Program Environmental Impact Report

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation Program

STATE CLEARINGHOUSE NO. 2025110783

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AB	Assembly Bill
ACM	asbestos-containing material
ADT	average daily traffic
AELUP	Airport Environs Land Use Plan
AFY	acre-feet per year
ALUC	Airport Land Use Commission
APN	Assessor's Parcel Number
AQMP	Air Quality Management Plan
ARWP	Archaeological Resources Work Plan
ASTM	American Society for Testing Materials
ATP	Active Transportation Plan
BERD	Built Environment Resource Directory
BMP	best management practice
BPP	basin production percentage
C	Circulation Element
CAAP	Climate Action and Adaptation Plan
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Division of Occupational Safety and Health
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards
CalRecycle	California Department of Recycling and Recovery
CARB	California Air Resources Board
CBC	California Building Code
CCC	California Coastal Commission
CCR	Code of California Regulations
CD	Community Design
CDFW	California Department of Fish and Wildlife
CDOC	California Department of Conservation
CDP	Coastal Development Permit
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CHR	California Historical Resource
CHRIS	California Historical Resources Information System
CIWMP	Countywide Integrated Waste Management Plan

Acronym/Abbreviation	Definition
CMFRD	Costa Mesa Fire & Rescue Department
CMMC	Costa Mesa Municipal Code
CMP	Congestion Management Program
CMPD	Costa Mesa Police Department
CMPMP	Costa Mesa Pedestrian Master Plan
CMSD	Costa Mesa Sanitary District
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CNRA	California Natural Resources Agency
CO	carbon dioxide
CO_2e	carbon dioxide equivalent
CON	Conservation Element
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CSS	coastal sage scrub
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
CWA	Clean Water Act
DAMP	Drainage Area Management Plan
dB	decibel
dBA	A-weighted decibel
DPH	California Department of Public Health
DPM	diesel particulate matter
DPR	California Department of Parks and Recreation
DTSC	Department of Toxic Substances Control
DTSC-SL	DTSC-modified screening levels
DWR	California Department of Water Resources
ECAR	Existing Conditions Assessment Report
EDFZ	electricity demand forecast zone
EISA	Energy Independence and Security Act of 2007
EMFAC	Emission Factor (Mobile Source Emissions Inventory model)
EO	Executive Order
EOP	Emergency Operations Plan
EPA	U.S. Environmental Protection Agency
EPCA	federal Energy Policy and Conservation Act
ESHA	Environmentally Sensitive Habitat Area
EV	electric vehicle
FAA	Federal Aviation Administration
FAR	Floor Area Ratio
FAR	Federal Aviation Regulations
FEMA	Federal Emergency Management Agency
FESA	federal Endangered Species Act

Acronym/Abbreviation	Definition
FHWA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration
GHG	greenhouse gas
GSP	groundwater sustainability plan
GWP	global warming potential
GWRS	Groundwater Replenishment System
HABS	Historic American Building Survey
HAER	Historic American Engineering Record
HALS	Historic American Landscape Survey
HAP	hazardous air pollutant
HCD	Housing and Community Development
HCP	Habitat Conservation Plan
HCR	Historical and Cultural Resources Element
HERO	Human and Ecological Risk Office
HIA	health impact assessment
HMBP	hazardous materials business plan
HOU	Housing Element
HPZ	Health Protection Zone
HQ	Headquarters
HRA	Historic Resources Assessment
HSC	California Health and Safety Code
HVAC	heating, ventilation, and air conditioning
IFC	International Fire Code
ILV	improvement to land value
INCE	Institute of Noise Control Engineering
IP	Invertebrate Paleontology
IPCC	Intergovernmental Panel on Climate Change
ips	inches per second
IRWD	Irvine Ranch Water District
IS	Initial Study
ISTEA	Intermodal Surface Transportation Efficiency Act
ITP	Incidental Take Permit
JWA	John Wayne Airport
LACM	Los Angeles County Museum
LCFS	low carbon fuel standard
LCP	Local Coastal Plan
LESA	Land Evaluation Site Assessment
LHMP	Local Hazard Mitigation Plan
LHMP	Local Hazard Mitigation Plan
LOS	level of service
LST	localized significance threshold
LU	Land Use Element

Acronym/Abbreviation	Definition
LUST	Leaking Underground Storage Tank
MATES	Multiple Air Toxics Exposure Study
MBTA	Migratory Bird Treaty Act
MCL	Maximum Contaminant Level
MLD	Most Likely Descendant
MM	Mitigation Measure
MMT	million metric tons
MPO	Metropolitan Planning Organization
MRZ	Mineral Resource Zone
MT	metric tons
MUOD	Mixed-Use Overlay District
MW	megawatt
MWD	Mesa Water District
MWDOC	Municipal Water District of Orange County
MWELO	Model Water Efficient Landscape Ordinance
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NETR	Nationwide Environmental Title Research, LLC
NHMLA	Natural History Museum of Los Angeles County
NHTSA	National Highway Traffic Safety Administration
NMUSD	Newport–Mesa Unified School District
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_3	ozone
OBBBA	One Big Beautiful Bill Act
OC	Orange County
OC Active	OC Active: Bike + Ped Plan
OC Basin	Orange County Groundwater Basin
OC San	Orange County Sanitation District
OCCOG	Orange County Council of Governments
OCHCA	Orange County Health Care Agency
OCPL	Orange County Public Libraries
OCTAM	Orange County Transportation Analysis Model
OCWD	Orange County Water District
OD	Origin-Destination
OHP	California Office of Historic Preservation
OSHA	Occupational Safety and Health Administration
OSR	Open Space and Recreation Element
PACE	Purchase of Agricultural Conservation Easement
PCB	polychlorinated biphenyl

Acronym/Abbreviation	Definition
PDC	Planned Development Commercial
PEIR	Draft Program Environmental Impact Report
PFAS	per- and polyfluoroalkyl substances
PM_{10}	particulate matter 10 microns or less in diameter
$PM_{2.5}$	particulate matter 2.5 microns or less in diameter
PPV	peak particle velocity
PRC	California Public Resources Code
PRMMP	Paleontological Resources Mitigation and Monitoring Program
PS	preschool
Public Works	Costa Mesa Public Works Department
PWWF	peak influent wet weather flow
RASS	Residential Appliance Saturation Survey
RCNM	Roadway Construction Noise Model
RCRA	Resource Conservation and Recovery Act
RFS	Renewable Fuel Standard
RHNA	Regional Housing Needs Allocation
RIOD	Residential Incentive Overlay District
RPS	Renewables Portfolio Standard
RSL	Regional Screening Levels
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
S	Safety Element
SAAAB	Santa Ana Army Air Base
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SCS	Sustainable Communities Strategy
SDS	Safety Data Sheet
SDSMP	Storm Drain System Master Plan
SED	socioeconomic data
SF&P	Santa Ana, Fairview, and Pacific
SGMA	Sustainable Groundwater Management Act
SJVAPCD	San Joaquin Valley Air Pollution Control District
SLCP	Short-Lived Climate Pollutant
SLF	Sacred Lands File
SO_2	sulfur dioxide
SOI	Secretary of the Interior
SR-	State Route

Acronym/Abbreviation	Definition
SSMP	Sewer System Management Plan
STC	sound transmission class
STIP	Transportation Improvement Program
SVP	Society of Vertebrate Paleontology
SWIS	Solid Waste Information System
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TAZ	traffic analysis zone
TCR	tribal cultural resource
TDS	Total Dissolved Solids
TGD	Technical Guidance Document
TIA	Transportation Impact Analysis
TISG	Transportation Impact Study Guide
TK	transitional kindergarten
TMDL	Total Maximum Daily Load
TPA	transit priority area
TSCA	Toxic Substances Control Act
USACE	U.S. Army Corps of Engineers
USC	United States Code
USDOT	U.S. Department of Transportation
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
USPS	U.S. Postal Service
UST	underground storage tank
UWMP	Urban Water Management Plan
VMT	vehicle miles traveled
VOC	volatile organic compound
VP	Vertebrate Paleontology
WQMP	Water Quality Management Plan

Executive Summary

The purpose of the Executive Summary for this Draft Program Environmental Impact Report (PEIR) is to provide a brief summary of the proposed Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation (Project or proposed Project), its environmental consequences, mitigation measures, and alternatives to the Project. Per the requirements of Section 15123 of the State California Environmental Quality Act (CEQA) Guidelines, a summary shall identify:

(1) Each significant effect with proposed mitigation measures and alternatives that would reduce or avoid that effect (see Section ES.3 and ES.5)

(2) Areas of controversy known to the Lead Agency including issues raised by agencies and the public (see Section ES.4)

(3) Issues to be resolved including the choice among alternatives and whether or how to mitigate significant effects (see Section ES. 4 and ES.5)

ES.1 Introduction

This Draft PEIR has been prepared by the City of Costa Mesa (City) to evaluate potential environmental effects that would result from implementation of the proposed Project. This Draft PEIR has been prepared in conformance with the California Environmental Quality Act of 1970 (CEQA) statutes (California Public Resources Code Section 2100 et seq., as amended) and its implementing guidelines (California Code of Regulations Title 14, Section 15000 et seq.). The proposed Project constitutes a "project" as defined in the CEQA Guidelines Section 15378. Pursuant to Section 15367 of the State CEQA Guidelines, the City is the lead agency for the Project.

CEQA requires the preparation of an environmental impact report (EIR) for any project that a lead agency determines may have a significant impact on the environment. 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 (CEQA Guidelines Section 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.

ES.2 Project Description

State CEQA Guidelines Section 15124(b) requires an EIR to include a statement of objectives sought by the Project, including the underlying purpose of the Project. The following Project Objectives have been established and will aid decision-makers in their review of the Project, the Project alternatives, and associated environmental impacts:

1. Implement many of the required programs of the City's 2021-2029 Housing Element and accommodate the City's Regional Housing Needs Allocation (RHNA), as required by State law.
2. Achieve Housing Element certification, as required by the State.
3. Implement the rezoning of Measure K sites, as allowed by Measure K (2022), including the rezoning of Housing Element sites, as required by State law.
4. Support the City Council's goal to diversify, stabilize, and increase housing to reflect community needs.
5. Amend the Zoning Code to be consistent with State and Federal law and to better facilitate the development of housing.
6. Prepare objective design standards consistent with the community's vision for citywide multi-family and mixed-use projects.
7. Prioritize new housing near jobs and amenities, while reducing potential impacts to existing residential neighborhoods, in order to revitalize existing commercial and industrial areas with the introduction of new housing and mixed-use developments.

The Project would utilize the Mixed-Use Overlay District (MUOD) as the zoning mechanism to implement the rezoning of all Measure K sites and would organize and consolidate the MUOD by: (1) sunsetting all urban plans and the Harbor Mixed-Use Overlay, but incorporate their applicable provisions into the MUOD within the Zoning Code; (2) consolidating all urban plan areas within Measure K into the MUOD; (3) refining and expanding existing provisions of the MUOD, with provisions tailored by sub-area; and (4) applying the amended MUOD to all Measure K sites, with special provisions applicable to Housing Element sites. Currently, the urban plans are enabled by the MUOD, but they are not a part of the Zoning Code. Therefore, the Project would sunset the urban plans and transfer the applicable regulations into the Zoning Code under the MUOD. The resulting refined version of the MUOD would be used to rezone all Measure K sites. The Planning Area is generally located along major thoroughfares within the city, including, but not limited to Newport Boulevard, Harbor Boulevard, Placentia Avenue, 19th Street, 18th Street, 17th Street, Baker Street, Bristol Street, and areas north of Interstate 405 (City of Costa Mesa 2025). The Project would help achieve a shared vision for the Planning Area by providing a planning framework for City staff, the development community, business owners, and residents that would shape the growth of the city, specifically the Planning Area, through horizon year 2056, as discussed in further detail in Chapter 3, Project Description, and Appendix B, Buildout Methodology, of this Draft PEIR.

For non-Housing Element sites, the application of the MUOD would not change a property's base zone or otherwise change or remove existing property rights. It would instead add optional zoning provisions to allow for the development of housing or mixed-use. Therefore, a property could continue to operate as it does today, or it could be redeveloped under the provisions of its base zone, or, if and when the property owner chooses to, they could opt into the MUOD and redevelop as housing or mixed-use under the provisions of the MUOD. For Housing Element sites, however, the MUOD would operate with certain restrictions. In cases where the base zoning does not allow for residential uses, the MUOD would supersede the base zone, unless there is another overlay (such as a Specific Plan) that allows for housing. If a Housing Element site is redevelopment under the MUOD, it must meet specific requirements identified for Housing Element sites.

The Planning Area is currently subject to the goals and policies of the General Plan and Title 13 (Planning, Zoning, and Development) of the Costa Mesa Municipal Code (CMMC). The Project would amend the General Plan and Title 13 of the CMMC to implement a number of Housing Element programs (Housing Element Programs including, but not limited to 2B, 2E, 2F, 2H, 2I, 2J 2K, 2M, 2N, 2O, 2P, 3C, 3D, 3E, 3F, 3H, 3I, 3J, 3K, 3S, 4E, and 4G) that require amendments to the City's Zoning Code. The objectives of the Zoning Code amendments are to implement the Housing Element as required by state law, ensure that the City is consistent with state law pertaining to housing, and in doing so, help the City create a more straightforward process for permitting homebuilding and mixed-use development. The Project would also apply new Objective Design Standards to new residential projects that are two or more stories in height and to all new multifamily projects and mixed-use residential projects, regardless of zoning designation. Enabled by recent state legislation, including Senate Bill (SB) 35 and SB 330, the Objective Design Standards are intended to improve predictability, efficiency, and transparency in project review while promoting high-quality design that aligns with state law, City goals, and the community's vision.

A list of the parcels affected by the Project, which includes existing and proposed land use designations/zoning, is included as Attachment A, Parcel List, of this Draft PEIR. Methodologies used to calculate the anticipated housing, commercial building area, population, and employment growth resulting from implementation of the Project are summarized in Section 3.4 of Chapter 3, Project Description and discussed in detail in Appendix B, Buildout Methodology, of this Draft PEIR.

ES.3 Summary of Environmental Impacts and Mitigation Measures

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

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.1	**Aesthetics***			
4.1-1	Would the project conflict with applicable zoning and other regulations governing scenic quality?	Potentially Significant Impact	**MM-4.1-1.** *Shade and Shadow Analysis.* Prior to entitlement or issuance of a building permit (whichever comes first) for any development project pursuant to the MUOD that is located outside of a Transit Priority Area on a non-Housing Element site, the applicant shall prepare and submit a Shade/Shadow Analysis if both of the following conditions apply: (1) The proposed project is over four stories in height, and (2) the subject property is adjacent to a residential parcel zoned R1, R2, or R3. ("Adjacent to" shall be defined as being within 100 feet of the subject parcel, measured from the respective parcel boundaries.) The Shade/Shadow Analysis shall be prepared by a qualified design professional with demonstrated experience in shade and shadow analyses. If triggered, the Shade/Shadow Analysis shall include the following: ▪ Project-Specific Shadow Diagrams. The study shall include shadow diagrams showing shade/shadows cast by the proposed project as designed, accounting for existing buildings and permanent infrastructure. Vegetation shall not be included as an existing source of shadow. Shade/shadow diagrams shall be prepared for the following days: - Winter Solstice (December 21) - Summer Solstice (June 21) - Spring/Fall Equinox (March 21 and/or September 21) ▪ For each required day, shade/shadows shall be illustrated hourly (at a minimum), from one hour after sunrise to one hour before sunset. Shorter,	**Significant and Unavoidable Impact**

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			time-based increments (e.g., 30- or 15-minute intervals) may be required to determine impacts. ▪ Diagram Content and Formatting. All shade/shadow diagrams shall show the project site boundaries and adjacent residential structures and yards. The diagrams shall clearly distinguish between existing baseline shadow and net new shade/shadow attributable to the proposed project. ▪ Significance Threshold Conclusion. The study shall determine whether new project-related shade/shadows would reduce access to direct sunlight of a private or common outdoor residential living area (e.g., a yard or courtyard) or other shade-sensitive outdoor feature (e.g., swimming pool) for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Pacific Standard Time (between early November and mid-March), or for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between mid-March and early November). If the analysis determines that significant shade/shadow impacts would result, the project applicant shall implement one or more of the following design-based measures, or equally effective measure, to reduce impacts in accordance with the stated significance thresholds: ▪ Reduce overall building height or step back upper stories; ▪ Modify building footprint, orientation, or upper-level articulation;	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			▪ Increase setbacks to preserve solar access; and/or ▪ Incorporate other design alternatives. The selected design measures shall be subject to review and approval by the City to ensure impacts are reduced in accordance with the stated significance thresholds. The selected design measures shall be reflected in the final project plan set(s) and submitted to the City for review prior to entitlement or issuance of a building permit, whichever comes first.	
Cumulative	Would the project have a cumulative effect on aesthetic resources?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
4.2	**Agriculture and Forestry***			
4.2-1	Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	Potentially Significant Impact	**No mitigation measures are feasible.**	**Significant and Unavoidable Impact**
4.2-2	Would the project conflict with existing zoning for agricultural use, or with a Williamson Act contract?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
4.2-3	Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	No Impact	Not applicable.	No Impact

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Cumulative	Would the project have a cumulative effect on agriculture of forestry resources?	Potentially Significant Impact	**No mitigation measures are feasible.**	**Significant and Unavoidable Impact**
4.3	**Air Quality***			
4.3-1	Would the project conflict with or obstruct implementation of applicable air quality plan?	Potentially Significant Impact	**MM-4.3-1.** *Construction Equipment Emissions Reductions.* Prior to the issuance of a building permit for future development projects subject to the MUOD within the Planning Area, the City shall ensure that the applicant's construction contractor's contract specifications, require the use of California Air Resources Board (CARB)-certified Tier 4 Final or better construction equipment for equipment engines greater than 25 horsepower. An exemption from this requirement may be granted under the following condition: The applicant's construction contractor shall demonstrate that at least two construction fleet owners/operators in Orange County were contacted and that those owners/operators confirmed Tier 4 Final equipment could not be located within Orange County during the desired construction schedule. **MM-4.3-2.** *Additional Construction Equipment Emission Reductions.* Prior to the issuance of a demolition/grading permit for future development projects subject to the MUOD within the Planning Area, the City shall ensure that the applicant requires, through the construction contractor's contract specifications, the following are implemented: ▪ Use electric or hybrid powered equipment for generators and other small pieces of equipment over 25 horsepower (e.g., forklifts), as commercially available	**Significant and Unavoidable Impact**

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			▪ Use cleaner fuel equipment, such as replacing diesel fuel with compressed natural gas or renewable diesel, as commercially available Commercially available equipment is defined as equipment sourced within 50 vehicle miles of the project site and within 10 percent of the cost of the diesel-fueled-equivalent equipment. The individual project applicant must contact at least two contractors or vendors within the County and submit to the City justification if the specified equipment is not commercially available. MM-4.3-3. *Limit Truck and Equipment Idling During Construction.* During construction of future development projects subject to the MUOD within the Planning Area, the City shall ensure that the applicant requires, through the construction contractor's contract specifications, that idling time of heavy-duty trucks is reduced either by requiring them to be shut off when not in use or limiting the time of idling to no more than 4 minutes (thereby improving upon the 5-minute idling limit required by the state airborne toxics control measure, 13 CCR 2485). The Project applicant shall post clear signage reminding construction workers to limit idling of construction equipment. MM-4.3-4. *Use of Low-Volatile Organic Compound Paint During Construction.* Prior to the commencement of construction activities for future development projects subject to the MUOD within the Planning Area, the applicant shall require, through the construction contractor's contract specifications, that low volatile organic compound (VOC) paint (50 grams per liter VOC or less) is used for all interior and exterior paint applications for residential and nonresidential land uses.	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			MM-4.3-5. *Construction Dust Control.* Prior to the issuance of a grading permit for future development projects subject to the MUOD within the Planning Area, the applicant shall require, the construction contractor's contract specifications, that implementation of dust control strategies are implemented to reduce project-generated dust during construction and ensure compliance with South Coast Air Quality Management District (SCAQMD) Rule 403. The dust control measures shall include at a minimum the following control strategies: 1. Water or another SCAQMD-approved non-toxic dust control agent shall be used on the grading areas at least three times daily. 2. A 15 mile-per-hour (mph) speed limit on unpaved surfaces shall be enforced. 3. All main roadways shall be constructed and paved as early as possible in the construction process. 4. Building pads shall be finalized as soon as possible following site preparation and grading activities. 5. Grading areas shall be stabilized as quickly as possible. 6. Wheel washers shall be installed adjacent to the apron for tire inspection and washing prior to vehicle entry on public roads. 7. Visible track-out into traveled public streets shall be removed with the use of sweepers, water trucks, or a similar method within 30 minutes of occurrence. 8. Unpaved construction site egress points shall be graveled to prevent track-out.	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			9. Construction access points shall be wet-washed at the end of the workday if any vehicle travel on unpaved surfaces has occurred. 10. All soil disturbance and travel on unpaved surfaces shall be suspended if winds (instantaneous gusts) exceed 25 mph. 11. On-site stockpiles of excavated material shall be covered. **MM-4.3-6.** *Notification of Construction Activities.* Prior to the commencement of any construction activities for future development projects subject to the MUOD within the Planning Area, the applicant shall be required to employ a construction relations officer who will address community concerns regarding on-site construction activity. The applicant shall provide public notification in the form of a visible sign containing the contact information of the construction relations officer, who shall document complaints and concerns regarding on-site construction activity. The sign shall be placed in easily accessible locations. **MM-4.3-7.** *Low-VOC Cleaning Supplies and Paint Educational Program.* Prior to the occupancy of any future development projects subject to the MUOD within the Planning Area, applicants shall develop a green cleaning product and paint education program. The City shall ensure that the applicant implements this program through property management practices, including but not limited to lease materials, tenant information packets, and project websites. The educational program shall include a flyer (hardcopy and/or digital) that includes, at a minimum, an explanation of what volatile organic compounds (VOCs) are, how VOCs affect us, where to find low-VOC alternatives for cleaning	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			supplies and paint, and additional resources for learning more. **MM-4.3-8.** *Landscape Maintenance Equipment Emission Reduction.* Applicants for future development projects subject to the MUOD within the Planning Area shall implement the following landscape maintenance equipment emission reduction measures: 1. *Include Outdoor Electrical Outlets*. Prior to the issuance of building permits, future development project applicants shall provide evidence to the City that the design plans include electrical outlets on the exterior of the structure to facilitate use of electrical lawn and garden equipment. The City shall verify compliance by confirming that this requirement is included in the construction contractor's contract specifications prior to issuance of a building permit. 2. *Encourage Use of Existing Yard Equipment Exchange and Rebate Programs*. Future development project applicants shall provide educational materials to future residents about the SCAQMD Residential Electric Lawn & Garden Equipment Rebate Program with the goal of accelerating transition from conventional gasoline-powered yard equipment (e.g., lawn mowers, leaf blowers and vacuums, shredders, trimmers, and chain saws) to electric and rechargeable battery-powered yard equipment. The City shall verify compliance by reviewing and confirming the inclusion of these materials prior to issuance of a certificate of occupancy.	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			MM-4.3-9. *Trip Reduction Program.* Prior to issuance of a grading permit, applicants for future development projects subject to the MUOD within the Planning Area for projects with 50 employees or more shall prepare a Trip Reduction Program aimed at discouraging single-occupancy vehicle trips and encouraging alternative modes of transportation, such as carpooling, and shuttle/transit use, and where applicable walking, and biking, with the goal of reducing VMT. The Program shall be subject to review and approval by the City. The exact measures to be implemented shall be determined when the Program is prepared, prior to issuance of a final certificate of occupancy for each future development project. The Program should be customized and may include but would not be limited to commute trip reduction program, marketing, carpool/vanpool service with incentives such as monetary assistance with fares or gas costs for carpool/vanpool users, subsidized/discounted daily or monthly public transit passes, employee shuttles, as well as encouraging telecommuting and alternative work schedule, if applicable to the type of employment. **MM-4.3-10.** *Enhanced End-of-Trip Bicycle Facilities.* Prior to the issuance of building permits for future development projects subject to the MUOD within the Planning Area, the City shall ensure that the applicant's design plans include end-of-trip bicycle facilities consistent with the following: ▪ Non-Residential (Office, Retail, Commercial) development must provide the following facilities: – Short-term bike racks for 5 percent of parking spaces	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			– Long-term secure bike parking for 5 percent of parking spaces – For developments with 150 or more employees, showers and changing facilities at a rate of the greater of one shower per 25,000 square feet of building area or one shower per 100 employees – Lockers for at least 5 percent of employees ▪ Multi-family Residential development must provide one secure long-term storage space (i.e., bike storage room or locker) per unit. **MM-4.3-11.** *Transit Oriented Features.* Prior to the issuance of building permits, applicants for future development projects subject to the MUOD within the Planning Area shall consult with the City to determine appropriate and reasonable contribution towards construction or implementation of transit features. Based on phasing and proposed project type, the City may require the future development project applicants to implement a transit feature to either connect to the nearest transit stop or hub and/or enhance the service or provide transit features such as bus shelters.	
4.3-2	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?	Potentially Significant Impact	**MM-4.3-1** through **MM-4.3-11**	**Significant and Unavoidable Impact**

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.3-3	Would the project expose sensitive receptors to substantial pollutant concentrations?	Potentially Significant Impact	**MM-4.3-1** through **MM-4.3-11**	**Significant and Unavoidable Impact**
4.3-4	Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
Cumulative	Would the project have a cumulative effect on air quality resources?	Potentially Significant Impact	**MM-4.3-1** through **MM-4.3-11**	**Significant and Unavoidable Impact**
4.4	**Biological Resources***			
4.4-1	Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS)?	Potentially Significant Impact	**MM-4.4-1.** *Habitat Assessment.* Prior to the issuance of any building permits for future development projects subject to the MUOD within the Planning Area, the City shall require project applicants to submit a Habitat Assessment Report to the City's Planning Division for review and approval unless the site is fully developed with impervious surfaces and/or irrigated landscaping. The Habitat Assessment Report shall be prepared by a qualified biologist and must evaluate the potential for impacts to sensitive wildlife and vegetation communities, including but not limited to rare plants, nesting birds, burrowing owl, western spadefoot, and Crotch's bumble bee, and shall include all other required information specified by City's Planning Division at the time of the request. If the survey determines that sensitive biological resources will be impacted by proposed activities, the City shall require implementation of the appropriate mitigation as set forth in MM-4.4-2 through MM-4.4-6, as appropriate.	**Significant and Unavoidable Impact**

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			MM-4.4-2. *Rare Plants.* If the habitat assessment described in MM-4.4-1 determines suitable habitat exists for southern tarplant, decumbent goldenbush, or Coulter's goldfields, particularly within the undeveloped parcels in the Planning Area, the project applicant shall conduct rare plant surveys within the appropriate blooming period for all three species to determine their presence/absence on a project site. If any of these three species are observed, they will be flagged for avoidance. However, in the event individual plants cannot be avoided, they will be relocated offsite to a conserved property, or replanted on site at an approved ratio determined through consultation with California Department of Fish and Wildlife (CDFW). Any relocation effort will be described in a Relocation Plan and relocation areas shall be conserved in perpetuity through a conservation easement or deed restriction. **MM-4.4-3.** *Nesting Birds.* If the habitat assessment described in MM-4.4-1 identifies suitable habitat for nesting birds and raptors, initiation of construction activities shall avoid the avian nesting season (February through August) to the extent feasible to reduce potential impacts to nesting birds protected by the Migratory Bird Treaty Act and California Fish and Game Code. If construction activities must be initiated during the migratory bird nesting season, the applicant shall have an avian nesting survey conducted to identify protected migratory birds, raptors, and active nests. The avian nesting survey shall be performed by a qualified wildlife biologist within 72 hours prior to the start of construction in accordance with the Migratory Bird Treaty Act and California Fish and Game Code. The results of the survey shall be provided to the City of Costa Mesa prior to the start of construction.	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			If an active bird nest is found, the nest shall be flagged and mapped on the construction plans along with an appropriate "no disturbance" buffer, which will be determined by the applicant's qualified biologist based on the species' sensitivity to disturbance (typically 50 feet for common, urban-adapted species, 300 feet for other passerine species, and 500 feet for raptors and special-status species). The nest area shall be demarcated in the field with flagging and stakes or construction fencing. The buffer area shall be avoided until the nest is vacated and the juveniles have fledged, as determined by the qualified biologist. The Project Applicant shall execute an agreement for a qualified biologist to provide periodic construction monitoring to determine when the nest is inactive and when construction activities can resume within the buffer area. The project applicant shall provide a copy of the agreement to the City prior to the start of construction. MM-4.4-4. *Burrowing Owl.* If suitable habitat for this species is found during the habitat assessment for individual projects described in MM-4.4-1, focused burrowing owl surveys shall be conducted. Focused surveys shall follow protocol set forth in the CDFG Staff Report on Burrowing Owl Mitigation (2012), consisting of four survey visits with at least one visit between February 15 and April 15, and three visits at least three weeks apart between April 15 and July 15, with at least one of those visits occurring after June 15. If burrowing owl is found on site, the applicant shall avoid impacts to owls and their habitat. However, if individual burrowing owls and their occupied habitat cannot be avoided the applicant shall consult with CDFW to determine the appropriate strategies to minimize impacts to the species. Since burrowing owl is a candidate for listing under CESA, and may be fully listed by the time future buildout of the	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			Project is completed, an ITP from CDFW shall be required offset impacts to the species and its habitat. The ITP will guide the mitigation process which may include habitat conservation and/or passive relocation. Mitigation and conservation land shall be in place prior to project-level construction. MM-4.4-5. *Western Spadefoot.* If the habitat assessment described in MM-4.4-1 determines suitable habitat for western spadefoot exists within the Planning Area, particularly within agricultural lands that experience prolonged ponding, presence/absence surveys for the species shall be required. Prior to the start of construction, the applicant shall provide focused surveys for western spadefoot conducted by a qualified biologist(s) (biologists familiar with amphibian eye-shine and all life stages of the local amphibian cohort) to determine if western spadefoot is present. Surveys will include spotlight surveys at night during or immediately following the first three major rain events of the wet season, defined as 0.20 inches or greater during a 24-hour period. Survey methodology shall be submitted to the USFWS for review. If surveys are negative, western spadefoot shall be considered absent from the site, and no further action shall be necessary. If surveys are positive, prior to the start of construction, a qualified biologist(s) shall conduct pre-construction surveys for western spadefoot and relocate spadefoot individuals of all life stages to suitable habitat outside of the project work area. Surveys and relocation shall include, at a minimum, the following elements: a. During the wet season prior to construction, exclusion fencing shall be installed by, or under the	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			supervision of, a qualified biologist around the limits of upland grading (i.e., berm removal) outside of the dense riparian vegetation in the river channel bottom (i.e., suitable aestivation habitat). During at least the first four large rain events of the season, defined as 0.20 inches or greater during a 24-hour period, a qualified biologist(s) shall conduct spotlight surveys at night during or immediately following the rain event. Adult spadefoot shall be collected and shall either be held by a Wildlife Agency-approved biologist to be released back into the site after construction activities or relocated to an area of suitable habitat outside of the project work area that provides suitable breeding and aestivation habitat. b. To the extent feasible, construction shall begin when the project site does not contain ponded water that may support breeding by western spadefoot. If construction is scheduled to begin during a time when portions of the site could support western spadefoot breeding, a qualified biologist(s) shall conduct pre-construction surveys of pool habitat and relocate any larvae and tadpoles present on site to suitable pool habitat outside of the project work area. To the extent feasible, pre-construction surveys shall include a minimum of three passes separated by 2 weeks, with the final pass occurring no more than 7 days prior to the start of construction. More frequent surveys may be conducted, if necessary, to complete three surveys prior to construction.	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			c. The location of receiving sites and the location of exclusion fence to be placed on Project parcels shall be subject to City of Costa Mesa approval. d. During construction, the biological monitor(s) present on site, shall relocate any western spadefoot individuals found within the project work area to an area of suitable habitat outside of the project work area. The biological monitor(s) shall maintain a complete record of any western spadefoot encountered during the project and coordinate with USFWS regarding additional data to be collected. Information shall include, at a minimum, location, date, and time of observation; details of the observed behavior; relocation site; estimated number of toads seen or heard; and photographs (when feasible). **MM-4.4-6.** *Crotch's Bumble Bee.* If the habitat assessment described in MM-4.4-1 determines suitable habitat exists for Crotch's bumble bee, a pre-construction survey shall be conducted to determine presence/absence of the species. The applicant shall provide a pre-construction survey for Crotch's bumble bee, conducted by a qualified biologist and within the construction footprint prior to the start of ground-disturbing construction activities occurring during the Colony Active Period (April 1 through August 31 for Crotch's bumble bee). If ground-disturbing activities occur outside the period, no further mitigation would be required. The survey shall ensure that no nests for Crotch's bumble bee are located within the construction area. The focused survey shall be performed by a biologist with expertise in surveying for bumble bees. Surveys may occur	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			between 1 hour after sunrise and 2 hours before sunset. Surveys shall not be conducted during wet conditions (e.g., foggy, raining, or drizzling) and surveyors shall wait at least 1 hour following rain. Optimal surveys are when there are sunny to partly sunny skies and a temperature greater than 60°F. Surveys may be conducted earlier if other bees or butterflies are flying. Surveys shall not be conducted when it is windy (i.e., sustained winds greater than 8 mph). Within non-developed habitats, the biologist shall look for nest resources suitable for bumble bee use. Ensuring that all nest resources receive 100 percent visual coverage, the biologist shall watch the potential nest resources for up to 5 minutes, looking for exiting or entering worker bumble bees. It is up to the discretion of the biologist regarding the actual survey viewshed limits from the chosen vantage point, but this limit shall not exceed 50 feet. The biologist will reduce the 50-foot limit as necessary to ensure 100 percent visual coverage of potential burrow resources depending on topography, vegetation height and cover, and other factors. This approach should allow the biologist to assess multiple burrows at one time to sufficiently determine if bees are entering/exiting them. If a nest is suspected, the surveyor can block the entrance of the possible nest with a sterile vial or jar until nest activity is confirmed (no longer than 30 minutes). A photo voucher of the bee species shall be collected, and the location mapped. If required, any capture of bumble bees will be conducted by a biologist with a valid CESA Memorandum of Understanding (MOU) and Scientific Collecting Permit (SCP) for Crotch's bumble bee. If a bumble bee worker is detected, then a representative shall be identified to species.	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			If Crotch's bumble bee nests are not detected, no further mitigation would be required. If a Crotch's bumble bee nest is detected, the project biologist shall establish, monitor, and maintain a no-work buffer around the nest. The size and configuration of the no-work buffer will be based on best professional judgement of the project biologist in consultation with CDFW. The buffer will provide at least 50 feet of clearance around the nest entrance(s). Construction activities will not occur within the no-work buffer until the colony is no longer active. To determine that a nest is no longer active, the nest will be observed for a minimum of 60 minutes each day across a minimum of 3 days during suitable flight weather (i.e., ambient air temperature between 60- and 90-degrees Fahrenheit, winds under 10 mph, and no precipitation more than a drizzling rain). If no bees are seen flying in or out of the nest by the end of the observation period, it will be determined that the nest is no longer active. If project activities occur outside of the Colony Active Period, then pre-construction surveys for active bee nests and avoidance measures are not required. A written survey report shall be submitted to the City within 30 days of the pre-construction survey. The report shall include survey methods, weather conditions, and survey results, including a list of insect species observed and a figure showing the locations of any Crotch's bumble bee nest sites or individuals observed. The survey report shall include the qualifications/resumes of the surveyor(s) and approved biologist(s) for identification of photo vouchers and a detailed habitat assessment. If Crotch bumble bee nests are observed, the survey report shall also include recommendations for avoidance, and the location	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			information shall be submitted to the California Natural Diversity Database at the time of, or prior to, submittal of the survey report. If the above measures are followed, it is assumed that the Project shall not need to obtain authorization from CDFW through the CESA ITP process. If the nest resources cannot be avoided, as outlined in this measure, the project applicant shall consult with CDFW regarding the need to obtain an ITP. Any measures determined to be necessary through the ITP process to offset impacts to Crotch's bumble bee may supersede measures provided in this CEQA document and shall be incorporated into the habitat mitigation and monitoring plan. In the event an ITP is needed, mitigation for direct impacts to Crotch's bumble bee shall be fulfilled through compensatory mitigation at a minimum 1:1 nesting habitat replacement of equal or better functions and values to those impacted by the Project, or as otherwise determined through the Incidental Take Permit process. Mitigation shall be accomplished either through off-site conservation or through a CDFW-approved mitigation bank. If mitigation is not purchased through a mitigation bank, and lands are conserved separately, a cost estimate shall be prepared to estimate the initial start-up costs and ongoing annual costs of management activities for the management of the conservation easement area(s) in perpetuity. The funding source shall be in the form of an endowment to help the qualified natural lands management entity that is ultimately selected to hold the conservation easement(s). The endowment amount shall be established following the completion of a Project-specific Property Analysis Record to calculate the costs of in-perpetuity land management. The	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			Property Analysis Record shall take into account all management activities required in the Incidental Take Permit to fulfill the requirements of the conservation easement(s), which are currently in review and development.	
4.4-2	Would the project have a substantial adverse effect on any sensitive natural communities (e.g., riparian habitat, coastal sage scrub, oak woodlands, non-jurisdictional wetlands) identified in local or regional plans, policies, regulations or by CDFW or USFWS?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
4.4-3	Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	No Impact	No mitigation measures are required.	No Impact
Cumulative	Would the project have a cumulative effect on biological resources?	Potentially Significant Impact	**MM-4.4-1** through **MM-4.4-6**	**Significant and Unavoidable**
4.5	**Cultural Resources***			
4.5-1	Would the project cause a substantial adverse change in the significance of a historical resource pursuant to PRC §15064.5?	Potentially Significant Impact	**MM-4.5-1** *Historic Architectural Resources.* Prior to the issuance of any building permits for future development projects subject to the MUOD within the Planning Area, the applicant shall determine if any potential historical building, structure, or district is present that could be affected by the development proposal. The applicant shall engage with a qualified architectural historian to conduct records search from applicable data repositories; check City of Costa Mesa Historic Resources Survey to identify properties listed in/eligible for listing in the NRHP, CRHR and/or City Register;	**Significant and Unavoidable**

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			conduct site inspections, as appropriate; and consider all relevant information available for the property to determine its potential for historical significance. If a future project includes a property greater than 50 years of age that has not been listed in or found eligible for listing in the NRHP, CRHR and/or City Register, the City shall require applicants to submit a Phase I and/or Phase II Historic Resources Assessment (HRA) report to evaluate the significance of resources greater than 50 years of age. The report shall be prepared by an SOI qualified architectural historian, in accordance with SOI standards and guidelines. The HRA shall include background, archival and historic research; site surveys; detailed physical description of identified resources; photographs; a historical significance evaluation in consideration of City, CRHR, and NRHP designation criteria and integrity requirements; an assessment of project impacts to historical resources; recommendations of mitigative treatment; and the preparation/recordation of the appropriate California Department of Parks and Recreation (DPR) 523 forms, as applicable. If project impacts to historic architectural resources are potentially significant, the applicant shall incorporate appropriate measures to avoid or minimize those impacts. Additional measures may include, but are not limited to, the following:	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			▪ If a future project involves alterations or modifications to historic architectural resources, the project design and proposed work shall conform to SOI Standards for the Treatment of Historic Properties to reduce or avoid impacts to historical resources. The project applicant shall retain a qualified architectural historian to advise on the final project design, recommend mitigative actions, specify performance standards, and oversee the construction activities related to the historical resources to ensure the project is constructed in compliance with specified mitigation performance standards and SOI Standards. ▪ If a future project involves the demolition or material impairment of an historical resource that cannot be mitigated through SOI Standards compliance, the project applicant shall submit an archival Historic American Building Survey (HABS), Historic American Engineering Record (HAER), or Historic American Landscape Survey (HALS) documentation, as appropriate, to the City for review and approval prior to the issuance of any grading or demolition permit. The HABS/HAER/HALS documentation shall be prepared by a SOI qualified architectural historian and may include an architectural and historical narrative; archival drawings and/or measured drawings; and large-format photography. All reports resulting from implementation of this mitigation measure shall be submitted to the City's Planning Division and filed with the SCCIC.	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.5-2	Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to PRC §15064.5?	Potentially Significant Impact	**MM-4.5-2** *Archaeological Resources.* Prior to the issuance of any building permits for future development projects subject to the MUOD within the Planning Area, the City's Planning Division shall review the archaeological sensitivity of the Planning Area as identified in Appendix F-3, Archaeological Resources Sensitivity Map of the Final EIR to determine whether the property is located in an area with moderate or high sensitivity. If the qualified archaeologist determines there is moderate or high sensitivity, applicants shall submit a Phase I Archaeological Resources Inventory Report to identify and evaluate archaeological resources that may be impacted by the subject project. The report must be prepared by a qualified archaeologist meeting Secretary of the Interior (SOI) Professional Qualifications Standards for Archaeology (Qualified Archaeologist). The report shall include archival search of historic records; records search of applicable data repositories, including the SCCIC database; pedestrian surveys; identification of archaeological resources within or near the subject property; assessment of potential project impacts to archaeological resources; recommendations for archaeological monitoring, if appropriate; and completion/recordation of the California Department of Parks and Recreation (DPR) 523 forms for all identified archaeological resources, as applicable. A Phase II Archaeological Resources Evaluation Report for testing and evaluation may be required based on the results and recommendations of the Phase I Report. If project impacts to archaeological resources are determined to be potentially significant, the applicant shall implement appropriate measures to avoid or minimize	**Significant and Unavoidable**

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			impacts to archaeological resources. Additional measures may include, but are not limited to, the following: **Archaeological Resources Work Plan.** Prior to issuance of a grading permit, the project applicant shall retain a qualified archaeologist to prepare and submit an Archaeological Resources Work Plan (ARWP). The purpose of this plan is to document the actions and procedures to be followed by the project to avoid or minimize impacts to archaeological resources. If potential impacts to tribal cultural resources are identified during project level review (e.g. records search, archaeological reports, AB 52 consultation, if applicable), the ARWP shall also address tribal cultural resources, in consultation with interested local Native American Tribes (interested consulting Tribes). The ARWP shall include, but may not be limited to, the following elements: ▪ A description of the roles and responsibilities of the archaeologist, the reporting relationships between construction managers and the archaeologist, and the notification procedures. ▪ Maps identifying locations where archaeological and/or Native American monitoring is required; duration of monitoring; and documentation of monitoring activities, including daily log of monitoring activities, location and results. ▪ Detailed procedures to follow if archaeological resources are inadvertently discovered during construction, including stop-work requirement within no less than a 50-foot radius of the find; documentation of all recovered resources on California Department of Parks and Recreation 523 forms; and inspection and evaluation of the	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			resource for listing in the national, state, and local register. ▪ Detailed plan for the collection of archaeological data, including sampling techniques and data management protocols. ▪ Methodology for testing and evaluation of archaeological resources encountered. ▪ Detailed treatment plan to avoid or minimize impacts to significant archaeological resources, including preservation and/or data recovery to the satisfaction of the City. ▪ Detailed plan for reporting recovered resources and treatment results, including submission of reports to applicable agencies. Construction Worker Archaeological Resources Sensitivity Training. Prior to the commencement of project ground-disturbing activities, a qualified archaeological monitor, as defined in the ARWP, shall present an archaeological resources sensitivity training to project construction personnel. If the project was subject to tribal notification/consultation, the Qualified Archaeologist shall invite interested consulting Tribes, a minimum of two weeks before the training session, to participate in and present Native American perspectives during the training sessions. The archaeological monitor shall inform construction personnel about the types of cultural resources that could be encountered; the proper procedures to follow in the event of an archaeological discovery; potential penalties for failing to adhere to applicable laws and regulations; and confidentiality of discoveries. The project applicant shall provide the training agenda, materials and attendance records to the City within five business days of request.	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			Archaeological Resources Monitoring. If required by the AWRP, during grading and excavation activities, a qualified archaeological monitor, as defined in the ARWP, shall be present to monitor ground-disturbing activities. Should archaeological resources be encountered, the archaeological monitor shall have the authority to halt ground-disturbing activities and immediately notify the Qualified Archaeologist of the find. The Qualified Archaeologist shall implement the evaluation and mitigation protocols described in the ARWP. In the event Native American archaeological resources are encountered during construction, Native American monitoring shall be provided thereafter for any ground-disturbing activities. However, if impacts to tribal cultural resources are determined potentially significant during project level review, a Native American monitor shall be required at the outset to monitor all ground-disturbing activities. The Qualified Archaeologist shall prepare a final report documenting all recovered archaeological resources, the significance of the resources, and the treatment of the recovered resources to the City, the SCCIC, and the NAHC (as applicable). **Archaeological Resources Discoveries.** If archaeological resources are encountered during construction, all ground-disturbing activities shall cease within no less than 50 feet of the find. The Qualified Archaeologist can determine, based on the initial assessment of the discovery, whether the 50-foot buffer shall be reduced or increased. The Qualified Archaeologist shall evaluate the recovered archaeological resources for significance. If the resource is found significant pursuant to CEQA, avoidance and preservation in place shall be the preferred manner of mitigating impacts. If avoidance is infeasible, the	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			Archaeologist shall develop and oversee the execution of a Phase III Archaeological Resources Data Recovery and Treatment Plan. The plan shall include: a detailed research design; justification for data recovery or other treatment methods depending on the nature of the resource's eligibility; excavation methodology; and, reporting and curation requirements. The archaeologist shall prepare a final report that includes documentation of all recovered resources, a full evaluation of their significance, and treatment of the recovered resources. When assessing significance and developing treatment for recovered resources that are Native American in origin, the City shall consult and coordinate with interested consulting Tribes. The City shall consider tribal preferences when making a determination on the disposition of Native American archaeological resources, which may include but is not limited to curation at an accredited or nonaccredited repository; onsite or offsite reburial; and/or donation to a local Tribe. The project applicant shall curate all significant non-Native American, historic-period archaeological material, or portions thereof at the recommendation of the Qualified Archaeologist and approval by the City, at a repository accredited by the American Association of Museums that meets the standards outlined in 36 CFR Section 79.9. If no accredited repository accepts the collection, then the project applicant may curate it at a nonaccredited repository as long as it meets the minimum standards set forth in 36 CFR Section 79.9. If neither an accredited nor a nonaccredited repository accepts the collection, then the project applicant may offer the collection to a public, nonprofit institution with	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			a research interest in the materials, or to a local school or historical society in the area for educational purposes. To the extent feasible, these measures are also inclusive of tribal cultural resources considerations. All reports resulting from implementation of this measure shall be completed and submitted to the City for review and approval. Once approved by the City, the report shall be submitted to the SCCIC and interested consulting Tribes.	
4.5-3	Would the project disturb any human remains, including those interred outside of dedicated cemeteries?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
Cumulative	Would the project have a cumulative effect on cultural resources?	Potentially Significant Impact	**MM-4.5-1** and **MM-4.5-2**	**Significant and Unavoidable**
4.6	**Energy**			
4.6-1	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	No mitigation measures are required.	Less Than Significant Impact
Cumulative	Would the project have a cumulative effect on energy resources?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
4.7	**Geology and Soils***			
4.7-1	Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Potentially Significant Impact	**MM-4.7-1** *Mitigation Protocols for Paleontological Resources.* Prior to the issuance of any building permits for future development projects subject to the MUOD within the Planning Area, the City's Planning Division shall determine whether the project site is within areas of low paleontological	**Significant and Unavoidable**

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			sensitivity or high paleontological sensitivity, as depicted on Figure 4.7-1, Geology and Paleontological Sensitivity, of the Draft PEIR. For projects within areas of the Planning Area designated as having low paleontological sensitivity, the following shall be implemented: a) Prior to commencement of any grading activity for individual projects within the Planning Area, the project applicant shall retain a qualified paleontologist per the Society of Vertebrate Paleontology (SVP) (2010) guidelines. A qualified paleontological monitor shall be on site during all ground-disturbing activities (including augering) below a depth of 5 feet. No paleontological monitoring is necessary during ground disturbance within artificial fill or previously disturbed sediments, if determined to be present. See section (c), below, in the event that paleontological resources (e.g., fossils) are unearthed during ground disturbing activities. For projects within areas of the Planning Area designated as having high paleontological sensitivity, the following shall be implemented: b) Prior to commencement of any grading activity, the project applicant shall retain a qualified paleontologist per the Society of Vertebrate Paleontology (SVP) (2010) guidelines. The qualified paleontologist shall prepare and implement a Paleontological Resources Mitigation and Monitoring Program (PRMMP) for the project. The PRMMP shall be consistent with the SVP (2010) guidelines and should outline requirements for preconstruction meeting attendance and worker environmental awareness training; where monitoring is required within the proposed project site	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			based on construction plans and/or geotechnical reports; procedures for adequate paleontological monitoring and discoveries treatment; and paleontological methods (including sediment sampling for 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 large diameter [2-feet or greater] augering) in previously undisturbed deposits of high paleontological sensitivity. See section (c), below, in the event that paleontological resources (e.g., fossils) are unearthed during ground disturbing activities. If paleontological resources (e.g., fossils) are exposed during project construction, all construction work occurring within 50 feet of the find shall immediately stop. The qualified paleontologist shall evaluate the significance of the find and determine whether or not additional study is warranted. If the discovery is clearly not significant, the qualified paleontologist may document the find and allow work to continue. In the event that significant paleontological resources (e.g., fossils) are unearthed during ground disturbing activities, documentation and collection of the find shall be completed. Then, the qualified paleontological monitor shall allow activity to recommence in the area of the find. Significant paleontological resources recovered during project ground-disturbing activities shall be donated to an accredited repository, such as the Orange County Parks Cooper Center or Natural History Museum of Los Angeles County. Costs for laboratory processing, curation, and accessioning of significant fossil collections into the accredited repository are the responsibility of the project applicant.	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
Cumulative	Would the project have a cumulative effect on geology and soils resources?	Potentially Significant Impact	MM-4.7-1	Significant and Unavoidable
4.8	**Greenhouse Gas Emissions***			
4.8-1	Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Potentially Significant Impact	MM-4.8-1. *Electrify Temporary and Portable Sources*. Prior to the issuance of a building permit for future development projects subject to the MUOD within the Planning Area, the applicant shall require, through the construction contractor's contract specifications, that grid power connections for construction trailers and lighting are utilized where power is available. MM-4.8-2. *Energy Conservation*. Prior to the issuance of building permits for future development projects subject to the MUOD within the Planning Area, the applicant shall require, through construction contractor's contract specifications, that buildings have been designed to include the following energy conservation measures unless determined to be not applicable or infeasible: a) Install Energy Star rated heating, cooling, lighting, and appliances. b) Outdoor lighting shall be light emitting diodes (LED) or other high-efficiency lightbulbs. c) Provide information on energy efficiency, energy efficient lighting and lighting control systems, energy management, and existing energy incentive programs to future tenants of the proposed Project. d) Non-residential and residential structures shall demonstrate that roofing materials meet or exceed enhanced cool roof performance standards of the California Building Energy Efficiency Standards (Title 24, Part 6). This is defined as achieving a 3-year solar	Significant and Unavoidable Impact

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			reflective index (SRI) of 82 for a low-sloped roof (≤2:12 pitch) and 32 for a high-sloped (>2:12) roof. e) Outdoor pavement, such as walkways and patios, shall include paving materials with 3-year SRI of 0.28 or initial SRI of 0.33. f) Install all-electric, high-efficiency water heating systems. Residential and non-residential development shall utilize electric water heating systems, such as heat pump water heaters (HPWHs) or equivalent high-efficiency electric systems. g) Encourage passive solar cooling/heating. h) Strategically plant trees to provide shade. MM-4.8-3. *Electric Vehicle Ready New Construction*. Prior to the issuance of building permits, applicants for future development projects subject to the MUOD within the Planning Area shall provide evidence to the City that the design plans include electric vehicle charging infrastructure that, meets or exceeds the voluntary standards (Tier 1 or Tier 2) in the California Green Building Standards Code at the time of project approval is incorporated into the development and that adequate charging equipment, capacity, and design features are provided to support effective long-term operation. MM-4.8-4. *On-site Solar*. Prior to the issuance of building permits, applicants of future development projects subject to the MUOD in the Planning Area shall provide evidence to the City that building designs include a rooftop photovoltaic (PV) system that meets or exceeds the current mandatory photovoltaic requirements of the California Green Building Standards Code (CALGreen) in effect at the time of project	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			approval by maximizing feasible rooftop coverage and minimizing exemptions. **MM-4.8-5.** *Water Conservation*. Prior to the issuance of building permits for future development projects subject to the MUOD within the Planning Area, the applicant shall require, through construction contractor's contract specifications, the project design plans include water conservation measures that meet or exceed requirements of the California Green Building Standards Code (CALGreen). Water conservation measures shall demonstrate enhanced indoor and outdoor water efficiency and shall include one or more of the following, as applicable: a) Installation of high-efficiency plumbing fixtures and appliances. b) Water-efficient landscape design consistent with the Model Water Efficient Landscape Ordinance (MWELO), including the use of drought-tolerant and native plant species, reduced turf areas, and soil amendment practices. c) Efficient irrigation systems, such as drip irrigation, smart controllers, and weather-based irrigation scheduling, designed to minimize potable water use. d) Site design strategies that reduce potable water demand and improve water retention, including water-sensitive urban design practices (e.g., permeable paving, bioretention areas, or stormwater capture features). e) Where feasible, installation of alternative water supply systems, such as rainwater harvesting or graywater reuse systems for non-potable uses.	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.8-2	Would the project conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Potentially Significant Impact	**MM-4.8-1** through **MM-4.8-5**	**Significant and Unavoidable Impact**
Cumulative	Would the project have a cumulative effect on greenhouse gas emissions?	Potentially Significant Impact	**MM-4.8-1** through **MM-4.8-5**	**Significant and Unavoidable Impact**
4.9	**Hazards and Hazardous Materials***			
4.9-1	Would the project create a significant hazard to the public or the environment through the routine transport, storage, production, use, or disposal of hazardous materials?	Potentially Significant Impact	**MM-4.9-1.** *Pre-Construction Due Diligence.* **Step A: Phase I Environmental Site Assessment.** During subsequent project-level permitting as required by the MOUD, a Phase I Environmental Site Assessment (ESA) shall be required for each property to be redeveloped within the Planning Area. The Phase I ESA shall be completed by an Environmental Professional as defined in 40 Code of Federal Regulations 312.10 in accordance with American Society for Testing Materials (ASTM) Standard E-1527-21 or any updated standard applicable at the time of the investigation. The Phase I ESA shall be submitted to the City as part of the permitting process. The City of Costa Mesa (City) shall review the Phase I ESA or shall have third-party review (peer review) of the Phase I ESA to validate the content and findings are in compliance with the applicable standards (ASTM E1527-21 or relevant) and the report is viable for the proposed development. **Step B: Phase II Environmental Site Assessment.** Any and all recognized environmental conditions (RECs), environmental concerns, or business environmental risks (BERs) identified in the Phase I ESA (see Step A) shall be investigated through completion of a Phase II ESA in accordance with ASTM	**Significant and Unavoidable**

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			Standard 1903-19 or any updated standard applicable at the time of the investigation. The Phase II ESA shall compare sampling results to regulatory screening levels current at the time of the investigation/redevelopment and applicable for the proposed development (residential). Sampling results must consider exposure of future construction and excavation workers as well as future occupants. The City shall review the Phase II ESA, or shall have third-party review (peer review) of the Phase II ESA, to validate the content and findings are in compliance with the applicable standards (ASTM E1903-19 or relevant). **Step C: Regulatory Oversight of Cleanup Sites.** If the Phase I ESA identifies the proposed development site on an open cleanup site or a closed cleanup site that either has conditional closure or was closed with remaining contamination that does not meet regulatory screening levels current at the time of development for the proposed type of development (residential or mixed use), the Applicant shall contact the regulatory agency that overseeing the cleanup for guidance on future development. The regulatory agency (Department of Toxic Substance Control [DTSC], State Water Resource Control Board [SWRCB], or Orange County Health Care Agency [OCHCA]) shall provide guidance on requirements for further remediation or protective measures required for redevelopment. The Applicant must submit those requirements to the City for review as part of the permit package and must follow those requirements prior to or during redevelopment as outlined by the regulatory agency. **Step D: Avoidance.** As a primary alternative, if contamination is identified above regulatory screening levels applicable to site development, development plans shall be prepared to	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			avoid construction on or within contaminated areas, near contaminated areas such that contamination could impact future development (e.g. soil vapor intrusion into future buildings), or where grading/excavation may result in disturbance of contaminated soils. If contamination is identified above regulatory screening levels, Project plans shall be designed to avoid placement of buildings on identified contaminated areas. Step E: Contaminated Media Management. If contamination cannot be avoided during future construction, a qualified environmental consultant shall be contracted to determine appropriate protective measures required for the proposed development. Protective measures may include, but are not limited to, removal of contaminated media (soil excavation, groundwater dewatering, or similar), remediation of contaminated media (soil vapor extraction or similar), or protective construction measures to avoid exposure of hazardous materials to future occupants (soil vapor barrier or similar). Step E.1: Construction Management Plan. If contaminated soil, soil vapor, and/or groundwater cannot be avoided during construction, or if there is a chance that previously unidentified contaminated soils may be encountered, a management plan shall be prepared by a qualified environmental consultant that outlines the proper screening, handling, characterization, transportation, and disposal procedures for contaminated soils on site, dewatering procedures for contaminated groundwater, and protective measures for contaminated soil vapor. It is recommended the management plan include, as appropriate,	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			avoidance measures to allow construction of the Project site to be completed without encountering contaminated soil, soil vapor, or groundwater. The management plan shall include health and safety and training procedures for workers who may come in contact with contaminated media. The management plan shall be implemented by the Applicant or their designated contractor for all sites with confirmed and suspected contaminated media, as identified in the Phase I and/or Phase II ESA. If the Phase I ESA or Phase II ESAs (MM-4.9-1 A and B, above) identified the potential for underground storage tanks, water wells (such as monitoring wells), or other subsurface features, the management plan shall also include procedures for the identification and proper abandonment of these features, as applicable, should any be identified during demolition and construction activities. The management plan shall include all applicable federal, state, and local regulations (including OCHCA and South Coast Air Quality Management District [SCAQMD]) associated with handling, excavating, and disposing of contaminated soils; the proposed disposal facility that will accept the contaminated soils; and appropriate procedures, notifications, permitting requirements, handling, and disposal requirements for decommissioning any underground storage tanks, wells, or other subsurface features. The City shall review the management plan, or shall have third-party review (peer review) of the management plan to validate the content and findings are in compliance with the applicable standards.	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			Step E.2. Protective Measures and Remediation. If contamination will not be removed during construction, construction design plans must include protective measures to avoid exposure of future users and occupants of the proposed site to contaminated soil, soil vapor, and/or groundwater. Protective measures must be designed by a licensed engineer, geologist, or hydrogeologist, experienced in the type of design (e.g. soil vapor barrier systems) and must meet regulatory guidance applicable to the type of protective system (e.g. DTSC's Soil Vapor Mitigation Advisory) and current at the time of site development. Protective measures must be designed to eliminate exposure pathways or reduce concentrations to regulatory screening levels acceptable for proposed site use at the time of development. All protective measures or remediation shall include operations and maintenance procedures to be implemented following occupation of the Project site to ensure protective measures are adequate and shall continue to be protective for the lifetime of the Project (e.g. vapor monitoring probes, groundwater monitoring wells, regular cap inspections). Protective measures shall be identified on the site plans for review and approval through the City's plan check process. **MM-4.9-2.** *Hazardous Materials Building Survey and Abatement.* Prior to issuance of a demolition permit and/or building permit for renovation activities for projects under the MUOD within the Planning Area, the applicant shall require, through the construction contractor's contract specifications, that a hazardous building materials survey is	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			conducted by a California Department of Public Health (DPH) Certified Asbestos Consultant and/or Certified Site Surveillance Technician and a California DPH Certified Lead Inspector/Risk Assessor or Sampling Technician. The survey shall include asbestos, lead-based paint, and universal wastes (including, but not limited to, mercury components in electrical equipment, polychlorinated biphenyls, treated wood wastes, and fluorescent light bulbs). A report documenting material types, conditions and general quantities shall be provided, along with documentation of positive materials and diagrams. Demolition and construction plans and contract specifications shall incorporate any abatement procedures for the removal of material containing hazardous materials. As mandated through the construction contractor's specifications, all abatement work shall be done in accordance with federal, state, and local regulations, including those of the Environmental Protection Agency (which regulates disposal), Department of Toxic Substances Control, Occupational Safety and Health Administration and California Occupational Safety and Health Administration (which regulates employee exposure), and the South Coast Air Quality Management District.	
4.9-2	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 or waste into the environment?	Potentially Significant Impact	**MM-4.9-1** and **MM-4.9-2** **MM-4.9-3.** *Methane Mitigation.* If methane mitigation standards are not established for development within the City of Costa Mesa at the time of development for sites subject to the MUOD within the Planning Area, the following mitigation shall be implemented. If methane mitigation standards are established as regulation, code, or ordinance at the time of development, the following measures shall not apply, and instead, the Applicant shall follow the City's	**Significant and Unavoidable**

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			methane mitigation standards. Future development projects in Costa Mesa shall comply with applicable local, County. State, and Federal requirements for appropriate methane mitigation. **Step A. Survey for Methane Sources.** Prior to issuance of a construction permit, the applicant shall require, through the construction contractor's contract specifications, that a survey must be completed at the proposed development site(s) that identifies the following: ▪ Any oil/gas well field, as defined by California Geologic Energy Management Division (CalGEM), encompassing the proposed development site or within 100 feet of the proposed development site. ▪ Any oil/gas well, either active, idle, abandoned, or plugged, within 100 feet of the proposed development site. ▪ Any gas seepage zone within 300 feet of the proposed development site. ▪ Any landfills, as identified by CalRecycle, with a refuse footprint within 1,000 feet of the proposed development site. If the survey positively identifies any of the above criteria, a soil gas investigation must be completed by a licensed/registered professional engineer that evaluates methane concentrations on the proposed development site. The soil gas investigation report shall include methodology and data collection techniques, as well as an evaluation of identified methane levels. **Step B. Protective Measures.** The following protective measures shall be submitted to the City for review and approval. The City shall review, or shall have third-party	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			review (peer review), of protective measures to validate the designs are in compliance with the applicable standards. All protective measures, with the exception of source removal, shall include operations and maintenance (O&M) plans and procedures to be implemented and maintained by the property owner. Step B.1. If the investigation outlined in Step A identifies methane (or other combustible soil gas) concentrations in excess of 5,000 parts per million (ppm) in any location on the proposed development site, the following protective measures shall be implemented for any building(s) within 300 feet of the identified location. ▪ Remove potential sources of combustible soil gases, such as petroleum-impacted soils or sumps, if present. ▪ Subslab passive venting of all slabs or foundations, the design of which is reviewed and approved by a registered/licensed professional engineer, geologist, or hydrogeologist, and is in accordance with California Building, Mechanical, and Plumbing Codes. ▪ If subslab passive venting is not practicable due to building design, active methane detection and forced air venting shall be implemented, the design of which is reviewed and approved by a registered/licensed professional engineer, geologist, or hydrogeologist, and is in accordance with	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			California Building, Mechanical, and Plumbing Codes. Step B.2. If the investigation identifies methane (or other combustible soil gas) concentrations in excess of 12,500 ppm in any location on the proposed development site, a soil gas mitigation plan shall be prepared and approved by a registered/licensed professional engineer, geologist, or hydrogeologist. Step B.3. If a proposed building will be placed within 25 feet of any abandoned oil/gas well, within 300 feet of an abandoned oil/gas well that is also beneath an impervious surface (such as a parking lot or road), within 25 feet of an impervious surface that covers an abandoned oil/gas well less than 300 feet from the building, or within 300 feet of an active gas seep zone, subslab passive venting shall be implemented as outlined in Step B.1. Gas membrane barriers may also be required as determined by the designing engineer specified in Step B.1. Step B.4. If a building will be placed on top of an abandoned oil/gas well and the ground floor is not naturally vented, an active interior methane detection system and forced air venting must be implemented as outlined in Step B.1. Step B.5. If a proposed building will be placed within 10 feet of an abandoned oil/gas well, a gas membrane barrier is required. The membrane shall be designed by a registered/licensed professional engineer, geologist, or hydrogeologist.	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.9-3	Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of sensitive land uses?	Potentially Significant Impact	**MM-4.9-1** and **MM-4.9-2**	**Significant and Unavoidable Impact**
4.9-4	Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Potentially Significant Impact	**MM-4.9-1**	**Significant and Unavoidable Impact**
4.9-5	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?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
4.9-6	Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
Cumulative	Would the project have a cumulative effect on hazards or hazardous materials?	Potentially Significant Impact	**MM-4.9-1** through **MM-4.9-3**	**Significant and Unavoidable Impact**

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.10	Hydrology and Water Quality			
4.10-1	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	No mitigation measures are required.	Less Than Significant Impact
4.10-2	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	No mitigation measures are required.	Less Than Significant Impact
4.10-3	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:	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
	i. Result in substantial erosion or siltation on or off site?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
	ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
	iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
	or provide substantial additional sources of polluted runoff; or			
	iv. Impede or redirect flood flows?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
4.10-4	In a flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
4.10-5	Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
Cumulative	Would the project have a cumulative effect on hydrology or water quality resources?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
4.11	**Land Use and Planning**			
4.11-1	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	No mitigation measures are required.	Less Than Significant Impact
Cumulative	Would the project have a cumulative effect on land use resources?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.12	**Mineral Resources**			
4.12-1	Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	No Impact	Not applicable.	No Impact
4.12-2	Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	No Impact	Not applicable.	No Impact
Cumulative	Would the project have a cumulative effect on mineral resources?	No Impact	Not applicable.	No Impact
4.13	**Noise***			
4.13-1	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-4.13-1**. *Construction Noise Management Plan and Best Management Practices.* Prior to the issuance of construction permits for future development projects subject to the MUOD within the Planning Area, the City shall ensure that the applicant requires, through the construction contractor's contract specifications, the preparation and implementation of a Construction Noise Management Plan, which shall include, at a minimum, the following: a) Identification of noise-sensitive receptor locations within 200 feet of the construction site; b) A construction equipment inventory with manufacturer's noise ratings or equivalent reference data; c) Predicted construction noise levels at identified receptors using FHWA RCNM or equivalent methodology;	**Significant and Unavoidable Impact**

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			d) Specification of noise reduction measures to be implemented, which may include temporary noise barriers (minimum 12-foot height, STC 25 or greater), equipment muffling, staging area locations, and haul route designations; e) A complaint response protocol with 24-hour contact information posted at the site perimeter; f) A requirement that all construction equipment operated on-site be equipped with properly operating and maintained mufflers, intake silencers, and engine enclosures consistent with manufacturer's specifications; g) A requirement that equipment not in active use be shut down to reduce idling noise; h) A requirement that stationary equipment (generators, compressors, pumps) be located as far as feasible from noise-sensitive receptor locations and be shielded with temporary barriers or enclosures where the equipment is within 100 feet of a residential property line; i) Compliance with the permitted construction hours specified in CMMC Section 13-279 (7:00 a.m. to 7:00 p.m. Monday through Friday; 9:00 a.m. to 6:00 p.m. Saturday; no construction on Sundays or federal holidays); j) Written notice to occupants of all residential properties within 300 feet of the construction site at least 10 days prior to the start of construction, identifying the expected schedule, duration, and contact information for noise concerns; and	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			k) Where high-noise operations (e.g., grading, demolition, concrete sawing) are anticipated within 100 feet of occupied residential structures, coordination with affected residents regarding scheduling to minimize disruption. MM-4.13-2. *Operational Noise Design, Performance, and Management.* Prior to the issuance of construction permits for future development projects subject to the MUOD within the Planning Area, the applicant shall demonstrate through project design, acoustical analysis, and operational planning that operational noise sources associated with the project will comply with the City noise standards and will minimize noise exposure to nearby sensitive receptors. The following requirements shall apply, as applicable: a) For projects that include stationary mechanical equipment (including but not limited to HVAC units, exhaust fans, generators, refrigeration equipment, pumps, and related appurtenances), the applicant shall demonstrate that the equipment will comply with the City's adopted residential exterior and interior noise standards, as applicable, at the nearest affected sensitive receptor locations, including equipment specifications (manufacturer/model or acoustical performance data), equipment location plans, and identification of noise control measures (e.g., barriers, parapets, enclosures, silencers, and vibration isolators), and where field verification is feasible, the City may require post-installation noise measurements consistent with the City's measurement protocol to confirm compliance;	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			b) For mixed-use or multi-family development projects that include loading areas, refuse collection points, compactors, or service bays, the applicant shall incorporate site design and operational plan that minimizes noise exposure to adjacent sensitive receptors, which may include locating loading and refuse areas away from sensitive property lines, orienting service activity toward internal site areas, providing solid enclosures around dumpsters and compactors, using rubber bumpers and quiet roll-up door hardware, prohibiting extended idling, and limiting routine deliveries and refuse service to daytime periods where feasible; c) For residential, mixed-use, or multi-family development projects that include outdoor common areas with active recreational amenities (e.g., pool/spa, barbeque/picnic areas, recreation courts), the applicant shall site and design such amenities to minimize operational noise exposure to adjacent existing sensitive receptors, which may include using building massing or solid walls as shielding, locating active amenities away from sensitive edges, and establishing operational quiet hours for outdoor common areas; and d) For mixed-use projects that include commercial tenants, outdoor seating, or other activity likely to generate evening or nighttime noise, the applicant or property manager shall implement a complaint response protocol that identifies a responsible contact, provides a means for residents to report persistent operational noise concerns, and documents corrective action (e.g., adjusting operating practices, modifying site management rules, adding localized noise controls).	

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.13-2	Would the project result in generation of excessive ground-borne vibration or ground-borne noise levels?	Potentially Significant Impact	**MM-4.13-3**. *Construction Vibration.* Prior to the issuance of construction permits for future projects subject to the MUOD within the Planning Area that utilize vibration-intensive construction equipment (e.g., pile drivers, jackhammers, vibratory rollers) within 500 feet of sensitive receptors, the applicant shall submit a vibration impact evaluation to the City for review and approval prior to issuance of a grading or building permit. The evaluation shall include a list of proposed construction equipment, associated vibration source levels, and a predictive analysis of potential project vibration impacts using Federal Transit Administration (FTA) guidance. If construction-related vibration is determined to exceed the FTA threshold of 0.2 inches per second peak particle velocity (PPV) or 80 velocity decibels (VdB) at vibration-sensitive uses, project-specific (e.g., suggested techniques per FTA or Caltrans guidance) measures shall be required to ensure compliance with vibration standards. All project-specific measures approved by the City shall be incorporated into appropriate construction-related plans (e.g., demolition plans, grading plans, and building plans) and implemented during project construction. Examples of equipment vibration source-to-receptor distances within which impact evaluation should occur, based on FTA reference vibration information, and with respect to potential for building occupant annoyance, include: ▪ Jackhammer – 23 feet ▪ Dozer, hoe-ram, drill rig, front-end loader, tractor, or backhoe – 42 feet ▪ Roller (for site ground compaction or paving) – 73 feet	**Significant and Unavoidable Impact**

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			▪ Impact pile-driving – 155 feet This mitigation measure shall remain in effect unless superseded by a citywide groundborne vibration ordinance that establishes construction vibration standards and ensures project compliance with FTA thresholds for development projects within the Planning Area. If construction-related vibration is anticipated to exceed the FTA thresholds, the contractor shall issue written notice to all receptors located within the identified screening distances no later than three weeks before beginning any activities that involve the vibratory equipment referenced above. The notification shall specify the expected start date and the duration of daytime vibration-producing work. It should also advise recipients of the potential for vibration-related impacts, particularly for those that possess vibration-sensitive equipment. A contact phone number should be provided to property owners or occupants to report if they have vibration-sensitive devices.	
4.13-3	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, would the project expose people residing or working in the project area to excessive noise levels?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
Cumulative	Would the project have a cumulative effect on noise?	Potentially Significant Impact	**MM-4.13-1** through **MM-4.13-3**	**Significant and Unavoidable Impact**

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.14	**Population and Housing***			
4.14-1	Would the 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)?	Potentially Significant Impact	**MM-4.14-1**. *SCAG Coordination and Inclusion in Regional Planning.* Within one year from approval of the Project, the City shall submit the Final PEIR to the Southern California Association of Governments (SCAG) for inclusion in regional planning documents, including the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (also referred to as Connect SoCal) and the Regional Housing Needs Assessment (RHNA), as applicable. This action is intended to ensure that the population, housing and employment growth facilitated by the Project is recognized and incorporated into regional forecasts. Doing so would allow SCAG and local jurisdictions to better align transportation, housing, and infrastructure planning with the long-term impacts of the Project.	**Significant and Unavoidable Impact**
4.14-2	Would the project displace substantial numbers of existing people or housing, especially affordable housing, necessitating the construction of replacement housing elsewhere?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
Cumulative	Would the project have a cumulative effect on housing and/or population resources?	Potentially Significant Impact	**MM-4.14-1**	**Significant and Unavoidable**
4.15	**Public Services**			
4.15-1	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:			
	i. Fire protection?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
	ii. Police protection?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
	iii. Schools?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
	iv. Libraries?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
Cumulative	Would the project have a cumulative effect on public services?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
4.16	**Recreation***			
4.16-1	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:			
	i. Parks?	Potentially Significant Impact	**No mitigation measures are feasible.**	**Significant and Unavoidable Impact**
4.16-2	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?	Potentially Significant Impact	**No mitigation measures are feasible.**	**Significant and Unavoidable Impact**
Cumulative	Would the project have a cumulative effect recreation resources?	Potentially Significant Impact	**No mitigation measures are feasible.**	**Significant and Unavoidable Impact**

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.17	**Transportation**			
4.17-1	Would the project conflict with an applicable plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
4.17-2	Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
Cumulative	Would the project have a cumulative effect on transportation resources?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact
4.18	**Tribal Cultural Resources***			
4.18-1	Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:			
	i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	Potentially Significant Impact	**MM-4.18-1.** *Tribal Cultural Resources*. During subsequent project-level environmental review, the City shall obtain a State of California Native American Heritage Commission (NAHC) Sacred Land Files Search, as appropriate, and comply with all applicable requirements of AB 52. Pursuant to AB 52, the City shall provide formal notification of the project to designated contact of each traditionally and culturally affiliated California Native American Tribe that has requested notice. The City shall begin the consultation process within 30 days after receiving a Tribe's request for consultation. The City shall consider all relevant information available for the property to identify potential tribal cultural resources in the project area, evaluate the project's potential	**Significant and Unavoidable Impact**

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			impacts to tribal cultural resources, and mitigate those potential impacts. If project impacts to tribal cultural resources are determined to be potentially significant, the City shall require the project to incorporate appropriate measures to avoid or minimize impacts to tribal cultural resources, including but not limited to, the measures recommended in Public Resources Code Section 21084.3, tribal monitoring, or other alternative measures identified in consultation with the California Native American Tribe. If an archaeological resource that is Native American in origin is identified in the preparation of a Phase I Archaeological Resources Inventory Report (see MM-4.5-2) or Native American archaeological resources are encountered during construction, the City shall consult and coordinate with the California Native American Tribal representatives who are traditionally or culturally affiliated with the geographic area of the development project to evaluate and mitigate impacts in accordance with the requirements set forth in MM-4.5-2. MM-4.5-2	
	ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision © of Public Resource Code Section	Potentially Significant Impact	MM-4.18-1 and MM-4.5-2	Significant and Unavoidable Impact

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
	5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.			
Cumulative	Would the project have a cumulative effect on tribal cultural resources?	Potentially Significant Impact	**MM-4.18-1** and **MM-4.5-2**	**Significant and Unavoidable Impact**
4.19	**Utilities and Service Systems**			
4.19-1	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	No mitigation measures are required.	Less Than Significant Impact
4.19-2	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	No mitigation measures are required.	Less Than Significant Impact
4.19-3	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	No mitigation measures are required.	Less Than Significant Impact

Table ES-1. Summary of Project Impacts

Section or Threshold Number	Environmental Impact	Level of Significance Without Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.19-4	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	No mitigation measures are required.	Less Than Significant Impact
Cumulative	Would the project have a cumulative effect on utilities and/or service systems resources?	Less Than Significant Impact	No mitigation measures are required.	Less Than Significant Impact

Note: * = Project would result in one or more "Significant and Unavoidable" impact(s) related to the indicated resource area(s).

ES.4 Areas of Known Controversy/Issues to be Resolved

Section 15123(b)(2) of the CEQA Guidelines indicates that an EIR summary should identify areas of controversy known to the lead agency including issues raised by agencies and the public. The City has complied with the State CEQA Guidelines by providing opportunities for early participation in the environmental review process. Specifically, in accordance with Section 15082(a) of the CEQA Guidelines, the City circulated a Notice of Preparation (NOP) for a 45-day public review period. The NOP was sent to the State Clearinghouse, the Orange County Clerk, public agencies, special districts, responsible and trustee agencies, and other interested parties for a public review period that began on November 17, 2025 and ended on December 19, 2025 (CEQA Public Review and Scoping Period) as well as the Scoping Meeting held on December 10, 2025. 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 PEIR. The NOP included an invitation to agencies and the public to review and comment on the NOP. A copy of the NOP is included in Appendix A-1, the comment letters received in response to the NOP are included in Appendix A-2, and the Scoping Meeting materials and comments are included in Appendix A-3 of this Draft PEIR.

With regard to the Project, the major issues to be resolved include decisions by the City, as lead agency, related to whether the benefits of the Project override those environmental impacts that cannot be feasibly mitigated, whether to adopt proposed mitigation measures, consideration of Project alternatives, and whether to approve, revise, or deny the proposed Project.

The primary areas of controversy identified by the public and agencies included the following potential issues (the Draft PEIR section[s] that address the issue[s] raised are provided in parentheses):[1]

- Potential impacts related to aesthetics and neighborhood character (Section 4.1, Aesthetics)
- Potential for air quality and/or pollution impacts and impacts to sensitive receptors (Section 4.3, Air Quality)
- Potential for impacts to biological resources and related to urban wildlife and at-risk species (Section 4.4, Biological Resources)
- Potential for impacts relating to hazards conditions (Section 4.9, Hazards and Hazardous Materials)
- Potential for impacts relating to water quality conditions (Section 4.10, Hydrology and Water Quality)
- Potential for impacts related to land use and planning (Section 4.11, Land Use and Planning)
- Potential impacts related to displacement of residents (Section 4.14, Population and Housing)
- Potential for impacts to open space and recreation (Section 4.16, Recreation)
- Potential impacts related to the transportation system, including traffic, freight/goods movement, transit mobility opportunities, opportunities for complete streets, walkability and bicycle lanes, increased vehicle miles traveled and pollution, safety, and consistency with adopted plans (Section 4.17, Transportation)
- Potential for impacts to tribal cultural resources and related to tribal consultation (Section 4.18, Tribal Cultural Resources)
- Potential for cumulative impacts (Chapter 4, Environmental Impact Analysis; see "Cumulative Impact Analysis" subsections in Sections 4.1 through 4.19 of Chapter 4)

[1] Comments received in response to the Project's Notice of Preparation are provided as Appendix A-2 and are summarized in Table 1-1, Notice of Preparation and Comment Letters Summary, in Chapter 1, Introduction of this Draft PEIR.

ES.5 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" (CEQA Guidelines Section 15126.6[a]). The CEQA Guidelines direct that the selection of alternatives be governed by "a rule of reason" (CEQA Guidelines Section 15126.6[f]).

As presented in this Draft PEIR and summarized above in Table ES-1, the Project would result in significant and unavoidable impacts after implementation of all mitigation measures. Topics for which impacts would be significant and unavoidable include the following: Aesthetics, Air Quality; Biological Resources; Cultural Resources; Geology and Soils; Greenhouse Gas Emissions; Hazards and Hazardous Materials; Noise; Population and Housing; Recreation; and Tribal Cultural Resources.

This Draft PEIR includes the analysis of four alternatives to the proposed Project:

- Alternative A – No Project/Buildout According to Adopted Plans
- Alternative B – Housing Element Sites Only
- Alternative C – Reduced Density of Non-Housing Element Sites
- Alternative D – Rezone on Non-Housing Element Industrial Sites and Safety Zone 3

Pursuant to Section 15126.6(d) of the CEQA Guidelines, each alternative is evaluated in sufficient detail to determine whether the overall environmental impacts would be less than, similar to, or greater than the corresponding impacts of the Project. Each alternative is also evaluated to determine whether the Project objectives would be substantially attained. Refer to Chapter 6, Alternatives to the Project, for a complete analysis of Project alternatives. A summary of each proposed alternative is provided below.

E.S.5.1 Alternative A – No Project/Buildout According to Adopted Plans

Under Alternative A, the Planning Area would continue to develop in accordance with the City's General Plan existing land use designations and zoning, as well as in accordance with General Plan Amendments and Specific Plans that have occurred since the adoption of the General Plan. In order to compare the buildout of Alternative A to the Project, the existing maximums under General Plan land use designations and zoning residential and non-residential square footage (for both Alternative A and the Project) are considered in combination with the "realistic capacity" methodology used under the proposed Project (see Appendix B, Buildout Methodology, for more discussion).

Table ES-2. Comparison of Planning Area Buildout Projections and Alternative A Buildout Projections

Category	Project Buildout Projections	Alternative A Buildout Projections	Difference in Buildout *(Alternative A – Project)*
Population[1]	52,872	2,912	**- 49,960**
Housing (DU)	22,030	1,138	**- 20,892**
Non-Residential Square Feet	17,306,003	19,663,251	**+2,357,248**

Sources: Appendix B, Buildout Methodology. See Table 4.14-5, within Section 4.14, Population and Housing, of this Draft PEIR.
Notes: Negative number is represented by parenthesis "(number)."
1 Baseline population for the Planning Area reflects population estimate (2.56 persons per household) for the City as recorded by the U.S. Census Bureau's 2020-2024 American Community Survey (U.S. Census 2026).

As shown in Table ES-2, under Alternative A, there would be approximately 49,960 fewer residents, 20,892 fewer dwelling units, and 2,357,248 more non-residential square feet within the Planning Area when compared to Project buildout conditions.

ES.5.2 Alternative B - Housing Element Sites Only

Under Alternative B, the anticipated residential and mixed-use development buildout associated with implementation of the MUOD would only occur for Housing Element sites. Other Measure K sites (non-Housing Element sites) would remain as-is and would retain underlying land use and zoning. Therefore, Alternative B would reduce the Planning Area from 1,079 parcels to 94 parcels and no rezoning or additional growth potential would be assumed on the non-Housing Element sites.[2]

Table ES-3. Comparison of Project Planning Area Buildout Projections and Alternative B Buildout Projections

Category	Project Buildout Projections	Alternative B Buildout Projections	Difference in Buildout *(Alternative B – Project)*
Population[1]	52,872	15,071	**-37,801**
Housing (DU)	22,030	5,887	**-16,143**
Non-Residential Square Feet	17,306,003	3,663,476	**-13,642,527**

Sources: Appendix B, Buildout Methodology. See Table 4.14-5, within Section 4.14, Population and Housing, of this Draft PEIR.
Notes: Negative number is represented by parenthesis "(number)."
1 Baseline population for the Planning Area reflects population estimate (2.56 persons per household) for the City as recorded by the U.S. Census Bureau's 2020-2024 American Community Survey (U.S. Census 2026).

As shown above in Table ES-3, Alternative B would result in 5,887 units and 3,663,476 non-residential square feet. Under this alternative, there would be 16,143 fewer units (including 37,801 fewer residents) and 13,642,527 fewer non-residential square feet when compared to the Project buildout conditions.

2 Housing Element sites reflect the Sites Inventory at the time of the Notice of Preparation publication (November 2025) and is subject to change. Following City Council action on March 17, 2026 and April 7, 2026, to remove 18 Housing Element sites and add 2 sites, the City of Costa Mesa has made "no net loss" findings and is in the process of identifying sites to be added to the Housing Element with sufficient capacity to meet the City's RHNA. All properties being considered are Measure K sites, within the Planning Area, and are already being studied (see Chapter 3, Project Description, of this PEIR).

ES.5.3 Alternative C - Reduced Density of Non-Housing Element Sites

Under Alternative C, the residential and mixed-use development buildout associated with implementation of the MUOD would still apply to the entire Planning Area. However, under Alternative C, a maximum of 30 du/ac would be applied to all non-Housing Element sites, which would still be consistent with Government Code Section 65583.2(c)(3)(B).[3] The Project currently proposes that non-Housing Element sites in North Costa Mesa (north of the Interstate 405 [I-405] freeway) be assigned a maximum density of 60 dwelling units per acre given the prevalence of larger sites (i.e., >5 acres) that are able to accommodate greater densities. As such, Alternative C serves as a 'reduced residential development' scenario that would not alter the number and location of parcels included in the MUOD, but would reduce the allowable density on non-Housing Element sites north of I-405 in order to reduce the Project's residential buildout.

Table ES-4. Comparison of Project Planning Area Buildout Projections and Alternative C Buildout Projections

Category	Project Buildout Projections	Alternative C Buildout Projections	Difference in Buildout *(Project – Alternative C)*
Population[1]	52,872	46,442	**-6,430**
Housing (DU)	22,030	18,141	**-3,889**
Non-Residential Square Feet	17,306,003	17,306,003	**0**

Sources: Appendix B, Buildout Methodology. See Table 4.14-5, within Section 4.14, Population and Housing, of this Draft PEIR.
Notes: Negative number is represented by parenthesis "(number)."
1 Baseline population for the Planning Area reflects population estimate (2.56 persons per household) for the City as recorded by the U.S. Census Bureau's 2020-2024 American Community Survey (U.S. Census 2026).

As shown above in Table ES-4, there would be 6,430 fewer residents, 3,889 fewer dwelling units, and same amount of non-residential square feet under Alternative C when compared to Project buildout conditions.

ES.5.4 Alternative D - Rezone on Non-Housing Element Industrial Sites and Safety Zone 3

Under Alternative D, no rezoning would occur on non-Housing Element sites with underlying industrial land uses. However, the amended MUOD would still apply to Housing Element sites with underlying industrial land uses, and future residential/mixed-use development projects under Alternative D could be developed on existing industrial uses. Approximately 283 of 1,079 parcels within the Planning Area are coded by SCAG as having an existing industrial use and are identified as non-Housing Element sites (Appendix B). These parcels would be removed from the Planning Area under Alternative D. In addition, Alternative D would remove 9 parcels from the Planning Area that are within John Wayne Airport Safety Zone 3, as shown in Figure 4.9-5, Airport Hazards, of this Draft PEIR. As a result, Alternative D would remove 292 parcels from the Planning Area. Table ES-5 reflects the buildout of population, housing, and non-residential square footage for Alternative D.

3 Government Code Section 65583.2(c)(3)(B) states, "[t]he following densities shall be deemed appropriate to accommodate housing for lower income households… (iv) For a jurisdiction in a metropolitan county: sites allowing at least 30 units per acre." The City of Costa Mesa is located within a jurisdiction in a metropolitan county (Orange County).

Table ES-5. Comparison of Project Planning Area Buildout Projections and Alternative D Buildout Projections

Category	Project Buildout Projections	Alternative D Buildout Projections	Difference in Buildout *(Project – Alternative D)*
Population[1]	52,872	40,706	**-12,166**
Housing (DU)	22,030	15,901	**-6,129**
Non-Residential Square Feet	17,306,003	12,715,260	**-4,590,743**

Sources: Appendix B, Buildout Methodology. See Table 4.14-5, within Section 4.14, Population and Housing, of this Draft PEIR.
Notes: Negative number is represented by parenthesis "(number)."
[1] Baseline population for the Planning Area reflects population estimate (2.56 persons per household) for the City as recorded by the U.S. Census Bureau's 2020-2024 American Community Survey (U.S. Census 2026).

As shown above in Table ES-5, there would be 12,166 fewer residents, 6,129 fewer dwelling units, and approximately 4.5 million fewer square feet of non-residential uses when compared to Project buildout conditions.

ES.5.5 Environmentally Superior Alternative

An EIR must identify an "environmentally superior" alternative; and, where the no project alternative is environmentally superior, the EIR is then required to identify an alternative from among the others evaluated as environmentally superior (CEQA Guidelines Section 15126.6(e)(20). When compared to the Project and Alternatives C and D, Alternative B would be the environmentally superior alternative. (Refer to Chapter 6, Alternatives to the Project, of this Draft PEIR for further details and discussion of proposed Alternatives A, B, C, and D).

ES.6 References

City of Costa Mesa. 2025. Measure K: Ordinance to Revitalize Commercial and Industrial Areas and Protect Residential Neighborhoods. Accessed November 2025. https://www.costamesaca.gov/trending/measure-k.

U.S. Census (United States Census Bureau). 2026. QuickFacts. Costa Mesa city, California. Accessed February 18, 2026. https://www.census.gov/quickfacts/fact/table/costamesacitycalifornia/HSD410224#HSD410224.

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1 Introduction

1.1 Purpose of the Environmental Impact Report

This Draft Program Environmental Impact Report (Draft PEIR) for the proposed Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation and associated discretionary actions (collectively referred to as the "Project" or the "proposed Project") has been prepared by the City of Costa Mesa (City) in conformance with the California Environmental Quality Act (CEQA) Statute (California Public Resources Code [PRC] Section 21000, et seq.) and CEQA Guidelines (California Code of Regulations [CCR] Title 14, Chapter 3, Sections 15000, et seq.).

Pursuant to Section 15367 of the CEQA Guidelines, the City is the lead agency under whose authority this Draft PEIR has been prepared. Under the provisions of CEQA, "[t]he 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" (PRC 21002[a]).

This Draft PEIR is intended to provide information to public agencies, decision-makers, and the public regarding the environmental impacts that would result from implementation of the Project and to allow the decision-makers to make an informed decision on the requested discretionary actions and necessary approvals by other agencies for this Project.

1.2 Program EIR

CEQA Guidelines Section 15168(a) provides for the preparation of a PEIR for a series of actions that can be characterized as one large project and are related either:

(1) Geographically,
(2) As logical parts in the chain of contemplated actions,
(3) In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or,
(4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.

The proposed Project is comprised of changes to land use that would allow for subsequent development activities within the city that are anticipated to have similar environmental effects that could be addressed through the same mitigation measures. Therefore, a PEIR is appropriate for the Project.

In accordance with CEQA Guidelines Section 15168, this Draft PEIR may serve as the environmental document for subsequent activities associated with the Project to the extent it contemplates and adequately analyzes the potential environmental effects of those subsequent activities. For example, there are various CEQA streamlining opportunities that may be applicable for future development projects including but not limited to environmental review pursuant CEQA Guidelines Section 15152, 15153, 15168(c), and 15183. Therefore, if the City finds that those subsequent activities fall under the scope of the Project covered by this Draft PEIR, then no additional CEQA review, such as a project-level CEQA document, would be required.

1.3 Environmental Review Process

In accordance with Section 15063 of the CEQA Guidelines, the City prepared an Initial Study (IS) for the proposed Project that was completed in November 2025. Per the CEQA Guidelines, the purpose of an Initial Study is to provide the Lead Agency with information to use as the basis for deciding whether to prepare an EIR or a Negative Declaration, to enable an applicant or Lead Agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a Negative Declaration, and/or to assist in the preparation of an EIR, among others. The IS determined that the proposed Project would not result in any significant impacts to wildfire and various other individual thresholds under various other environmental topics (see Section 5.5, Effects Found Not to Be Significant, of this Draft PEIR, for additional discussion regarding these impacts). The IS prepared for the proposed Project can be found in Appendix A-1, NOP and Initial Study, of this Draft PEIR.

In accordance with Section 15082(a) of the CEQA Guidelines, the City circulated a Notice of Preparation (NOP) for a public review period. The NOP was available for public review for the required 30-day public review period. The NOP was sent to the State Clearinghouse, the Orange County Clerk, public agencies, special districts, responsible and trustee agencies, and other interested parties for a public review period that began on November 17, 2025 and ended on December 19, 2025. 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 PEIR.

The NOP was also printed and published in the *Daily Pilot - Los Angeles Times*. Additionally, hardcopies of the NOP were made available for public review at City Hall, the Mesa Verde Library and the Costa Mesa/Donald Dungan Library. Electronic copies of the NOP were made available for download on the City's website and the Project's website at:

https://www.costamesaca.gov/government/departments-and-divisions/economic-and-development-services/planning/environmental-notices-and-reports

https://www.costamesaneighborhoods.com/resources

The NOP included a description of the proposed Project, identification of potential environmental effects that would be addressed in the Draft PEIR, and an invitation to agencies and the public to review and to identify any additional environmental issues that should be addressed as well. The NOP and comments are provided in Appendix A-1, NOP and Initial Study, and Appendix A-2, NOP Comment Letters, respectively, of this Draft PEIR. Comments on the NOP were received from two state agencies and one community group. The NOP comment letters, which contain environmental concerns, are listed in Table 1-1, Notice of Preparation and Comment Letters Summary, along with a summary of the environmental issues raised and the Draft PEIR chapter(s) or section(s) where the environmental topics are addressed.

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

Commenter	Date Received	Summary of Comments	Addressed in PEIR Section(s)
State Agency			
California Department of Transportation (Caltrans)	12/15/2025	Transportation and land use concerns; increased vehicle miles traveled; consideration of complete streets; coordination with the Orange County Transportation Demand Management Plan; transit mobility opportunities; freight/good movement	Section 4.11, Land Use and Planning; Section 4.17, Transportation
Native American Heritage Commission (NAHC)	11/20/2025	Tribal consultation requirements of SB 18 and AB 52	Section 4.18, Tribal Cultural Resources
Community Groups			
Costa Mesa First	12/19/2025	Location concerns; potential for density bonus; nearby sensitive receptors exposed to pollution burdens; displacement of residents; impacts on biological resources; impacts on parks and increased need for parkland; water sources; visual impacts and neighborhood character; comprehensive analysis of cumulative impacts and environmental impacts; utilization of adequate mitigation measures	Section 2, Environmental Setting and all subsections of Section 4, Environmental Impact Analysis

Source: Appendix A-2

Pursuant to Section 21083.9 of the CEQA Statutes and Section 15802(c) of the CEQA Guidelines, the lead agency is required to conduct at least one scoping meeting for all projects of Statewide, regional, or areawide 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. The City hosted a scoping meeting at the Costa Mesa City Council Chambers on December 10, 2025, at 5:30 PM. A Spanish-speaking interpreter was present at the meeting to assist with translation services.

At the conclusion of the presentation, attendees of the scoping 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 written comments/questions and two verbal comments on the Project and/or related to environmental topics during the scoping meeting, which are summarized in Table 1-2, Scoping Meeting Comments Summary.

Table 1-2. Scoping Meeting Comments Summary

Commenter	Summary of Comments	Addressed in PEIR Section(s)
David Martinez	This commenter provided written comments with concerns regarding transportation mitigation measures and roadway widening.	Section 4.17, Transportation
Rick Huffman	This commenter provided written comments with concerns regarding: traffic impacts, including pollution, safety, and equity; cumulative impacts relating to maximum build out on open space streets and over grouping; demand increase for parks and effects on urban wildlife and at-risk species; financial stress to City services.	Section 4.3, Air Quality; Section 4.4, Biological Resources; Section 4.16, Recreation; Section 4.17, Transportation
Mahmoud Niroumand	This commenter provided verbal comments with concerns regarding existing water quality conditions and hazardous conditions.	Section 4.9, Hazards and Hazardous Materials; Section 4.10, Hydrology and Water Quality
Angely Andrade Vallarta	The commenter provided verbal comments on the importance of the proposed Project, including comments in support for walkability and bicycle lanes, landscaping/shade, and parking.	Section 4.17, Transportation

Source: Appendix A-3.

1.4 Public Review of the Draft PEIR

In accordance with the CEQA Guidelines Sections 15087 and 15105, this Draft PEIR is circulated to responsible and trustee agencies, other affected agencies, bordering municipalities, organizations, and all other interested parties for a 45-day public review period. A Notice of Availability of the Draft PEIR was published in the *Daily Pilot - Los Angeles Times*. Additionally, during the public review period, copies of the Draft PEIR are available at City Hall, the Mesa Verde Library and the Costa Mesa/Donald Dungan Library. In accordance with CEQA Guidelines Section 15105, the 45-day public review period began Tuesday June 16, 2026, and will end Monday, August 3, 2026. During the public review period, written comments concerning the Draft PEIR may be submitted by interested public agencies and members of the public via email to: neighborhoods@costamesa.gov, or by mail to:

Costa Mesa Community Development Department
Attn: Michelle Halligan, Senior Planner
77 Fair Drive 2nd Floor
Costa Mesa, California 92626

The Draft PEIR can be viewed or downloaded at the City's website at:

https://www.costamesaca.gov/government/departments-and-divisions/economic-and-development-services/planning/environmental-notices-and-reports.

After the public review period ends, written responses to all comments on the environmental issues will be prepared as part of the Final PEIR. In addition, the Final PEIR may also contain corrections and additions to the Draft PEIR and other information relevant to the environmental issues associated with the Project. As required by CEQA, written responses to comments received from any state agencies will be distributed to those agencies for review at least 10 days prior to the public hearing at which certification of the Final PEIR will be considered. All persons who comment on the Draft PEIR will be notified of the availability of the Final PEIR and the date of any public hearing(s).

1.5 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 part of another document is incorporated by reference, the incorporated language is considered to be included in the EIR. The following documents are incorporated into reference into this Draft PEIR and are available to be viewed online:

- The **Costa Mesa 2015-2035 General Plan** provides an assessment of the city across physical, social, economic, and environmental characteristics. The Costa Mesa General Plan sets forth the vision, goals, objectives, and policies for the City through 2035. The General Plan is available at the link below:

  https://www.costamesaca.gov/government/departments-and-divisions/economic-and-development-services/planning/general-plan/2015-2035-general-plan

- The **Costa Mesa 2015-2035 General Plan EIR** analyzes environmental issues with a discussion of the existing environmental setting, including physical conditions and pertinent planning and regulatory framework for each topic. The impact analysis examines the broad, long-term environmental effects resulting from implementation of the goals and policies contained in each of the amended General Plan elements. The General Plan EIR is available at the link below:

  https://www.costamesaca.gov/government/departments-and-divisions/economic-and-development-services/planning/general-plan/2015-2035-general-plan

- The **City of Costa Mesa Municipal Code** outlines the legal and procedural requirements for land use and zoning, building and site development, environmental compliance, and permitting and enforcement. The Municipal and Development Code provides zoning regulations, land use controls, subdivision and parcel maps, environmental and resource protection, permit processes, and code enforcement. The code is available at the link below:

  https://ecode360.com/CO4918

- The **City of Costa Mesa Housing Element (2021-2029)** is one of the seven State mandated elements included in the City of Costa Mesa General Plan. The purpose of the Housing Element is to identify a strategy for addressing the City's existing and projected housing needs over the eight-year planning period. The Housing Element contains a detailed work program of the City's housing goals, policies, quantified objectives, and actions or programs for the preservation, improvement, and development of housing. The Housing Element is available at the link below:

  https://www.costamesaca.gov/government/departments-and-divisions/economic-and-development-services/planning/housing-element-update

- The **Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation** website provides information regarding the proposed Project and all efforts being conducted by the City as part of the Project's process. The Project website is available at the link below:

  https://www.costamesaneighborhoods.com/

- The **2020 Urban Water Management Plan (UWMP)** from Mesa Water District (MWD) outlines MWD's long term strategy to ensure reliable water supply through 2045. The UWMP fulfills the requirements under the California Urban Water Management Planning Act, which ensure that MWD plans for water supply reliability during wet and dry seasons. The UWMP complies with mandates which include SBX7-7, the Water Conservation Act of 2009, which required a 20 percent reduction in water use by 2020. The UWMP provides a description of the MWD water supply system, water usage, baseline and target water usage, system water supplies, water supply reliability, water shortage contingency planning, demand management measures, and plan adoption and implementation. The UWMP is available at the link below:

  https://www.mesawater.org/sites/default/files/Save%20Water/Documents/Mesa%20Water%202020%20UWMP%20FINAL-2021.06.30.pdf

- The **Costa Mesa Storm Drain System Master Plan Update** outlines the existing condition of the City's storm drain systems as they operate today, how existing storm drain systems are modeled and analyzed, and how the City prioritizes future storm drain projects throughout the city. The Strom Drain Master Plan also includes an analysis regarding proposed drainage & water quality improvements to the system, and a Storm Drainage Impact Fee Nexus Study. The Storm Drain System Master Plan ensures compliance with state regulations, support for future development, and protection of public health and the environment. It covers a utility system overview, regulatory compliance, planning and asset management, environmental review, and financial planning to ensure sustainable funding. The Storm Drain System Master Plan is available at the link below:

  https://www.costamesaca.gov/government/departments-and-divisions/public-works/engineering/storm-drain-master-plan

1.6 Mitigation Monitoring Procedures

CEQA Guidelines Section 15097 requires that the mitigation measures and revisions to the proposed Project identified in the PEIR 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 Project will be completed as part of the Final PEIR, prior to consideration of the Project by the City of Costa Mesa Planning Commission and City Council.

1.7 Organization of the Draft Program Environmental Impact Report

The Draft PEIR is comprised on the following chapters:

- **Executive Summary** – Outlines the conclusions of the environmental analysis and provides a summary of the proposed Project and alternatives analyzed in the Draft PEIR. This chapter also includes a table summarizing all environmental impacts identified in the Draft PEIR, along with the associated mitigation measures proposed to reduce or avoid each impact.
- **Chapter 1: Introduction** – Serves as a foreword to the Draft PEIR, introducing the proposed Project; the type, purpose, and intended uses of this Draft PEIR; the public review process, including summaries of

public comments received during the NOP review period and scoping meeting; the documents incorporated by reference; and the mitigation monitoring procedures.

- **Chapter 2: Environmental Setting** – Introduces the existing environmental conditions, including a detailed description of the proposed Project location and existing environmental conditions.
- **Chapter 3: Project Description** – Provides a detailed description of the Project, including the updates to existing conditions, legislative changes, General Plan Element updates, projected buildout, a summary of the buildout assessment methodology, and a statement of objectives. The Project Description also provides the intended uses of the Draft PEIR and the required approvals.
- **Chapter 4: Environmental Analysis** – This chapter contains 19 sections that analyze each environmental resource topic area. Each section presents the existing conditions, regulatory setting, proposed Project and cumulative impact analyses, mitigation measures (if required), and significance conclusions after mitigation for each environmental impact issue.
- **Chapter 5: Other CEQA Considerations** – This chapter provides a discussion of significant and unavoidable impacts that would result from the Project, significant and irreversible changes to the environment, growth-inducing impacts, potential secondary effects of mitigation, and effects found not to be significant.
- **Chapter 6: Alternatives** – As required by CEQA, this chapter of the Draft PEIR evaluates alternatives to the proposed Project and compares the potential impacts of each alternative with the Project's potential impacts. Pursuant to CEQA Guidelines Section 15126.6(b), alternatives were selected based primarily on the ability of the alternatives to reduce significant impacts of the Project, even if those alternatives would impede, to some degree, the attainment of the Project's objectives.
- **Chapter 7: Preparers and References** – This chapter provides a listing of the primary authors of the Draft PEIR and the complete list of references cited.

The Draft PEIR includes the following appendices:

- Appendix A-1: NOP and Initial Study
- Appendix A-2: NOP Comment Letters
- Appendix A-3: Scoping Meeting Comments
- Appendix B: Buildout Methodology
- Appendix C: Land Evaluation and Site Assessment Report
- Appendix D: Air Quality and Greenhouse Gas Emissions Modeling and Energy Calculations
- Appendix E: CNDDB List, CNPS Inventory, and IPaC Records
- Appendix F: *Confidential* NAHC SLF Records Search Results
- Appendix G-1: *Confidential* NHMLA Records Search Results
- Appendix G-2: *Confidential* OC Records Search Results
- Appendix H: Noise Technical Data
- Appendix I: Public Services Correspondence
- Appendix J: OCTAM Land use Modeling Inputs
- Appendix K-1: NAHC Sacred Land Files Results and AB 52 and SB 18 Notification Letters
- Appendix K-2: Confidential Tribal Communications Records - Not for Public Review
- Appendix L: Utility Services Correspondence

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2 Environmental Setting

2.1 Introduction

This chapter describes the environmental setting of the City of Costa Mesa (City) Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation (Project or proposed Project) and provides an overview of the regional setting, existing conditions within the City, and the planning context. As stated in California Environmental Quality Act (CEQA) Guidelines Section 15125(a):

> An EIR must include a description of the physical environmental conditions in the vicinity of the project. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. The description of the environmental setting shall be no longer than is necessary to provide an understanding of the significant effects of the proposed Project and its alternatives. The purpose of this requirement is to give the public and decision makers the most accurate and understandable picture practically possible of the project's likely near-term and long-term impacts.

CEQA requires that the lead agency describes the physical environmental conditions as they exist at the time the Notice of Preparation (NOP) is published, which was November 17, 2025. Comments received in response to the NOP are summarized in Table 1-1, Notice of Preparation and Comment Letters Summary, included in Chapter 1, Introduction, of this Draft Program Environmental Impact Report (Draft PEIR). A copy of the NOP is included in Appendix A-1 and the comment letters received in response to the NOP are included in Appendix A-2 of this Draft PEIR.

2.1.1 Scope of the Environmental Impacts

The proposed Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation Project is evaluated in this Draft PEIR at a programmatic level, in accordance with CEQA Guidelines Section 15168. The Project would not result in the construction or operation of any new development or infrastructure projects or propose any site-specific development that could directly result in construction or operational impacts to the environment. Rather, implementation of the proposed Project would result in changes to the Zoning Code (Title 13, Planning, Zoning, and Development of the City's Municipal Code) that would allow for additional future development/redevelopment to occur. Therefore, this Draft PEIR does not assess site-specific construction or operation details of each future development within the Planning Area. Instead, it assesses the impacts associated with changes to existing land uses and the associated overall effects of buildout of the proposed Project over the next 30 years (through 2056). Approval of the Project is unlikely to have immediate effects, as land use change would gradually occur over time in accordance with various factors including economic market conditions. Potential impacts to environmental resources are assessed in Sections 4.1 through 4.19 of Chapter 4, Environmental Impact Analysis, of this Draft PEIR in accordance with Appendix G of the State CEQA Guidelines.

Section 4.1 through Section 4.19 of Chapter 4 of this Draft PEIR presents the environmental setting, regulatory framework, and analyses of potential impacts related to future development that is expected to occur through the buildout of the Project by 2056. Implementation of the Project would result in land use changes that would allow for denser development or redevelopment to occur in the future. As such, this Draft PEIR assesses impacts associated with programmatic changes to existing land uses and the associated overall effects of buildout of the Project through

2056, where reasonably foreseeable physical changes to the environment could occur. Site-specific or "project-level" development evaluations are not possible because the actual locations and intensity of development (and its chronologic sequence or concurrence) that may be implemented in the future are speculative. If potential significant impacts are identified, feasible programmatic mitigation measures are recommended. The analysis also includes an anticipated level of impact after the implementation of programmatic mitigation measures.

This programmatic analysis of the Project evaluates proposed rezoning of all Measure K sites, including Housing Element sites and non-Housing Element sites, along with modifications to the City's zoning regulations across existing urban plans, overlays, and specific plans with the intent to clarify, consolidate, and streamline regulations where possible to implement the rezoning and meet State law, as discussed in detail in Chapter 3, Project Description of this Draft PEIR.

2.2 Regional Setting

2.2.1 Project Location

The City of Costa Mesa is approximately 15.8 square miles within Orange County, California, with a population of approximately 109,131 residents (City of Costa Mesa 2026). Costa Mesa is bordered by the City of Fountain Valley to the northwest; the Santa Ana River and the City of Huntington Beach to the west; the City of Newport Beach to the south and southeast; John Wayne International Airport to the east; the City of Irvine to the northeast; and the City of Santa Ana to the north. Figure 2-1, Regional Location and Local Vicinity Map, identifies the boundaries of the city in the context of Orange County.

The proposed Project includes components that would apply citywide and includes components that would affect only select parcels, as described in detail in Section 3, Project Description of this PEIR. The proposed rezoning, which would result in environmental impacts associated with anticipated buildout of the proposed zoning changes, would be implemented on parcels at various locations, but generally located along major transportation and commercial corridors in the city. The identified key corridors within the city include Newport Boulevard, Harbor Boulevard, Placentia Avenue, 19th Street, 18th Street, 17th Street, Baker Street, Bristol Street, and areas north of Interstate (I) 405 (City of Costa Mesa 2025a).

Given the citywide nature of the Project, the location of identified parcels to be rezoned is collectively defined as the "Planning Area." Specifically, the Planning Area is comprised of all Measure K sites, which include Housing Element sites and non-Housing Element sites (sites that were not included in the Housing Element but were identified under Measure K). For more information regarding Measure K, see Section 2.2.2.3 below. The Measure K sites, including Housing Element sites and non-Housing Element sites, are identified on Figure 2-2, Planning Area, and a full list of all parcels included under this Project can be found in Attachment A to Appendix B, Planning Area Parcel List.

2.2.2 Planning Considerations

2.2.2.1 State

California Government Code

Section 65300, State Planning Law

State planning law (California Government Code Section 65300) requires every county or city in California to adopt a comprehensive, long-term general plan for physical development of the county. A general plan should consist of an integrated and internally consistent set of goals and policies that are grouped by topic into a set of elements and are guided by a countywide vision. State law requires that a general plan address eight elements or topics (land use, circulation, housing, conservation, open space, noise, safety, and environmental justice), but allows some discretion on the arrangement and content. Additionally, each of the specific and applicable requirements in the state planning law should be examined to determine if there are environmental issues within the county or city that a general plan should address. In Costa Mesa, the General Plan serves as the foundation for all citywide planning, including Urban Plans and Specific Plans which focus on land use and development regulations that are specific to their respective plan areas.

Section 65580, Housing Element Law

Since 1969, the State of California has required all local governments to adequately plan to meet the housing needs of everyone in the community. California's local governments meet this requirement by adopting housing plans as part of their General Plan. The law mandating that housing be included as an element of each jurisdiction's general plan is known as "Housing Element Law" (California Government Code sections 65580 et seq.). Pursuant to State law, the Housing Element must be updated periodically according to statutory deadlines. The most current Housing Element Update covers the planning period of October 15, 2021, to October 15, 2029. The City's Housing Element must be updated every eight years and must be reviewed by the California Department of Housing and Community Development (HCD) before it is adopted.

The Housing Element Update represents the City's effort in fulfilling the requirements under State Housing Element law. The State Legislature requires cities to adopt updates to their Housing Element in line with anticipated housing demand and under the goal that residents should have access to an attainable and suitable living environment. The law does not require local governments to actually build the housing, but the adopted Housing Element must provide an identification and analysis of existing and projected housing needs and a statement of goals, policies, quantified objectives, and scheduled programs for the preservation, improvement, and development of housing. The Housing Element must identify adequate sites for housing and make adequate provision for the existing and projected needs of all economic segments of the community. The California HCD is required to prepare a Regional Housing Needs Assessment (RHNA) for each Council of Governments in the State that identifies projected residential dwelling units ("units") needed for all economic segments based on Department of Finance population estimates.

2.2.2.2 Regional

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the Council of Governments for Los Angeles, Ventura, Riverside, Orange, San Bernardino, and Imperial Counties. SCAG is a federally recognized Metropolitan Planning Organization (MPO) that represents the counties of Los Angeles, Orange, Ventura, Imperial, San Bernardino, and Riverside, and 191 cities, and encompasses over 38,000 square miles (SCAG 2025). SCAG is a regional planning agency and a forum for addressing regional issues concerning transportation, the economy, community development, and the environment. SCAG is also the regional clearinghouse for projects requiring environmental documentation under federal and State law. In this role, SCAG reviews proposed development and infrastructure projects to analyze their impacts on regional planning programs. As the Southern California region's MPO, SCAG cooperates with the South Coast Air Quality Management District (SCAQMD), the California Department of Transportation (Caltrans), and other agencies in preparing regional planning documents (SCAG 2025).

SCAG allocates the fair share of the total RHNA (regional housing growth) needed for each income category to the six counties and 191 cities and unincorporated County areas. Each local government must demonstrate that it has planned for and has capacity to accommodate all of its RHNA in its Housing Element. The future housing needs allocations are broken down by income level so that each jurisdiction is responsible for the development of affordable housing units to meet future housing needs.

SCAG is required to develop a final RHNA methodology to distribute existing and projected housing need for the planning period October 2021 through October 2029 (known as the 6th Cycle RHNA). HCD 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, the regional existing need for additional housing units has been determined to be 836,857 units, and the regional projected need is 504,970 units (SCAG 2020). SCAG's 6th Cycle RHNA allocation for the City, based on the Regional Council-approved Final RHNA Methodology, was determined to be a total of 11,760 units (2,919 very-low income, 1,794 low income, 2,088 moderate income, and 4,959 above-moderate income units). Note that the state-mandated RHNA allocations require planning to encourage and facilitate residential development, but do not require the actual construction of the allocated units by 2029.

Regional Transportation Plan/Sustainable Communities Strategy

SCAG is federally mandated to develop plans for transportation, growth management, hazardous waste management, and air quality. The Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) includes goals to increase mobility and enhance sustainability for the region's residents and visitors. The RTP/SCS recommends local jurisdictions accommodate future growth within existing urbanized areas, particularly near existing transit, to reduce vehicle miles traveled (VMT), congestion, and greenhouse gas (GHG) emissions.

The 2024–2050 RTP/SCS (also referred to as "Connect SoCal") presents the land use and transportation vision for the SCAG region through fiscal year 2050 (SCAG 2024). The following are the explicit top-line goals set forth by Connect SoCal RTP/SCS: (1) Mobility: build and maintain an integrated multimodal transportation network; (2) Communities: develop, connect and sustain livable and thriving communities; (3) Environment: create a healthy region for the people of today and tomorrow; (4) Economy: support a sustainable, efficient and productive regional economic environment that provides opportunities for all people in the region (SCAG 2024).

2.2.2.3 Local

City of Costa Mesa General Plan

A General Plan is intended to provide direction for future development and conservation. 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 City's General Plan provides the policy framework and establishes the long range vision through the year 2035. The General Plan consists of the following elements: Land Use, Circulation, Growth Management, Housing, Conservation, Noise, Safety, Community Design, Open Space and Recreation, and Historical and Cultural.

- The Land Use Element establishes and defines the various land use designations (e.g. residential, commercial, industrial) in the City. The Element prioritizes preservation of neighborhood character while directing higher-intensity residential, commercial, and mixed-use development to targeted corridors and activity centers. Industrial uses are maintained in designated areas and support economic diversity within the City. The Land Use Element identifies 16 different land use designations, with 3 being residential designations. At the time of the drafting of the Land Use Element in 2015, the residential neighborhoods (single- and multi-family land uses) encompassed 42.6 percent of the land area of the city (3,716 acres out of 8,042 total acres). The existing General Plan land use designations for the Planning Area parcels are illustrated on Figure 2-3, Existing General Plan Land Use Designations. The Land Use Goals set forth in this Element include:
    - Goal LU-1: A Balanced Community with a Mix of Land Uses to Meet Resident and Business Needs
    - Goal LU-2: Preserve and Protect Residential Neighborhoods
    - Goal LU-3: Development that Maintains Neighborhood Integrity and Character
    - Goal LU-4: New Development that Is Sensitive to Costa Mesa's Environmental Resources
    - Goal LU-5: Adequate Community Services, Transportation System, and Infrastructure to Meet Growth
    - Goal LU-6: Economically Viable and Productive Land Uses that Increase the City's Tax Base
    - Goal LU-7: A Sound Local Sustainable Economy that Attracts Investment, Creates Educational Opportunities, and Generates Employment Opportunities
    - Goal LU-8: Promote a range of multiple uses at the Fairview Developmental Center site
    - Goal LU-9: Ensure that Fairgrounds uses are consistent with the General Plan designation
    - Goal LU-10: Promote the growth of tourism
- The Circulation Element establishes the City's goals regarding the transportation network, foremost by using a "Complete Streets" approach to mobility planning and regional coordination. The Element promotes a balanced, multimodal transportation system that supports existing development patterns and planned growth. Policies emphasize roadway functionality, safety, and improved access for vehicles, transit, bicycles, and pedestrians.
- The Housing Element focuses on encouraging and facilitating a range of housing types and affordability levels while preserving established residential neighborhoods. New housing is encouraged in appropriate locations, including mixed-use and areas near jobs and services. The Housing Element identifies specific

programs to encourage residential development, and implementation of these programs requires updates to zoning regulations to accommodate the City's mandated fair share of Orange County's RHNA.

- The Conservation Element addresses environmental stewardship within the fully urbanized setting of the city, which has limited natural resources. Policies emphasize conservation of water and energy, air quality protection, and reduction of urban environmental impacts, and this Element prioritizes resource management and sustainability.
- The Noise Element seeks to minimize noise impacts on sensitive land uses, particularly residential neighborhoods. Policies focus on land use compatibility, development standards, and mitigation related to transportation and urban activity noise. The Element supports maintaining acceptable noise levels in the city's dense urban environment.
- The Safety Element addresses protection from natural and human- made -hazards, including seismic, flooding, fire, and emergency events. Policies emphasize hazard mitigation through land use planning, infrastructure standards, and emergency preparedness. Additionally, public safety and community resilience are central objectives for the City.
- The Open Space and Recreation Element emphasizes maintenance and enhancement of parks, recreational facilities, and community spaces. The City primarily relies on managed parks, golf courses, and shared recreational facilities. Maintaining equitable access to recreation and community health are key themes of the Element.
- The Growth Management Element ensures that the planning, management, and implementation of traffic improvements and infrastructure meet the current and projected needs of the City. This Element guides the pace and location of development to ensure consistency with infrastructure, public services, and fiscal capacity.
- The Community Design Element identifies activity nodes and promotes high-quality design, attractive streetscapes, and pedestrian-oriented- development. Policies emphasize compatibility with surrounding uses and reinforcement of neighborhood identity.
- The Historical and Cultural Resources Element identifies and protects buildings, sites, and features that reflect Costa Mesa's history and cultural identity. Policies encourage preservation and adaptive reuse where feasible, while allowing for development.

6th Cycle Housing Element (2021–2029)

The City's Housing Element is one of the seven required elements of the General Plan. Per Section 65583(c)(7) of the California Government Code, Housing Element policies are shaped by, and must be consistent with, other General Plan elements and associated policies. The primary focus of the Housing Element is to ensure decent, safe, sanitary, and affordable housing for current and future City residents, including those with special needs. As such, the City is required to ensure the availability of residential sites, at adequate densities and appropriate development standards, in the City to accommodate its fair share of the Regional Housing Needs Allocation, also known as the RHNA. Under the current RHNA, the City is required to establish zoning with the capacity to accommodate the development of at least 11,760 housing units affordable to households at specific income levels, designated as follows:

- **Very-Low Income:** 2,919 units

- **Low-Income:** 1,794 units
- **Moderate-Income:** 2,088 units
- **Above-Moderate Income:** 4,959 units

To accommodate the RHNA and a buffer of additional residential development capacity, the City is required to identify enough sites and ensure zoning allows for the development of housing as identified in the Housing Element. These sites are generally known as "Housing Element Sites" and "Housing Element Opportunity Sites." The City prepared the Housing Element for the planning period from October 2021 to October 2029. The City's Housing Element was adopted by the City Council on November 15, 2022. HCD found the Housing Element Update meets the statutory requirements of Housing Element Law. However, the Housing Element could not be found in substantial compliance until the City has completed necessary rezoning to accommodate the RHNA (City of Costa Mesa 2023).[1]

Measure Y

In November 2016, Costa Mesa voters approved Measure Y, a local ballot initiative that established a requirement for citywide voter approval of certain development projects that constitute a "major change in allowable land use", as defined. A "major change in allowable land use" includes projects that proposed changes to the City's General Plan, Zoning Code, Specific Plans, or overlay plans and that exceeded certain defined thresholds related to residential units, non-residential floor area, or traffic generation.

Measure Y applies to projects proposing 40 or more dwelling units, 10,000 square feet or more of non-residential development, or that would result in more than 200 additional daily vehicle trip ends. Projects that were consistent with existing General Plan and zoning designations were allowed to proceed through the City's standard discretionary review process and were not subject to voter approval. Measure Y was intended to provide residents with direct oversight of growth-inducing projects exceeding the thresholds described above. The ordinance remains in effect today and continues to govern qualifying development proposals citywide except on properties removed from Measure Y by a subsequent voter-approved ballot measure, Measure K.

Measure K

In November 2022, Costa Mesa voters approved Measure K, a local ballot measure that authorized the City Council to adopt land use plans and zoning amendments to facilitate housing and mixed-use development within specific sites, generally along commercial and industrial corridors. Measure K was adopted to allow changes to land use and zoning in select commercial and industrial areas to address housing needs while preserving established residential neighborhoods. Measure K is a direct result of Housing Element Program 3G, Address City-wide Vote Requirement in Relation to Housing Element Compliance.

Measure K allows the City Council to approve qualifying General Plan amendments, zoning changes, specific plans, and overlay plans within designated corridors without requiring citywide voter approval. The measure requires public engagement and environmental review before land use and zoning changes are approved. Measure K authorizes

[1] Housing Element sites reflect the Sites Inventory at the time of the NOP publication (November 2025) and is subject to change. Following City Council action on March 17, 2026 and April 7, 2026, to remove 18 Housing Element sites and add two sites, the City of Costa Mesa has made "no net loss" findings and is in the process of identifying sites to be added to the Housing Element with sufficient capacity to meet the City's Regional Housing Needs Allocation (RHNA). All properties being considered are Measure K sites, within the Planning Area, and are already being studied under the project description of this PEIR.

the City to establish maximum building heights for properties within its boundary. Measure K does not apply to residential neighborhoods or parks and does not eliminate Measure Y citywide.

In summary, Measure K created a limited exception to Measure Y by exempting specific commercial and industrial properties from the land use/zoning change voter-approval requirement. As a result, Measure Y continues to apply outside Measure K corridors, while Measure K allows the City Council to approve qualifying projects within designated corridors without a public vote. Together, the measures preserve voter oversight in residential areas while enabling new housing growth in targeted commercial and industrial locations. Measure K includes Housing Element sites as well as "non-Housing Element Sites." Both Measure K and Measure Y as amended thereby are codified in the Costa Mesa Municipal Code (CMMC).

Costa Mesa Municipal Code

Title 13, Planning, Zoning and Development

The Zoning Code (Title 13 of the Costa Mesa Municipal Code) and zoning map are implementation tools of the General Plan that provide details on specific allowable uses, development standards, and procedures. Zoning regulations govern the division, design, and use of individual parcels of land, including minimum lot size, lot configuration, access, height restrictions, and setbacks for structures (City of Costa Mesa 2025b). Title 13 designates the jurisdiction's residential, commercial, industrial, open space, and mixed-use zones. Key components include:

- Base zoning districts that determine primary allowable land uses.
- Overlay zones, including the Mixed-Use Overlay, that allow additional uses or modified development standards.

Across all zoning districts, Title 13 provides specific requirements, such as: minimum lot area and lot width; maximum building height and floor area ratio (FAR); residential density ranges; setbacks, step-backs, and open space requirements; parking ratios, shared parking allowances, and bicycle facilities; and landscaping and buffering standards. Mixed-use districts typically include more flexible standards to allow vertical or horizontal integration of uses and increased height or density under certain conditions.

Chapter II, Zoning Districts

This Chapter defines Costa Mesa's zoning districts and refers to the official zoning map. It classifies, regulates, and restricts the use of buildings and land, regulates the height and bulk of buildings, and regulates the population densities by creating classes of zones (i.e. zoning districts). Per the Zoning Code and zoning map, the existing zoning for the Planning Area parcels is illustrated on Figure 2-4, Existing Zoning.

- Section 13-20, Zoning districts, describes the Mixed-Use Overlay (MU), which is intended to allow development of residential and nonresidential uses as mixed, integrated projects. This overlay district can be applied in conjunction with the adoption of an urban plan for the designated area.[2] The urban plan is a regulating plan that describes the unique characteristics of the overlay area, include a matrix of permitted, conditionally permitted, and prohibited uses and provide development standards.

[2] All Urban Plans within the City would sunset under the Project and are proposed to be consolidated into the Mixed-Use Overlay District. See Chapter 3, Project Description, for more details.

- Overlay zoning districts may also be created. Section 13-21, Overlay Districts, provides additional standards and procedural requirements that apply to development and land-use activities.

Chapter V, Development Standards, Article 11, Mixed-Use Overlay District

Chapter V establishes the development standards that govern the physical form, site layout, and operational compatibility of development utilizing the Mixed-Use Overlay District (MUOD) throughout the City. These standards collectively ensure that new development minimizes impacts on surrounding neighborhoods, enhances the public realm, provides adequate infrastructure and utilities, and contributes to a coherent urban environment.

The MUOD is intended to enable compact, walkable, and higher-intensity development in designated areas by allowing a combination of residential and commercial uses beyond what is permitted in the underlying zoning. The MUOD governs how mixed-use projects are regulated and implemented. These definitions clarify the relationship between the overlay zone and the underlying base zoning districts, and they define fundamental mixed-use concepts such as mixed-use buildings, mixed-use development sites, and live/work units. The MUOD encourages a full array of different land use types and structures, including reuse of existing structures, to create an active city life and enhance business vitality, and ensures that the appearance of buildings are complementary to the existing architectural character of the area in which they are located and that uses are compatible. The article also clarifies the role of an adopted urban plan, which sets forth allowable uses and development standards for each designated mixed-use overlay area.

Mixed-use development types within the overlay include live/work units, commercial/residential units, and standard residential units. Live/work units integrate living quarters and workspace within a single unit and require specific residential and work components. Commercial/residential are where residential units are located above (vertical mixed-use) or adjacent to nonresidential uses (horizontal mixed-use), while residential units may also exist independently.

If an applicant chooses to apply to develop using the MUOD, the development standards in the MUOD supersede those of the base zoning district and establish expectations for building form, land use distribution, and site design. Standards address allowable FAR, the placement of residential and nonresidential uses in vertical and horizontal configurations, requirements for shared or centrally located resident amenities, restrictions on single-family detached homes, and regulations for live/work units. Nonresidential components must be located and designed to minimize traffic conflicts and must integrate parking, service areas, landscaping, and lighting into the overall site plan. Additional standards are specified in each adopted urban plan.

Compatibility standards address limitations on hours of operation, noise and vibration controls, lighting design, window placement for privacy, and security provisions such as separate entrances and circulation for residential uses. Collectively, these compatibility provisions ensure that residential units are adequately protected from operational impacts associated with commercial or industrial uses within or adjacent to a mixed-use project.

<u>Urban Plans</u>

Urban plans are adopted regulatory documents that provide supplemental regulations to the MUOD. Urban plans are tailored to be specific to select areas of the city. Within Title 13, the urban plans development standards and mixed-use development types. The boundaries of the urban plans are identified on Figure 2-3.

- 19 West Urban Plan/Mixed-Use Overlay

The 19 West Urban Plan, adopted in 2006, is one of three plans that guide development within the Westside of the city. The 19 West Urban Plan provides commercial and residential mixed-use opportunities primarily along West 19th Street and Harbor Boulevard, at a cluster of properties between Newport Boulevard and Superior Avenue, and at the south side of Victoria Street and Placentia Avenue. This mixed-use Urban Plan is intended to promote commercial and residential mixed-use development, encourage adaptive reuse, stimulate private investments and improvements, and meet housing demand (City of Costa Mesa 2016a).

- South Bristol Entertainment & Cultural Arts (SoBECA) Urban Plan/Mixed-Use Overlay

The SoBECA Urban Plan applies to an area within the northwest portion of the city along State Route (SR-) 73 and Baker Street and allows for a mix of housing and retail/service commercial businesses, light industrial uses, creative studios, retail campuses, and entertainment and restaurant uses with the aim to attract local residents and visitors. Permitted development approaches under this Urban Plan are mixed-use developments that combine residential and commercial uses, and standalone commercial and residential uses; however, this Urban Plan caps residential units within its area at a total of 450 units (City of Costa Mesa 2025).

- Mesa West Bluffs Urban Plan/Mixed-Use Overlay

The Mesa West Bluffs Urban Plan was adopted to provide an overlay zone encouraging the development of live/work units or residential development to revitalize and provide new high-quality residences without exceeding the development capacity of the General Plan transportation system. The Urban Plan applies to industrial properties predominantly south of 18th Street, north of 16th Street, and along Placentia Avenue. New residential development under the Plan must be designed to minimize conflicts with long-established industrial uses. New creative industrial workspace is permitted under the Plan, provided that activities limit or confine noise, dust, and vibration impacts (City of Costa Mesa 2025).

- Mesa West Residential Ownership Urban Plan/Mixed-Use Overlay

The Mesa West Residential Ownership Urban Plan is located between Victoria Street and 17th Street, west of SR-55. It aims to promote economic viability in existing medium-density and high-density residential areas, encourage the conversion of existing rental apartments to residential common-interest development (i.e., condominiums, planned unit developments), and encourage new residential common-interest development to improve the balance between rental and ownership opportunities. The Plan provides flexible development regulations to incentivize development and investment (City of Costa Mesa 2025).

<u>Harbor Mixed-Use Overlay</u>

The Harbor Mixed-Use Overlay is not an urban plan, but applies to select areas along Harbor Boulevard, between Wilson Street and 19th Street. The intent of the Plan is to introduce a diverse mix of uses to create integrated, walkable areas and complementary mix of residential and retail spaces, neighborhood-serving retail and commercial services, and residential uses along the southern portion of Harbor Boulevard that intersects with 19th Street. The Overlay allows residential development at up to 20 du/ac, with a maximum 1.25 FAR for projects that consist of both residential and commercial mixed uses and a maximum building height of four stories (City of Costa Mesa 2025).

Chapter V, Development Standards, Article 12, Residential Incentive Overlay District

The Residential Incentive Overlay District was adopted to provide new housing opportunities for residential development at strategic locations along Harbor Boulevard and Newport Boulevard. This overlay allows for higher density residential uses in certain areas along Harbor Boulevard currently developed with commercial uses and on Newport Boulevard, where limited lower density residential is allowed (City of Costa Mesa 2025b). There are no properties in the Residential Incentive Overlay District within the Planning Area.

Specific Plans

The City has specific plans that regulate land use and development within specific areas of the city. Specific plans are used to ensure that property owners and developers of a specific area adhere to a common vision, plan or coordinate multiple phases of a long-term development. Specific plans must also be consistent with the General Plan and act to further General Plan goals and policies. The boundaries of the City's adopted specific plans are identified on Figure 2-3.

North Costa Mesa Specific Plan

The North Costa Mesa Specific Plan was first adopted by the City Council in July 1994 and has since been amended on multiple occasions, including as recently as March 2026. The Specific Plan covers approximately 423 acres and consists of many identifiable and diversified components within the city, including the South Coast Plaza Town Center. The Specific Plan specifies the land use designations and accompanying residential densities and commercial and industrial intensities for the plan area, as well as numerous policies that are relevant or specific to North Costa Mesa. The intent of the North Costa Mesa Specific Plan is to allow higher density and intensity uses within that area, establish specific development standards to realize the development potential of the Plan area, and the need to sensitively integrate new development with the surrounding areas, and, therefore, promote both resident and business community confidence in the long-term vision for the plan area (City of Costa Mesa 2016b).

Newport Boulevard Specific Plan

The Newport Boulevard Specific Plan encompasses properties fronting the east side of Newport Boulevard between Mesa Drive and 19th Street and generally consists of commercial properties; although, there are some residential properties. The intent of the Specific Plan was to provide a long-term vision for this area of the city and to encourage viable commercial businesses to continue to prosper along Newport Boulevard and to encourage marginal uses to redevelop. The Specific Plan also aimed to address development issues resulting from the changed circulation patterns due to the completion of the Costa Mesa Freeway between Del Mar Avenue and 19th Street and its extension to 15th Street. The Newport Boulevard Specific Plan also intended to ensure land use compatibility and viability in the plan area and to attract traffic back to Newport Boulevard (City of Costa Mesa 1999). Several non-Housing Element Measure K sites are located within the Newport Boulevard Specific Plan.

One Metro West Specific Plan

The One Metro West Specific Plan establishes planning and design standards for one 15.23-acre site and the off-site improvements on Sunflower Avenue along the project site and the bikeway connection to the Santa Ana River Trail. The Specific Plan study area is bordered by Sunflower Avenue to the north, I-405 Freeway to the south, the South Coast Collection commercial retail/dining development to the east and industrial uses to the west. The One Metro West Specific Plan allows over 1,000 multi-family residential units, a 1.5-acre urban open space, as well as some supportive retail and office uses.

East 17th Street Specific Plan

This Specific Plan is not within the Planning Area. None of the properties in this Specific Plan are Housing Element or Measure K sites.

2.3 Existing Conditions

2.3.1 Land Use, Population, and Housing

According to the United States Census, the City's population in 2020 was recorded as 111,918 residents (Census 2026). Based on recent estimates, the City's 2024 population is approximately 109,131 residents (Census 2026). This demonstrates a reduction in population between 2020 and 2024. As shown in the Housing Element Update, growth forecasts between the years 2020 and 2040 show that the City is estimated to grow by 2.2 percent (or 2,500 people) from 111,200 residents to 116,400 residents (City of Costa Mesa 2023).

There are approximately 42,292 households estimated in the city, according to the U.S. Census Bureau's 2020-2024 estimates (Census 2026). Based on the same data source, the City's average household size is 2.56 persons per household. Moreover, the Housing Element Update notes that the City's vacancy rate is considered low at 4.8 percent with a majority of the housing units built over 30 years ago (City of Costa Mesa 2023).

The Planning Area is comprised of 1,079 parcels across the city totaling approximately 1,353.4 acres. The existing General Plan land use designations and zoning designations in the Planning Area are summarized in Table 2-1, Existing Conditions, and further detailed in Appendix A, Planning Area Parcel List.

Table 2-1. Existing Conditions

Land Use Designation	Total Acreage	Total Existing Square Feet	Maximum Allowable Density (units per acre)	Maximum Allowable Intensity (Floor to Area Ratio [FAR])
General Plan Land Use Designation				
Commercial Center (CC)	81.3	671,606.6	--	0.25 to 0.75
Commercial-Residential (CR)	40.3	573,467.6	12 to 17.4	0.20 to 0.40
Cultural Arts Center (CAC)	56.9	898,636.5	[a]	1.77
General Commercial (GC)	441.4	5,557,418.7	--	0.20 to 0.75
High-Density Residential (HDR)	10.0	167,919.9	20	--
Industrial Park (IP)	287.6	3,970,286.3	--	0.20 to 0.75
Light Industrial (LI)	179.4	2,873,981.5	--	0.15 to 0.75
Medium-Density Residential (MDR)	1.5	19,270.9	12	--
Neighborhood Commercial (NC)	11.6	65,109.0	--	0.15 to 0.75
Regional Commercial (RC)	130.1	2,051,057.8	--	0.652 to 0.89

Table 2-1. Existing Conditions

Land Use Designation	Total Acreage	Total Existing Square Feet	Maximum Allowable Density (units per acre)	Maximum Allowable Intensity (Floor to Area Ratio [FAR])
Urban Center Commercial (UCC)	113.4	705,660.5	20 or 80 [a]	0.48 to 0.79
Zoning Designation				
Administrative and Professional District (AP)	6.1	--	--	[b]
Commercial Limited District (CL)	20.6	224,807.1	--	[b]
General Business District (C2)	130.3	1,668,089.2	--	[b]
General Industrial (MG)	177.1	2,839,270.7	--	[b]
Industrial Park (MP)	147.7	2,231,628.9	--	[b]
Institutional and Recreational District (I&R)	0.9	8,879.2	--	[b]
Local Business District (C1)	263.3	3,153,920.8	--	[b]
Multiple-Family Residential District, High Density (R2-HD)	4.7	57,496.7	14.52	--
Multiple-Family Residential District, Medium Density (R2-MD)	1.8	31,027.9	12	--
Planned Development Commercial (PDC)	372.5	4,166,479.9	--	[b]
Planned Development Industrial (PDI)	116.0	1,438,154.9	--	[b]
Planned Development Residential—High Density (PDR-HD)	6.0	130,964.2	Up to 20	--
Planned Development Residential—Medium Density (PDR-MD)	0.5	462.4	Up to 12	--
Shopping Center District (C1-S)	48.8	704,596.8	--	[b]
Town Center District (TC)	55.7	898,636.5	--	[b]

Source: SCAG 2025; City of Costa Mesa 2025b; Zoning Code Article 8, Floor Area Ratios, Table 13-69, Maximum Floor Area Ratios.
Note: The "total" estimates for the Planning Area are roughly equivalent to the sum of each zoning designation; however, the estimates may not sum precisely due to rounding. AC = Acre; SF = Square Feet; DU/AC = dwelling units per acre; FAR = Floor Area Ratio; -- = Not Applicable.

[a] Refer to the North Costa Mesa Specific Plan for detailed density for specific sites.

[b] Refer to the General Plan for the applicable maximum FAR as shown in Table 13-69 of the Zoning Code, unless a deviation is allowed by the General Plan.

Whereas some parcels included in Table 2-1 above consist of vacant land, a majority of the parcels contain existing development, including but not limited to residential, commercial, and industrial land uses.

The existing conditions related to population, housing and employment within the Planning Area are provided in Table 2-2, Existing Planning Area Population, Housing, and Employment. The geographic scope for existing conditions is the Planning Area (i.e., Measure K sites, including Housing Element and non-Housing Element properties), as illustrated in Figure 2-2.

Table 2-2. Existing Planning Area Population, Housing, and Employment

Housing (DU) [a]	Population	Employment [b]
508	1,300 [c]	23,383

Notes: DU = dwelling units.
[a] The total number of existing dwelling units in the Planning Area is an estimate based on existing conditions (Appendix B).
[b] Employment was estimated for the Planning Area based on existing parcel data for Planning Area parcels (Appendix B).
[c] 508 housing units x 2.56 persons per household = 1,300.48 residents (or 1,300 residents) residing within the Planning Area.

2.3.2 Natural Resources and Open Space

As stated in the City's General Plan, parks and open spaces contribute to the health of residents and the environment. The City aims to plan for growth while preserving open spaces. Costa Mesa's inventory of open spaces ranged from highly developed, active recreation sites to more natural, passive open spaces. Natural open spaces function as habitat for wildlife and places of education. The City's commitment to well-maintained parks and playgrounds ensures that residents can recreate and enjoy outdoor gathering spaces adaptable to the evolving needs of the community (City of Costa Mesa 2016a).

As discussed in the City's General Plan, Costa Mesa benefits from a favorable location near the coast with cool ocean breezes and coastal bluffs that provide a diversity of natural habitats. The city has various other natural resources, such as the Santa Ana River, which is located along the city's western boundary, which provides flood control and open space connectivity. Fairview Park and Talbert Regional Park are open space resources that support wildlife diversity. The Santa Ana River and riparian areas are important to local wildlife for the open space connectivity they create between isolated areas where animals live and forage, and their use as migration corridors.

The General Plan designates Talbert Regional Park as Open Space Reserve (OSR), which applies to lands of scenic and natural attraction, in addition to areas of ecological, cultural, historical, and recreational significance permanently preserved as and restricted to open space and compatible uses. As discussed in the City's General Plan, Talbert Regional Park/Nature Preserve encompasses 180 acres along the Santa Ana River, including 97 acres within the coastal zone. Fairview Park, which includes 208 acres open space consisting of bluffs, vernal pools, trails, native plant communities, and wildlife, is located adjacent to Talbert Regional Park and is linked with the Santa Ana River system of trails and parks. Riparian areas like the Fairview Park wetlands and riparian habitat area play a key role in sorting and filtering sediment, recharging ground aquifers, and for reducing flood potential. These parks provide important biodiversity habitat and is part of the open space and natural habitat reserve system of the Orange County Central/Coastal Subregional Natural Communities Conservation Plan and Habitat Conservation Plan (NCCP/HCP), which is a 37,000-acre reserve system that permanently protects a broad range of plant and animal populations within the region of Orange County (City of Costa Mesa 2016a). Talbert Regional Park and Fairview Park are located outside of the Planning Area.

For more discussion and analysis regarding natural resources and open space, refer to Sections 4.4, Biological Resources, 4.12, Mineral Resources, and 4.16, Recreation, of this Draft PEIR.

2.3.3 Transportation, Circulation, and Public Transit

Costa Mesa's transportation system consists of a comprehensive network of sidewalks, bicycle routes, trails, bus transit facilities, local streets, major roadways, and freeways that supports connectivity between the major commercial activity areas and residential neighborhoods (City of Costa Mesa 2016a). The City is served by the regional freeway system that provides connectivity to all of Orange County, including I-405 that traverses east-west across the northern portion of the city; SR-73, which traverses southeast-northwest through the city until it intersects with I-405; and SR-55 that traverses southwest-northeast through the city. Locally, various north/south arterial roadways serve the city, including Harbor Boulevard, Fairview Road, Bear Street, and Bristol Street, all of which are six-lane facilities; in addition to Placentia Avenue and Red Hill Avenue, which are four-lane facilities. The east-west arterial roadways serving the City are the six-laned Anton Boulevard and Adams Avenue, Sunflower Avenue that consists of both six-lane and four-lane portions, and the four-laned South Coast Drive, Baker Street, Fair Drive, Victoria Street, West 19th Street, and East 17th Street (City of Costa Mesa 2016a).

As discussed in the General Plan, east-west access into the city is constrained by the Santa Ana River on the west and by John Wayne Airport and Upper Newport Bay on the east. In Costa Mesa, the Santa Ana River is crossed at Adams Avenue, Victoria Street, and MacArthur Boulevard. Besides I-405, these roadways represent the only locations where Costa Mesa residents can travel to Huntington Beach and Fountain Valley without having to go north through Santa Ana or south through Newport Beach. To the east, the John Wayne Airport and Upper Newport Bay constrain surface street connections extending east, except via Pacific Coast Highway to the south, Bristol Street parallel to SR-73, and MacArthur Boulevard north of I-405 (City of Costa Mesa 2016a).

The City is served by a range of transit options that provide alternatives to single-occupant automobile travel, including buses, trains, rideshare, and paratransit services. The Planning Area is served by a variety of bus routes operated by the Orange County Transportation Authority (OCTA), including local bus routes 35, 43, 47, 55, 71, 76, and 86, community bus routes 150/151 and 178, and Intercounty Express bus routes 543 and 533; (City of Costa Mesa 2016a; OCTA 2026). OCTA operates bus rapid transit service Bravo! Route 543 along Harbor Boulevard, which extends from the Fullerton Transportation Center through Anaheim, Garden Grove and Santa Ana, ending at MacArthur Boulevard at the Costa Mesa city limit. OCTA also provides paratransit services within Orange County, with several routes in Costa Mesa. Through OCTA's Senior Taxi Program and ACCESS, the City supports discounted bus fares to seniors and flexible paratransit shuttles. ACCESS is OCTA's shared-ride service for people who are unable to use the regular fixed-route bus service because of functional limitations caused by a disability. OCTA's Senior Mobility Program is designed to fill the gap between local fixed-route buses and ADA paratransit by providing local transportation services to seniors (City of Costa Mesa 2016a). In addition, the City also operates the Let's Go Costa Mesa program, which is a free, on-demand electric rideshare service operated in partnership with Circuit utilizing funds from the State of California's Clean Mobility Options (CMO) program. Let's Go Costa Mesa operates Monday through Friday from 8 a.m. to 8 p.m., and Saturday through Sunday from 10 a.m. to 8 p.m., and provides service throughout the south and central portion of the city surrounding downtown and to Hoag Memorial Hospital within the City of Newport Beach (City of Costa Mesa 2026).

For more discussion and analysis regarding transportation, circulation, and public transit, see Section 4.17, Transportation, of this Draft PEIR.

2.4 Public Services and Utilities

2.4.1 Public Services

This Draft PEIR evaluates the Project's potential impacts on public services including fire protection and emergency services, law enforcement, school, parks, and library services. This section provides a brief overview of the existing public services for the project and Planning Area. For a more detailed discussion of existing conditions related to public services, please refer to Section 4.15, Public Services, of Chapter 4 of this Draft PEIR.

2.4.1.1 Fire Protection and Emergency Services

The Costa Mesa Fire & Rescue Department serves the City with fire suppression and emergency medical services through a network of six fire stations and employs 90 full-time staff, including 84 sworn positions and six non-sworn positions (City of Costa Mesa 2016a; City of Costa Mesa 2025c). In addition to fire suppression and emergency medical services, Costa Mesa Fire & Rescue also provides fire prevention and community risk reduction services, and hazardous materials response services (City of Costa Mesa 2016a).

2.4.1.2 Police Protection Services

The Costa Mesa Police Department (CMPD) provides general-service law enforcement within the City (City of Costa Mesa 2016a). The CMPD employs approximately 142 sworn police personnel, consisting of one captain, four lieutenants, 16 sergeants, and 77 officers, as well as 29 civilian employees and employs approximately 102 sworn and professional employees within its Support Services Division (Appendix I; City of Costa Mesa 2025d, 2025e). In addition to enforcement of criminal laws, CMPD also serves the City with crime investigation and traffic enforcement. The CMPD maintains its headquarters at 99 Fair Drive in the Civic Center within Costa Mesa, as well as two substations at South Coast Plaza and 567 West 18th Street. CMPD also maintains a mutual aid agreement with the Huntington Beach Police Department for airborne law enforcement patrols and related services (City of Costa Mesa 2016a).

2.4.1.3 School Services

The City is served with school services by the Newport-Mesa Unified School District which has an approximate enrollment of 18,000 students and operates 31 schools serving Newport Beach, Costa Mesa, and Corona del Mar (NMUSD 2025).

2.4.1.4 Parks

The City's Parks and Community Services Department owns and operates parks, recreational facilities, and community centers in the city. The parks and open space inventory includes neighborhood and community parks, a regional nature preserve (Talbert Regional Park, operated by the County of Orange), institutional uses, the Orange County Fair and Event Center (operated by the 32nd District Agricultural Association), open space easements, and golf courses. The City offers a wide diversity of facilities, ranging from highly developed, active recreation sites to low-activity, passive open spaces (City of Costa Mesa 2016a).

2.4.1.5 Libraries

Orange County Public Libraries (OCPL) provides library services to residents in Orange County via 32 public library branches, including two branches in Costa Mesa – the Donald Dungan Library at 1855 Park Avenue, and the Mesa Verde Library at 2969 Mesa Verde Drive (City of Costa Mesa 2025f; OCPL 2025).

2.4.2 Utilities

This Draft PEIR evaluates the Project's potential impacts on utilities and service systems, including the potential impacts to water, wastewater, storm drain, electric power, natural gas, telecommunication conveyance capacity, as well as impacts to water supply, wastewater treatment, and solid waste disposal capacity. A brief discussion of the existing regional utilities and service systems within the city is below. For a more detailed discussion of existing conditions related to utilities and system services, please refer to Section 4.19, Utilities and System Services of this Draft PEIR.

2.4.2.1 Stormwater Service

The City of Costa Mesa is operating and maintaining City-owned storm drainage facilities in the city, while many of regional flood control facilities in the city are owned, operated, and maintained by the Orange County Flood Control District.

2.4.2.2 Sewer Service

The Costa Mesa Sanitary District (CMSD) provides wastewater treatment services for the City. CMSD owns, operates, and maintains a 224-mile wastewater collection system in the city that collects and transmits wastewater to the Orange County Sanitation District (CMSD 2025). The wastewater generated within the city is collected and processed at treatment plants in Fountain Valley and Huntington Beach (City of Costa Mesa 2016a).

2.4.2.3 Water Supply

Domestic water services within the city are provided by the Mesa Water District (MWD) and the Irvine Ranch Water District (IRWD). The MWD service area encompasses approximately 18 square miles, covering most of the city, part of Newport Beach, and John Wayne Airport. The IRWD service area encompasses approximately 181 square miles and covers a portion of properties within Costa Mesa located southeast of Newport Boulevard between 23rd Street and Bristol Street, as well as various other jurisdictions (City of Costa Mesa 2016a). The MWD operates eight groundwater wells within the city that pump water from the Orange County Groundwater Basin. However, because natural water supplies are limited in Orange County and demand generally exceeds the rate of replenishment of these sources, a majority of communities in Orange County rely on water imported from sources outside Orange County, including from the Colorado River Aqueduct and the State Water Project. See Section 4.10, Hydrology and Water Quality, and Section 4.19, for further information about retail water purveyors and the water supply system servicing the city.

2.4.2.4 Solid Waste

The Costa Mesa Public Works Department (Public Works) manages all commercial waste collection and recycling services within the city, while the Costa Mesa Sanitary District oversees all residential waste collection and recycling

services (City of Costa Mesa 2025g). The City expects that landfill space will diminish in Southern California which will require jurisdictions to continue development of waste reduction and diversion efforts to avoid shortfalls in landfill capacity (City of Costa Mesa 2016a).

2.4.2.5 Electrical Service

Electricity in the city is provided by Southern California Edison (SCE), a private franchise utility company and subsidiary of Sempra Energy. All standards, development requirements, and improvement strategies are set directly by SCE, with oversight by the California Public Utilities Commission (CPUC). Electricity is transmitted by a network of aboveground and underground power lines to supply sufficient power to all locations, including streetlights and traffic signals.

2.4.2.6 Natural Gas

Natural gas currently serving the City is provided by Southern California Gas Company (SoCalGas), which owns and operates two natural gas storage fields in Southern California. These storage fields help meet peak seasonal demand and allow Southern California customers to secure natural gas supplies more efficiently. SoCalGas also owns and operates four underground storage facilities located around Southern California. In addition, SoCalGas owns and operates all transmission mains, distribution pipelines, and service laterals within the city.

2.4.2.7 Telecommunication Service

Telecommunication facilities are installed in the city by a variety of private utility companies, including AT&T, Spectrum Services, Verizon, and Comcast Cable.

2.5 Cumulative Impact Analysis

Section 15355 of the CEQA Guidelines defines cumulative impacts as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” Cumulative impacts are the change caused by the incremental impact of an individual project compounded with the incremental impacts from closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

Section 15130 of the CEQA Guidelines states that, where a lead agency concludes that the cumulative effects of a project, taken together with the impacts of other closely related projects are significant, the lead agency then must determine whether the project’s incremental contribution to such significant cumulative impact is “cumulatively considerable” (and thus significant in and of itself). Section 15130 further states that this discussion of cumulative impacts shall reflect the severity of the impacts and the likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. CEQA Guidelines Section 15130(b)(1) states that the information utilized in an analysis of cumulative impacts should come from one of two sources:

1. A list of past, present and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or
2. A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or areawide conditions contributing to the cumulative impact.

The cumulative impact analysis contained in this Draft PEIR considers projections used in the City's General Plan land use buildout as well as one current project (Fairview Developmental Center Specific Plan, for which a Notice of Preparation was released in October 2025).[3] A summary of the cumulative buildout projections for the City (including the proposed Project) is provided below in Table 2-3, City of Costa Mesa Cumulative Build Projections.

Table 2-3. City of Costa Mesa Cumulative Buildout Projections

Cumulative Plans	Geographic Scope	Buildout Projections		
		Population	Housing (DU)	Jobs
General Plan Land Use Buildout	All Non-Planning Area Parcels in the City	103,596	43,240	85,037
Fairview Developmental Center Specific Plan[2]	2501 Harbor Boulevard (APN 420-012-16)	9,440	4,000	88
	Cumulative Subtotal	*113,036*	*47,240*	*99,815*
Proposed Project[3]	Planning Area	52,872	22,030	38,152
	Cumulative + Project	**165,908**	**69,270**	**123,277**

Sources: City of Costa Mesa 2016c; City of Costa Mesa 2025h; Fehr and Peers 2026; SCAG 2016, 2017.
Notes: APN = Assessor's Parcel Number; DU = dwelling units, which is a common planning term used to refer to housing units
1 The Notice of Preparation and Notice of Completion for the Fairview Developmental Center Specific Plan was posted in October 2025. Housing and jobs estimates are derived from the Notice of Completion. The population is based on a persons-per-household rate of 2.36 and the projected number of dwelling units set forth in the Notice of Completion (City of Costa Mesa 2025h).
2 Please refer to Section 3.4, Project Buildout and Assessment Methodology in Chapter 3, Project Description of this PEIR for a discussion of buildout methodology for the proposed Project.

Section 15130(b)(3) of the CEQA Guidelines states that "lead agencies shall define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used." Each cumulative analysis in Sections 4.1 through 4.19 of this Draft PEIR identify the geographic scope that is applicable to that topic area. In general, the cumulative study area is the City of Costa Mesa. There are environmental issues whose relevant geographic scope for purposes of the cumulative impact analysis may be larger or smaller than the City, and may be defined by local, regional, or state agency jurisdiction or by other environmental factors. One example is the geographic scope of cumulative air quality impacts, defined by the SCAQMD to encompass the South Coast Air Basin. The basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The geographic context for the cumulative analysis is specified for each environmental issue addressed in Sections 4.1 through 4.19 of this Draft PEIR.

3 The buildout of the City was determined throughout the development of the Climate Action and Adaptation Plan, which is anticipated to be considered for adoption in October 2026.

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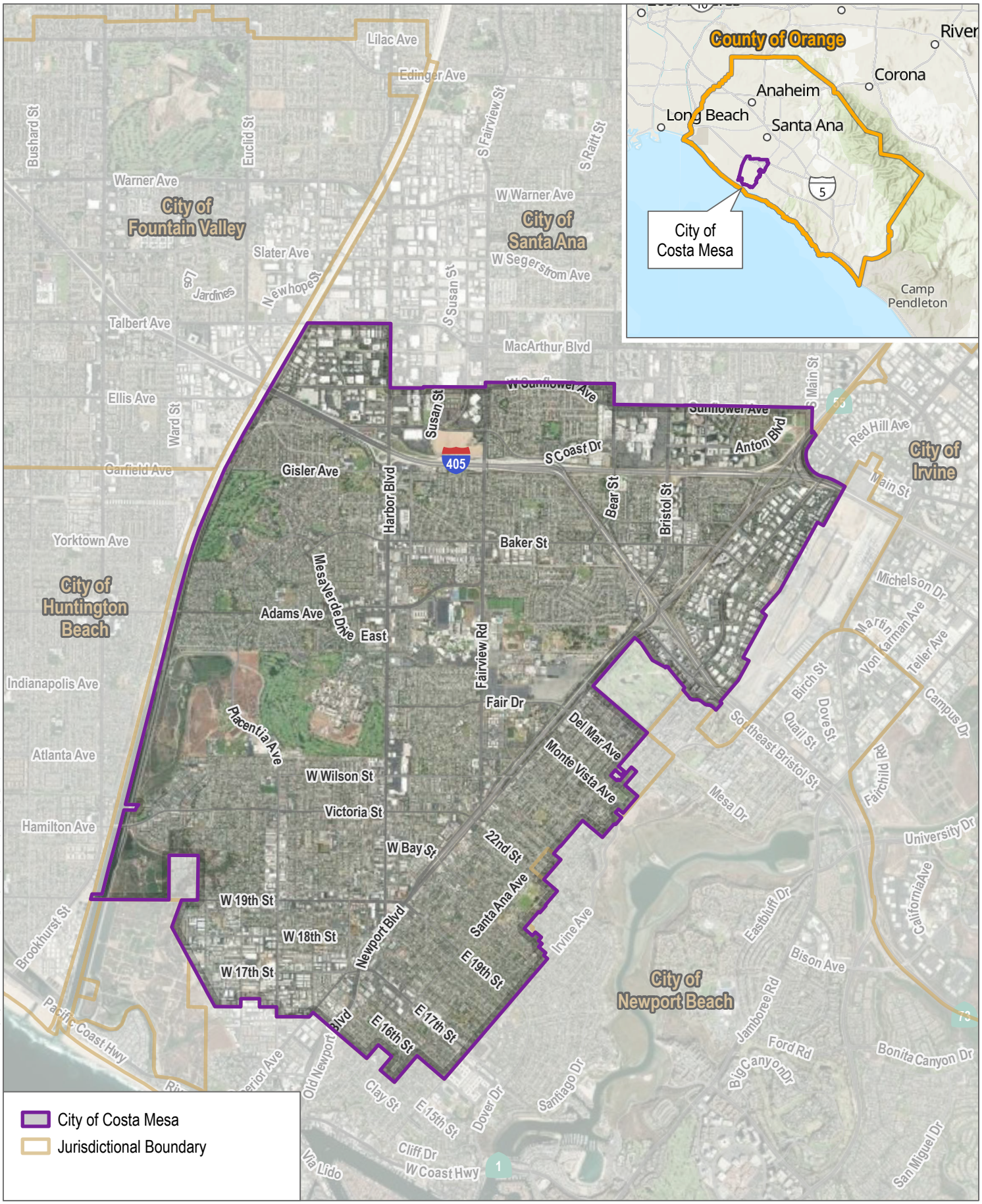

SOURCE: Esri, Open Street Map

FIGURE 2-1

Regional Location and Local Vicinity

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

DUDEK

0 2,350 4,700 Feet

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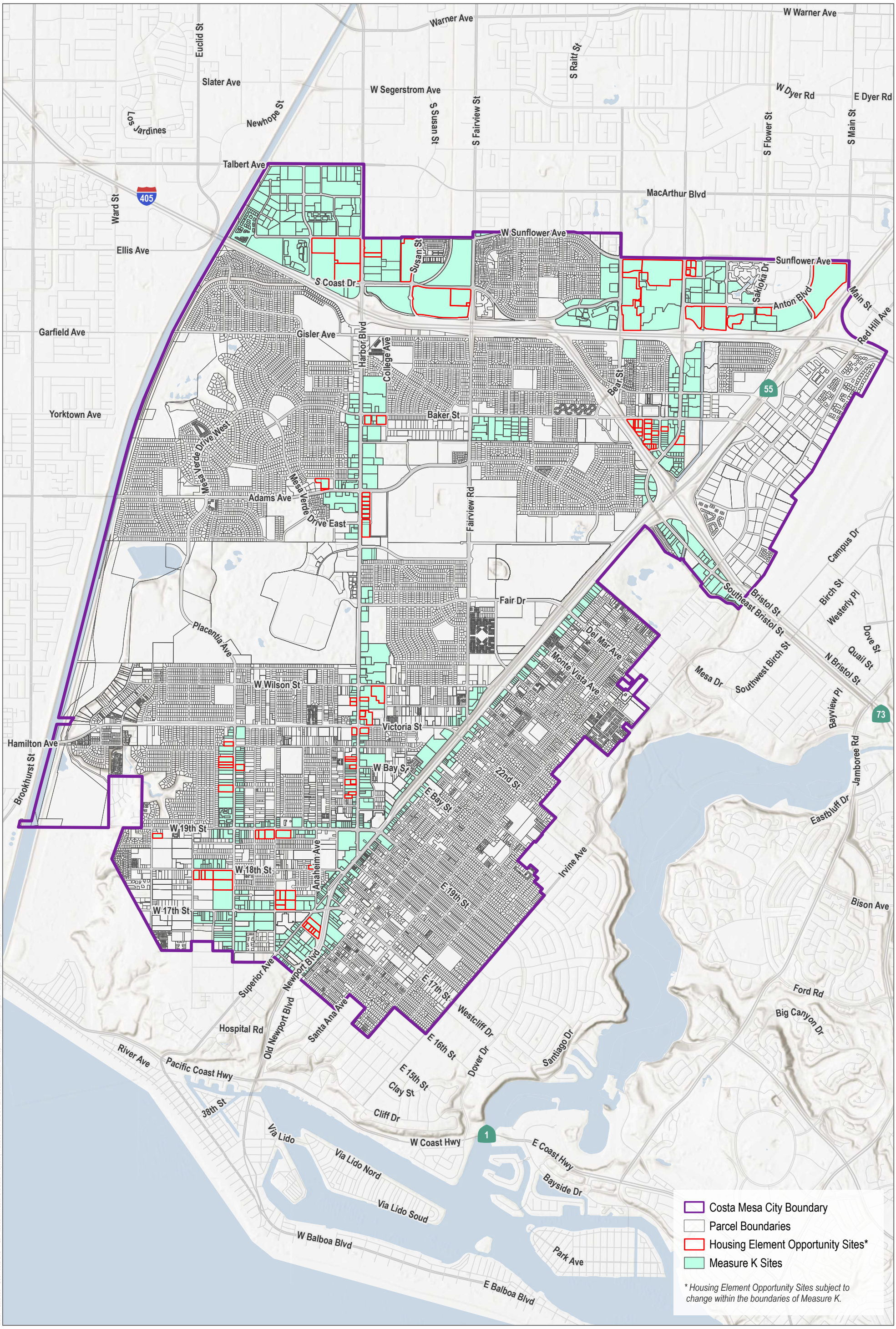

SOURCE: City of Costa Mesa, Orange County Sanitation District, Open Street Map

DUDEK

0 0.25 0.5 Miles

FIGURE 2-2

Planning Area

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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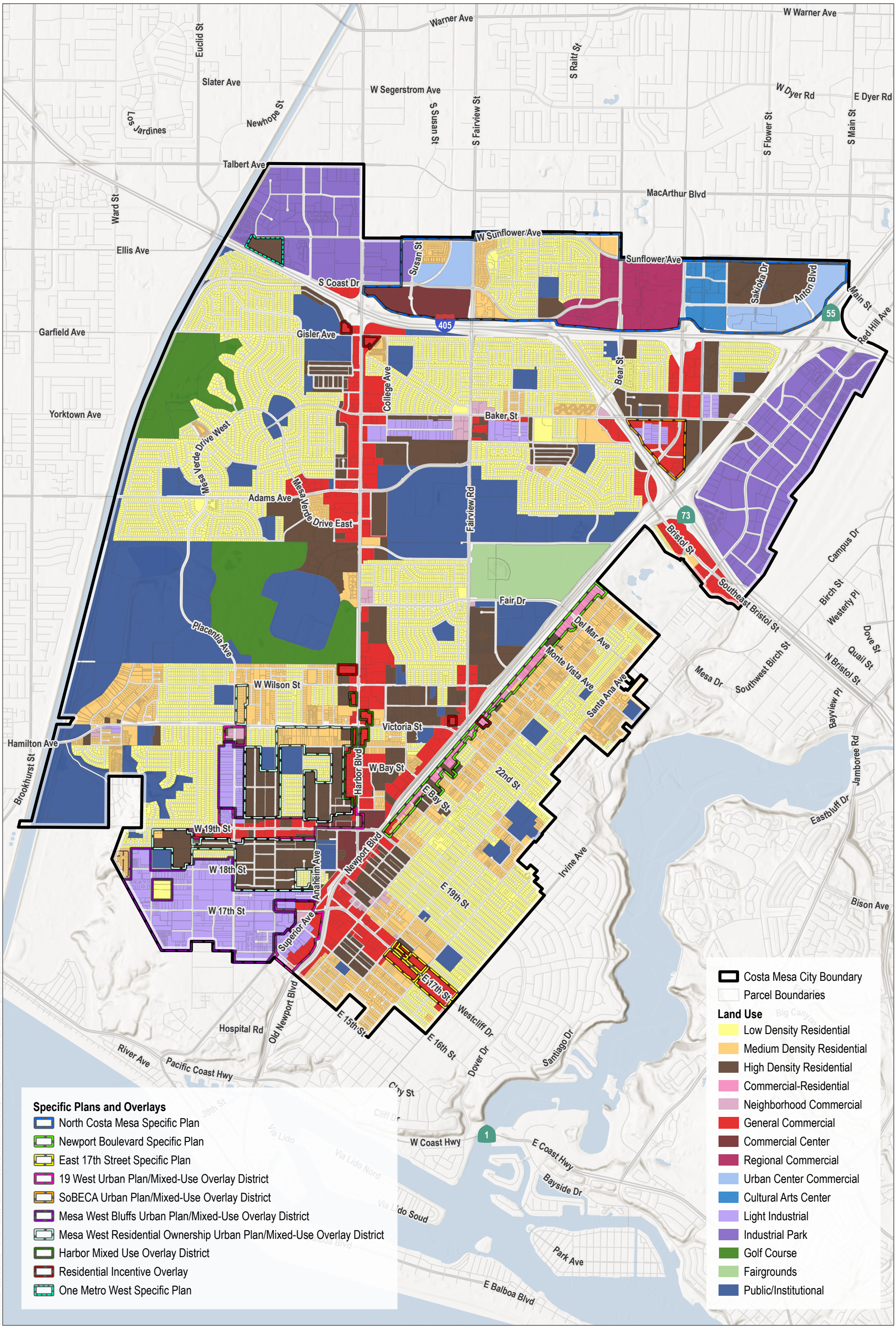

SOURCE: City of Costa Mesa 2025, Open Street Map 2019

DUDEK

0 0.25 0.5 Miles

FIGURE 2-3

Existing General Plan Land Use Designations

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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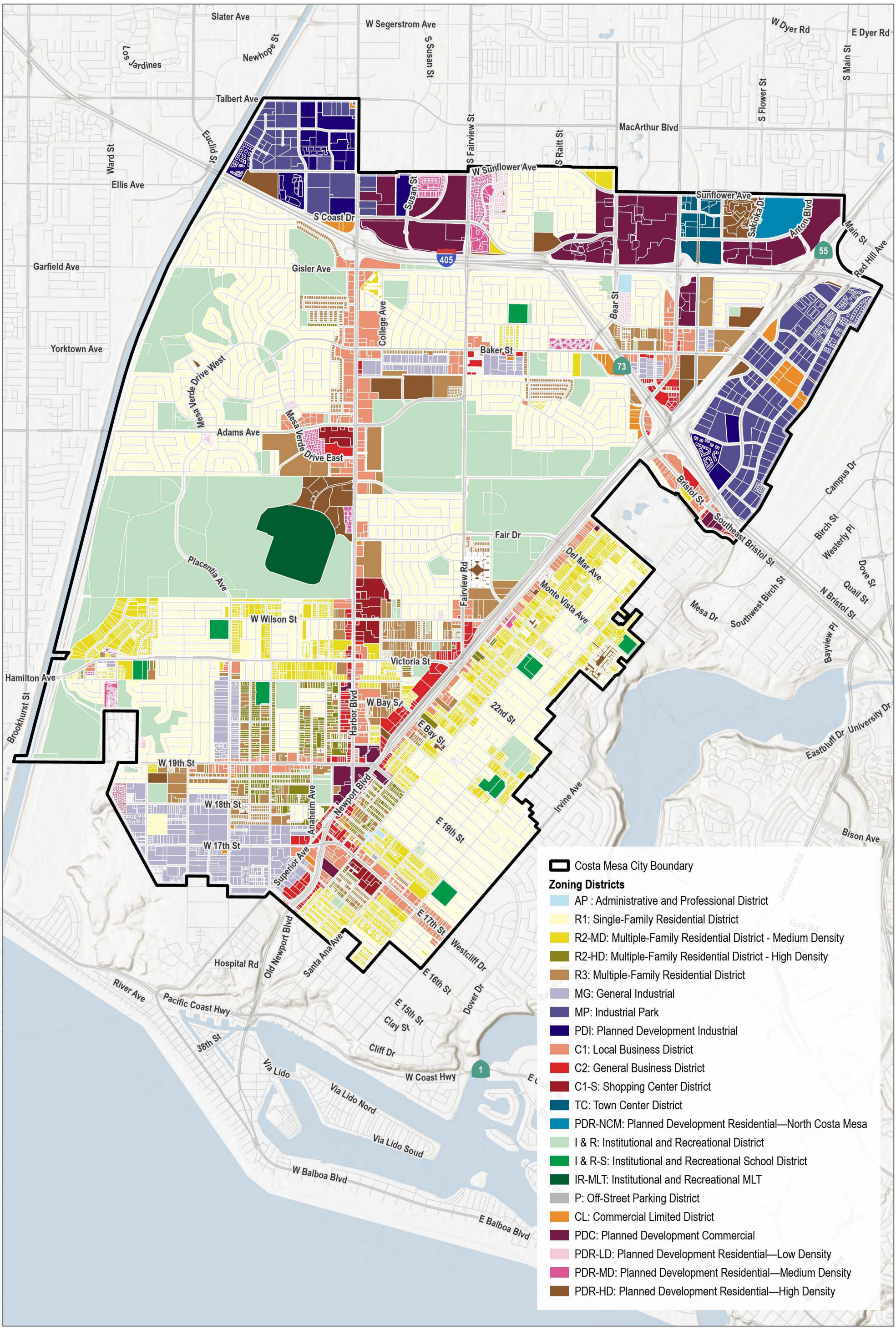

SOURCE: City of Costa Mesa 2025, Open Street Map 2019

FIGURE 2-4

Existing Zoning

DUDEK

0 0.25 0.5 Miles

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3 Project Description

This chapter of the Draft Program Environmental Impact Report (Draft PEIR) provides a description of Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation (Project). The purpose of this chapter is to provide sufficient information about the Project to allow meaningful evaluation and review by the public, reviewing agencies, and decision-makers in accordance with the California Environmental Quality Act (CEQA), California Public Resources Code Sections 21000 et seq., and the State CEQA Guidelines (14 California Code of Regulations [CCR] 15000 et seq.).

3.1 Project Location

The proposed Project is located within the City of Costa Mesa (City), a city within Orange County, California. The proposed Project is comprised of three main actions, including:

- The proposed rezoning of Measure K sites (both Housing Element and non-Housing Element sites), which are primarily located adjacent to major thoroughfares and are identified on Figure 2-2, Planning Area, by applying an updated Mixed-Use Overlay District (MUOD). The location of identified Measure K parcels is collectively defined as the "Planning Area" throughout this Draft PEIR.
- The proposed Zoning Code Amendments to Title 13, Planning, Zoning, and Development of the City's Municipal Code, which can be generally categorized as follows: (1) codification of state mandates, including implementation of Housing Element programs; (2) administrative corrections and updates; and (3) City policy-driven updates with no environmental impacts. The amendments to Title 13 would be implemented citywide. Figure 2-1, Regional Location and Local Vicinity Map, provides an aerial map overview of the City's boundaries.
- The proposed Objective Design Standards that would be applicable to all multi-family residential and mixed-use residential projects citywide will apply to the MUOD as well. Figure 2-1, Regional Location and Local Vicinity Map, provides an aerial map overview of the City boundaries.

The Measure K sites are generally located along major thoroughfares within the City, including, but not limited to Newport Boulevard, Harbor Boulevard, Placentia Avenue, 19th Street, 18th Street, 17th Street, Baker Street, Bristol Street, and areas north of Interstate (I) 405 (City of Costa Mesa 2025). The Planning Area is comprised of 1,079 parcels totaling approximately 1,353 acres. Appendix B contains an inventory of all parcels included in the Planning Area, and Figure 2-2, Planning Area, provides an illustration of the location of all parcels in the Planning Area.

3.2 Project Objectives

CEQA Guidelines Section 15124(b) requires an environmental impact report to include a statement of objectives sought by the project, including the underlying purpose of the project. The following Project objectives have been established and will aid decision-makers in their review of the Project, the Project alternatives, and associated environmental impacts:

1. Implement many of the required programs of the City's 2021-2029 Housing Element and accommodate the City's Regional Housing Needs Allocation (RHNA), as required by State law.
2. Achieve Housing Element certification, as required by the State.

3. Implement the rezoning of Measure K sites, as allowed by Measure K (2022), including the rezoning of Housing Element sites, as required by State law.
4. Support the City Council's goal to diversify, stabilize, and increase housing to reflect community needs.
5. Amend the Zoning Code to be consistent with State and Federal law and to better facilitate the development of housing.
6. Prepare objective design standards consistent with the community's vision for citywide multi-family and mixed-use projects.
7. Prioritize new housing near jobs and amenities, while reducing potential impacts to existing residential neighborhoods, in order to revitalize existing commercial and industrial areas with the introduction of new housing and mixed-use developments.

3.3 Project Background

As stated above, the proposed Project consists of three primary actions: (1) the proposed rezoning of Measure K sites (both Housing Element and non-Housing Element properties) defined as the "Planning Area" throughout this Draft PEIR; (2) the proposed Zoning Code Amendments to Title 13, Planning, Zoning, and Development of the City's Municipal Code, which would be implemented citywide; and (3) proposed Objective Design Standards.

All Measure K sites were approved by Costa Mesa voters in 2022. Table 3-1, Measure K Sites, identifies the parcels as either Housing Element sites or non-Housing Element sites. These Measure K sites are located generally in some existing commercial and industrial areas, and they are located within a variety of existing zoning frameworks. Appendix B contains an inventory of all parcels included in the Planning Area.

Table 3-1. Measure K Sites

Planning Area Parcels	Parcels	Acres
Housing Element Sites	94	238
Non-Housing Element Sites	985	1,115
Total	**1,079**	**1,353**

Note: Housing Element sites reflect the Sites Inventory at the time of the NOP publication (November 2025) and is subject to change. Following City Council action on March 17, 2026, and April 7, 2026, to remove 17 Housing Element sites and add two sites, the City of Costa Mesa has made "no net loss" findings and is in the process of identifying sites to be added to the Housing Element with sufficient capacity to meet the City's Regional Housing Needs Allocation (RHNA). All properties being considered are Measure K sites, within the Planning Area, and are already being studied under the project description of this PEIR. Therefore, the number of parcels and acres identified Table 3-1 may be subject to change without substantially changing the project description.

Figure 3-1, Current and Proposed Regulatory Framework, provides a visual representation of the City's current land use regulatory framework in juxtaposition to the proposed Project's rezoning. Currently, Measure K sites are subject to various and differing zoning requirements. They are subject to their respective underlying base zone, but in some cases they also have an overlay or an urban plan, or a specific plan as well. In the City of Costa Mesa, the General Plan is the City's overarching regulatory document. Additionally, the Land Use Element, which is one of the required chapters of the General Plan, sets forth the general land use policy and land use designations (e.g. residential, commercial, and industrial). The Land Use Element is then implemented primarily through the Zoning Code or through specific plans, which is where land use policy becomes zoning or development regulations.

The Zoning Code establishes a zoning district, or a base zone, for each property (e.g. R1, R2, R3, C1). In addition to the base zone, properties can also have overlay zones, which is an additional layer of zoning in addition to the base

zone. Overlays either work in tandem with the base zone or they can supersede the base zone. In Costa Mesa, there are multiple overlays: the MUOD, the Residential Incentive Overlay District (RIOD), and a number of urban plans that implement the MUOD. Urban plans are unique plans to Costa Mesa, as standalone documents that are separate from the Zoning Code and provide supplemental regulations to the MUOD, tailored specifically to certain parts of the City. Currently, the MUOD is a complicated zoning framework with multiple layers and sometimes overlapping conditions, which are anticipated to be remedied through the implementation of the proposed Project.

The Land Use Element can also be implemented by a specific plan, which is a state-regulated zoning document that implements the General Plan for a specific part of the City. In Costa Mesa, there are four active specific plans: North Costa Mesa, Newport Boulevard, One Metro West, and East 17th Street, which provide specific regulations to properties that fall within specific plan areas.

Some of the City's various urban plans, overlays, and specific plans are the focus of the proposed Project's rezoning effort. The MUOD (inclusive of the urban plans and the Harbor Mixed-Use Overlay)would be amended in order to rezone the City's Measure K sites and the City's North Costa Mesa Specific Plan, Newport Boulevard Specific Plan, and One Metro West Specific Plan would be amended for consistency. With implementation of the Project's rezoning effort, the goal is to provide for a more straightforward and more predictable path to develop housing in the City, as depicted in Figure 3-1.

3.4 Project Description

A "project," as defined by the CEQA Guidelines, means "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and that is any of the following: (1) … enactment and amendment of zoning ordinances, and the adoption and amendment of local General Plans or elements thereof pursuant to Government Code Sections 65100-65700" (14 CCR 15378(a)). The Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation is a project, as defined by the CEQA Guidelines and is subject to the requirements of environmental review accordingly.

3.4.1 Project Overview

3.4.1.1 Rezoning of Measure K Sites

The Project would utilize the MUOD as the zoning mechanism to implement the rezoning of all Measure K sites. Additionally, the City proposes organizing and consolidating the MUOD by conducting the following:

- Sunset all urban plans and the Harbor Mixed-Use Overlay, but incorporate their applicable provisions into the MUOD within the Zoning Code;
- Consolidate all urban plan areas into the MUOD;
- Refine and expand existing provisions of the MUOD, with provisions tailored by sub-area; and
- Apply the amended MUOD to all Measure K sites, with special provisions applicable to Housing Element sites.

Currently, the urban plans are enabled by the MUOD, but they are not a part of the Zoning Code. Therefore, the Project would sunset the urban plans and transfer the applicable regulations into the Zoning Code under the MUOD. The resulting refined version of the MUOD would be used to rezone all Measure K sites.

For non-Housing Element sites, the application of the MUOD would not change a property's base zone or otherwise change or remove existing property rights. It would instead add additional optional zoning provisions to allow for the development of housing or mixed-use. Therefore, a property could continue to operate as it does today, or it could be redeveloped under the provisions of its base zone, or, if and when the property owner chooses to, they could opt into the MUOD and redevelop as housing or mixed-use under the provisions of the MUOD.

For Housing Element sites, however, the MUOD would operate with certain restrictions. In these cases, the MUOD would supersede the base zone. This means that if and when a Housing Element site is redeveloped, it must be developed pursuant to the MUOD in order to meet requirements of a Housing Element site. Specifically, redevelopment must include a minimum of 50 percent residential floor area and achieve a minimum density of 20 units per acre, consistent with state law and applicable case law; e.g. *New Commune DTLA LLC v. City of Redondo Beach (2025)* 115 Cal.App.5th 111.

The Project would also sunset the Mesa West Residential Ownership Urban Plan, consistent with the objectives set forth in Program 3D of the Housing Element. Although this urban plan is technically located within the MUOD, it does not allow mixed use development. Instead, it was created to provide a mechanism for properties within its boundary to support and encourage ownership housing opportunities-primarily through a condominium process-at a time when the Zoning Code did not include condominium provisions. Because of this narrow purpose, the Project would sunset this urban plan and incorporate its relevant provisions directly into the Zoning Code, where appropriate.

The Project would not make any changes to the Residential Incentive Overlay District.

The Project would apply the MUOD to Measure K sites within the North Costa Mesa Specific Plan, Newport Boulevard Specific Plan, and One Metro West Specific Plan as an additive, optional layer on non-Housing Element Measure K sites.

Properties that are not Measure K sites, but already in the MUOD, would maintain all current provisions of the MUOD and would be unaffected by the rezoning. While no direct development is proposed as part of the Project, the rezoning would allow for future development to be constructed across the Planning Area resulting in approximately 21,522 dwelling units and 10,630,361 square feet of non-residential uses. Implementation of the proposed Project would occur over time with a horizon year of 2056 (or 30 years from adoption). For more information on the proposed buildout, see Appendix B, Buildout Methodology, and Section 3.5, Project Buildout and Assessment Methodology.

Lastly, the Project includes revisions primarily to the Land Use Element of the General Plan with the intent to clarify, consolidate, and streamline provisions for existing urban plans, overlays, and specific plans for consistency with the Housing Element and the amended MUOD. In addition, the Project also includes other minor revisions to other elements of the General Plan for internal consistency with the Land Use Element amendment that is required to be made as a part of this Project.

3.4.1.2 Zoning Code Amendments

The Project would also implement a number of Housing Element programs that require amendments to the Zoning Code. The objectives of the Zoning Code amendments are to implement the Housing Element as required by state law, ensure that the City is consistent with state law pertaining to housing, and in doing so, help the City make it a simpler, more straightforward process to develop housing across the City. These Zoning Code Amendments generally include surgical updates to definitions of different kinds of housing, parking standards, findings and conditions of review and approval of projects, and updating the allowances and/or incentives for certain types of housing.

3.4.1.3 Objective Design Standards

The Project would also apply new Objective Design Standards to all new construction multifamily residential and mixed-use buildings (consistent with California Government Code Section 65913.4) of three or more stories in height, as well as second-story additions to multifamily residential or mixed-use buildings, regardless of zoning designation. Enabled by recent state legislation, including SB 35 and SB 330, the Objective Design Standards are intended to improve predictability, efficiency, and transparency in project review while promoting high-quality design that aligns with state law, City goals, and the community's vision.

3.4.2 Project Components

3.4.2.1 Rezoning of Measure K Sites

Housing Element Sites

In order to accommodate the City's mandated fair share of housing needs (i.e., RHNA) and a buffer, the Housing Element includes an inventory of sites at specific densities and capacities that those sites need to be rezoned to accommodate the development of housing at the specified densities.[1] The proposed Project would rezone all Housing Element sites (except for the Fairview Developmental Center site, whose rezoning is being implemented via a separate process not part of this Project) by applying the amended MUOD with specific provisions to satisfy the requirements of Housing Element Programs 3C, 3D, and 3N, as described below.

- **Update the North Costa Mesa Specific Plan.** The proposed Project would satisfy the objectives of Program 3C by implementing zoning amendments pertaining to the North Costa Mesa Specific Plan that would permit residential development capacity at the allowable densities identified in the Housing Element on select properties.
- **Update the City's Urban Plans and Overlays.** The proposed Project would satisfy the objectives of Program 3D by implementing zoning amendments pertaining to the existing urban plans (i.e., 19 West Urban Plan, SoBECA Urban Plan, and Mesa West Bluff Urban Plan) and overlays (i.e., Mixed-Use Overlay District and Residential Incentive Overlay District) that would permit the residential development capacity at the

[1] On June 30, 2025, Senate Bill (SB) 131 was signed into law, which took effect immediately. The new law exempts Housing Element-related rezoning, as required under Government Code section 65583(c), from further CEQA review. Accordingly, because the City adopted the Housing Element Update and associated CEQA documentation in 2022, it is understood that the rezoning of Housing Element sites is exempt from CEQA review. At the time of preparing this Draft PEIR, the City has pursued the rezoning for the Housing Element sites accordingly, given the exemptions allowed under SB 131; nevertheless, this Draft PEIR anticipates evaluation of all Measure K sites, including Housing Element sites and non-Housing Element sites.

allowable densities identified in the Housing Element on select properties. The proposed Project also satisfies the Program's objective of removing the Mesa West Residential Ownership Overlay.

- **Rezone Candidate Sites Used in Previous Housing Elements**. The proposed Project would satisfy the objectives of Program 3N by implementing zoning amendments that would apply the amended MUOD to all non-vacant sites included in the prior Housing Element and all vacant sites included in two or more consecutive planning periods that permits by-right housing development for projects that meet the requirements of State Housing Law (Gov Code Section 65583.2(c).

Non-Housing Element Sites

The proposed Project would apply the amended MUOD to non-Housing Element sites following a robust community planning and visioning process. Therefore, the Project would implement Housing Element Program 3G, Address Citywide Vote Requirement in Relation to Housing Element Compliance, by engaging in a community planning and visioning process for proposed General Plan amendments, rezones, and revisions to Measure K sites. On non-Housing Element sites, the amended MUOD would provide property owners with the additive option to develop residential or mixed-use under the provisions of the MUOD or develop commercial or industrial uses as currently permitted by the underlying base zone.

Mixed-Use Overlay District (MUOD) Amendments

As discussed above, the Project would amend the City's existing MUOD, as codified in Article 11, Chapter V (Development Standards) of Title 13 (Planning, Zoning, and Development), to implement the rezoning. The amended MUOD would be applied to all Measure K sites, including Housing Element and non-Housing Element sites, as shown in Figure 2-2, Planning Area. Upon implementation of the proposed Project, the City's zoning map would be updated, as depicted in Figure 3-2, Updated Zoning Map.

Applicability of the MUOD

The provisions of the underlying base zoning districts would continue to apply to a property unless the property is a Housing Element site where the MUOD supersedes the base zone. If applicable, the provisions of other zoning provisions, such as overlays and specific plans, would continue to apply to a property unless specifically superseded. A MUOD project would be eligible for a density bonus pursuant to Article 4 (Density Bonuses and Other Incentives) of Chapter IX of Title 13, and as allowed under Government Code Section 65915 et. seq. The MUOD would apply to all Measure K sites, including Housing Element sites and non-Housing Element sites.

Fees and Off-Site Improvements for MUOD Projects

All MUOD projects would be subject to the applicable special fee assessments pursuant to Chapter XII (Special Fee Assessments) of Title 13. Applicable MUOD projects provide off-site improvements within the public right-of-way as required by the City Engineer pursuant to Article 9 (General Site Improvement Standards) of Chapter V of Title 13, which may include, but is not limited to sidewalks, parkway trees, parkway landscaping, utilities, and street lighting. Additionally, utility service providers generally require individual development/redevelopment projects to obtain service approval and pay applicable connection, meter, and/or capacity related charges at the time-of-service connection.

Required Studies for MUOD Projects

MUOD projects may be subject to technical studies to ensure compatibility with surrounding uses and compliance with City standards. Required studies are summarized below.

- All MUOD projects would be subject to a Phase 1 Environmental Assessment pursuant to MUOD provisions. The Phase 1 Environmental Assessment would provide disclosure of and measures to remediate onsite hazardous conditions. If applicable, additional assessments may be required, in which case, the project would comply with applicable required remediation measures. Where applicable, a letter of case closure would be required from the County of Orange Health Care Agency for development sites.
- Applicable MUOD projects would be subject to the applicable traffic study requirements pursuant to Article 3 (Transportation System Management) of Chapter XII of Title 13. Applicable projects would include those subject to a discretionary approval and estimated to generate 100 or more vehicle trips ends during a peak hour pursuant to Article 3 of Chapter XII. Applicable properties would be required to prepare a traffic impact study, upon which compliance with mitigation measures may be required as conditions of approval.
- Applicable MUOD projects shall be subject to a noise study prepared by a qualified acoustical consultant. Applicable MUOD projects include those abutting a freeway or within the Airport Planning Area, as defined by the Airport Environs Land Use Plan (AELUP) for John Wayne Airport. The noise study shall certify compliance with CMMC Title 13, Chapter XIII (Noise Control) and the AELUP.

Permitted Uses in the MUOD

Table 3-2, Permitted Uses in the MUOD, provides a list of uses that would be allowed or conditionally allowed within the MUOD. These uses are consistent with some of the allowable uses in Table 13-30, Citywide Land Use Matrix of the City's Municipal Code. However, some of these uses are not currently allowed within the MUOD but would be allowed or conditionally allowed with implementation of the proposed Project. For items that are currently allowed within one or more of the urban plans, those items are identified with a (*).

Table 3-2. Permitted Uses in the MUOD

Land Use	Permit Requirement
Residential Uses: (Stand-Alone and/or As Part Of A Vertical Or Horizontal Mixed-Use Development)	
▪ Multi-family dwellings	P
▪ Common interest developments, residential	P
▪ Supportive housing	P[11]
▪ Transitional housing	P[11,12]
▪ Low barrier navigation center	P[13]
Accessory Uses: (As Part Of A Vertical Or Horizontal Mixed-Use Development)	
▪ Day care facilities (15 children or more) (see also Nursery schools)	C
▪ Family day care—Large (7 to 14 children) (subject to the requirements of Section 13-37, Large Family Day Care Homes)	P[2]
▪ Family day care—Small (up to 8 children)	P
▪ Home occupations (subject to the requirements of Chapter IX, Article 6, Home Occupations)	P[2,3]

Table 3-2. Permitted Uses in the MUOD

Land Use	Permit Requirement
▪ Accessory dwelling unit (subject to the requirements of Chapter V, Section 13-35, Accessory Dwelling Units)	P[2]
▪ Junior accessory dwelling unit (subject to the requirements of Chapter V, Section 13-35, Accessory Dwelling Units)	P[2]
▪ Temporary real estate and construction offices (subject to the requirements of Chapter IX, Article 10, Temporary Trailers)	P[2]
Non-Residential Uses: (As Part Of A Live/Work Unit)	
▪ Artists studio (sculpture, woodworking, furniture, restoration, painting, ceramics, etc.) (*)	P
▪ Barber and beauty shops with accessory uses such as permanent make up, facials, and accessory massage (*)	P
▪ Catering (*)	P
▪ Commercial art; graphic design (*)	P
▪ Computer and data processing (*)	P
▪ Offices: central administrative (*)	P
▪ Offices: engineering; architectural; and surveying services; management; consulting and public relations (*)	P
▪ Offices: general (*)	P
▪ Offices: medical and dental	MC
▪ Offices: services to businesses such as bookkeeping and data processing (*)	P
▪ Photocopying; blueprinting and related services (*)	P
▪ Photography: commercial (*)	MC
▪ Photography: portrait studio (*)	MC
▪ Printing and publishing (*)	P
▪ Recording studios (*)	MC
▪ Studios: dance; martial arts; music, etc. (*)	MC
▪ Retail: general— excluding antique malls, pawn shops, supermarkets, grocery stores, convenience stores; and liquor stores listed separately (*)	C
▪ Retail: nonstore (*)	P
Institutional and Recreational Uses: (As Part Of A Vertical Or Horizontal Mixed-Use Development)	
▪ Churches and other places of religious assembly (Subject to the requirements of Article 4.5, Development Standards for Churches and Other Places of Religious Assembly) (*)	P[2]
▪ Civic and community clubs (*)	P
▪ Libraries, privately-operated	C
▪ Nursery schools—See also Day care facilities for 15 or more children	C
▪ Parks and playgrounds	P
▪ Public offices and facilities, such as city halls, courthouses, police/fire stations, etc.	C
▪ Schools: primary, secondary and colleges	C
▪ Schools: trade and vocational; group counseling	C
▪ Senior congregate care facility	C

Table 3-2. Permitted Uses in the MUOD

Land Use	Permit Requirement
Commercial and Industrial Uses: (As Part Of A Vertical Or Horizontal Mixed-Use Development)	
▪ Acupressure; massage (subject to the requirements of Title 9, Chapter II, Article 22, Massage Establishments and Practitioners)	P[2]
▪ Amusement centers (subject to the requirements of Chapter IX, Article 5, Electronic Game Machines) (*)	C[2]
▪ Animal shelters, pounds, kennels, training schools	C
▪ Antique malls	P
▪ Artists, sculptors studios	P
▪ Auction houses	P
▪ Banks; savings and loans; and other financial institutions (*)	P
▪ Barber and beauty shops with accessory uses such as permanent make up, facials, and accessory massage (*)	P
▪ Billiards parlors	C
▪ Bowling centers	C
▪ Building supplies; hardware stores (retail) (*)	P
▪ Catering (*)	P
▪ Commercial art; graphic design (*)	P
▪ Computer and data processing (*)	P
▪ Convenience stores; mini-markets (subject to the requirements of Chapter IX, Article 16, Liquor Stores, Convenience Stores, and Mini-Markets) (*)	C[2]
▪ Department stores (retail)	P
▪ Electronic game machines (four or more), incidental to the primary use, (subject to the requirements of Chapter IX, Article 5, Electronic Game Machines)— Excluding amusement centers listed separately	MC[2]
▪ Entertainment, live or public	See Title 9, Article 11, Regulatory Permits For Public Entertainment
▪ Establishments where food or beverages are served	See Chapter V, Article 4, Establishments Where Food Or Beverages Are Served
▪ Flower stands—see also Carts	MC
▪ Grocery stores—see also Supermarkets; excluding convenience stores; and liquor stores listed separately (*)	P
▪ Hotels— Excluding motels listed separately	C
▪ Laundry, such as tailoring, laundromats, cleaning and garment services, not inclusive of on-site plants	P
▪ Liquor stores (subject to the requirements of Chapter IX, Article 16, Liquor Stores, Convenience Stores, and Mini-Markets) (*)	C[2]

Table 3-2. Permitted Uses in the MUOD

Land Use	Permit Requirement
▪ Massage— See also Acupressure (subject to the requirements of Title 9, Chapter II, Article 22, Massage Establishments and Practitioners)	P[2]
▪ Motels— (Subject to requirements of Chapter IX, Article 8, Motels) Excluding Hotels listed separately	C[2]
▪ Motion picture theaters and other theaters not within 200 feet of residential zones (*)	P
▪ Motion picture theaters and other theaters within 200 feet of residential zones (*)	C
▪ Offices: central administrative (*)	P
▪ Offices: engineering; architectural; and surveying services; management; consulting and public relations (*)	P
▪ Offices: general (*)	P
▪ Offices: medical and dental (*)	P
▪ Offices: services to businesses such as bookkeeping and data processing (*)	P
▪ Off-street parking lots and structures including related maintenance buildings (*)	C
▪ Off-street parking lots and structures, incidental uses within (*)	MC
▪ Pawn shops	P
▪ Photocopying; blueprinting and related services (*)	P
▪ Photography: commercial (*)	P
▪ Photography: portrait studio (*)	P
▪ Physical fitness facilities	C
▪ Printing and publishing (*)	P
▪ Recording studios (*)	MC
▪ Retail: general— excluding antique malls, pawn shops, supermarkets, grocery stores, convenience stores; and liquor stores listed separately (*)	P
▪ Retail, incidental sales to the main use (subject to the requirements of section 13-54(a), incidental retail sales)	P
▪ Retail: nonstore (*)	P
▪ Studios: dance; martial arts; music, etc. (*)	P
▪ Supermarkets— see also Grocery stores	P
▪ Specialty stores	P
▪ Tattoo parlors	C

Notes:

1 Uses proposed in this zone are subject to verification of consistency with the adopted master plan. Uses not specified in the master plan, could be allowed, subject to the review process indicated in this matrix, if the proposed use is determined to be compatible with the adopted master plan. Residential uses shall not be permitted on any site or parcel of land on which residential uses are expressly prohibited by the general plan.

2 This use is subject to the requirements of the referenced Municipal Code article or section.

3 If residential uses exist, accessory uses shall be permitted.

4 For the purposes of this table, the symbols in the non-shaded areas shall have the following meaning: C—Conditional Use Permit; MC—Minor Conditional Use Permit; P—Permitted; and S—Special Use Permit.

5 Six hundred fifty foot separation required between sober living homes, or from state licensed alcohol or drug abuse recovery or treatment facilities. CMMC 13-311(a)(10)(i).

6 Subject to the separation requirement set forth in sections 13-322(a)(3) and 13-323(b).

7 Small boardinghouses shall locate at least 650 feet from any other small boardinghouse. Large boardinghouses shall be located at least 1,000 feet away from any other boardinghouse.

8 Uses prohibited in the base zoning district of a mixed-use overlay zone shall also be prohibited in the overlay zone.

9 Prohibited at the SoCo property, 3303 through 3323 Hyland Ave.

[10] Emergency shelters located on sites owned, controlled, and/or operated by the City in the MP and/or the PDI zone are a permitted use, not subject to a master plan requirement and the standards in section 13-200.79(1), (2), (4), (8), (10) and (13) do not apply to such uses.
[11] Supportive housing, as defined in Section 65650, shall be a use by right in all zones where multifamily and mixed uses are permitted, provided it is consistent with California Government Code Sections 65650 – 65656.
[12] In accordance with Government Code Section 65583(c)(3), Transitional and Supportive Housing shall be considered a residential use of property and shall be subject only to those restrictions that apply to other residential dwellings of the same type in the same zoning district.
[13] Low Barrier Navigation Centers shall be permitted by right provided they are consistent with the requirements under State Law 65660-65668.

Development Standards for MUOD Projects

The Project revises and expands existing development standards for all MUOD projects. All MUOD projects, including those on Housing Element sites, would be subject to the development standards in Table 13-83.11.7, Development Standards for MUOD Projects in the MUOD, which would supersede and prevail over any conflicting provisions of the property's underlying base zone, specific plan, or overlay, unless otherwise noted. However, MUOD projects on Housing Element sites would also be subject to the exceptions and additional standards in Section 13-83.11.10, Properties Identified in Housing Element, in the MUOD relating to minimum residential densities and capacities, minimum residential floor area, ministerial review and approval, and other applicable provisions. Table 3-3 below provides an overview of the majority of the development standards in the MUOD, with additional details provided in the MUOD.

Table 3-3. Development Standards for MUOD Projects

Table 13-83.11.7. Development Standards for MUOD Projects			
DEVELOPMENT STANDARD			ADDITIONAL PROVISIONS IF APPLICABLE
RESIDENTIAL DENSITY STANDARDS[1]			
BY MUOD SUB-AREA	MINIMUM RESIDENTIAL FLOOR AREA	MAXIMUM RESIDENTIAL DENSITY	
Mesa West Bluffs	Minimum 50 percent of the total floor area of a MUOD project shall be residential use	20-30 du/ac	MUOD Sub-Areas and allowable maximum residential densities are depicted in Figure 13-83.11.7.
19 West		20-30 du/ac	
Newport Boulevard		30 du/ac	
Harbor Boulevard		30 du/ac	
SoBECA		40 du/ac	
North Costa Mesa		60 du/ac	
NON-RESIDENTIAL FLOOR AREA RATIO (FAR) STANDARDS			
Minimum FAR	None		
Maximum FAR	1.0 FAR		

Table 3-3. Development Standards for MUOD Projects

Table 13-83.11.7. Development Standards for MUOD Projects			
DEVELOPMENT STANDARD			ADDITIONAL PROVISIONS IF APPLICABLE
BUILDING HEIGHT STANDARDS[1]			
BY RESIDENTIAL DENSITY	MAXIMUM BUILDING HEIGHT		
	Residential-Only Building or Vertical Mixed-Use Building	Non-Residential Building	
20 du/ac	60 ft.	40 ft.	
30 du/ac			
40 du/ac			
60 du/ac	72 ft.		
SETBACK STANDARDS			
BY ABUTTING CONDITION	MINIMUM AND MAXIMUM SETBACK[2]		
Front or side along a public street	Min. 10 ft. and max. 20 ft.		
Side or rear abutting alley	0 ft.		
Side or rear abutting:			
-Commercial or mixed-use zone	5 ft.		
-Residential zone	20 ft.		
-Industrial zone	20 ft.		
Side or rear abutting bluff crest	10 ft.		Section 13-34 (Bluff-Top Development) of Chapter V of Title 13
LOT STANDARDS			
Minimum lot size	None		
OFF-STREET PARKING STANDARDS			
Minimum parking for dwelling units (including live/work units)	None		Chapter VI (Off-Street Parking Standards) of Title 13
Minimum parking for non-residential uses	Subject to Table 13-89 (Non-Residential Parking Standards)		
OPEN SPACE STANDARDS[3]			
Usable common residential open space[4]	Min. total area equivalent to 30% of lot		Chapter VII (Landscaping Standards) of Title 13
Usable private residential open space [5]	Min. 100 sq. ft./unit provided on the ground floor for dwelling units located on the ground floor, and min. 50 sq. ft./unit provided for dwelling units located above the ground floor.		
Publicly accessible open space	Min. total area equivalent to5% of commercial gross floor area for developments with a commercial gross floor area greater than 50,000 sq. ft.		

Table 3-3. Development Standards for MUOD Projects

Table 13-83.11.7. Development Standards for MUOD Projects	
DEVELOPMENT STANDARD	ADDITIONAL PROVISIONS IF APPLICABLE
SIGN STANDARDS	
Signs for MUOD projects shall be subject to the commercial zone requirements of Table 13-115 (Sign Regulations Permanent Signs), with the following additions and exceptions: ▪ Max. height of freestanding signs along any arterial street shall be 25 ft.	
POOL/SPA STANDARDS	
Pools and spas in MUOD projects shall be prohibited in the front or side setback abutting a public street	
GENERAL SITE IMPROVEMENT STANDARDS	
MUOD projects are subject to the applicable general site improvement standards in Article 9 (General Site Improvement Standards) of Chapter V of Title 13	

Notes:

1 Exceptions for Housing Element Sites. MUOD projects on properties identified in the City's adopted 2021-2029 Housing Element Sites Inventory shall be subject to the provisions in Section 13-83.11.10.

2 Minimum setbacks shall apply to all portions of a building or structure. Maximum setbacks along public streets shall only apply to a building or structure's ground floor, with exceptions for driveways, walkways, and open space.

3 Or as provided in an applicable Specific Plan.

4 Up to 50 percent of the required usable common residential open space may be substituted by publicly accessible open space

5 Up to 50 percent of the required usable private open space may be substituted by usable common residential and/or publicly accessible open space.

General Plan Amendments

Amendments to the City's General Plan are required for Project implementation and internal consistency. These amendments would be applied primarily to the Land Use Element, as well as other Elements of the General Plan in order to create consistency between land use and zoning for the Planning Area sites regarding the extent and intensity of allowed uses. In addition, amendments to the Land Use Element would occur with the intent to remove references to and provisions for existing urban plans. Upon implementation of the proposed Project, the City's land uses would be updated, as depicted in Figure 3-3, Updated Land Use Map.

Revisions to the Land Use Element include the removal of all respective references to the urban plans, consolidating the areas of the SoBECA Mixed-Use Overlay, Harbor Mixed-Use Overlay, and Westside Urban Plans into one Mixed-Use Overlay.

To further create consistency between the land use and zoning for the Planning Area sites, the following policies are proposed:

- Goal 1, Policy LU-1.6 Balance housing, retail and employment opportunities by facilitating the development of residential and mixed-uses within the Mixed-Use Overlay.
- Goal 2, Policy LU-2.12 Concentrate new housing in the Mixed-Use Overlay where infrastructure and services can support higher densities.

Additionally, the following revisions to Policy LU-5.10 are proposed in order to remove redundancies:

> Building densities/intensities for proposed new development projects shall not exceed the trip budget for applicable land use classifications, as identified in the Land Use Element, ~~unless the site is identified as a housing opportunity site within the sites inventory of the Housing Element, then the density and intensity may be modified to realize the residential site capacity, or density, identified therein~~. Building intensities for proposed new development projects shall not exceed the applicable floor area standards, except for the following conditions:
>
> (a) …
>
> (b) …
>
> (c) …
>
> (d) …
>
> (e) The General Plan does not specify trip generation standards as allowed in the Mixed-Use Overlay

The following revisions to Policy LU-6.3 are proposed for clarity and consistency "Continue to prioritize commercial and industrial park use of properties ~~north of I-405 and~~ within the Airport Industrial ~~District~~ Area."

Additional revisions to the Land Use Element are provided in the narrative sections for consistency and clarity and include the removal of references to various districts that are addressed at the zoning level; references to the MUOD, where appropriate; an updated narrative on the colocation of residential and employment uses; removal of regulatory language that is duplicative of the City's Municipal Code; the removal of regulatory language that is duplicative of specific plans; and the addition of the MUOD to Table LU-12 General Plan and Zoning Consistency.

Revisions to the Noise Element include the removal of the following text: "The Noise Ordinance further specifies that residential exterior areas such as private balconies, roof decks, and internal courtyards in a Mixed-Use Overlay District for live/work and multi-family residential development that are approved pursuant to a Master Plan, and subject to the land use regulations of an Urban Plan, are exempt from the residential exterior noise standards." The removal of this policy is proposed in an effort to remove the reference to the Urban Plans, which are no longer applicable and to avoid redundancy of zoning regulations within the General Plan.

Revisions to the Design Element would replace references to "urban plans" with references to "Mixed-Use Overlay."

Revisions to the Open Space and Recreation Element would replace references to the "SoBECA Urban Plan with "Mixed-Use Overlay."

Revisions to the Circulation Element would include the removal of the following text: "In districts with heavy pedestrian activity—such as in the Westside, SoBECA and South Coast Plaza/Orange County Performing Arts districts—sidewalks should have several zones that accommodate pedestrians."

Additional amendments to the General Plan are proposed for internal consistency and clarity across elements and consistency with the proposed rezone. Notably, several elements of the General Plan use the term "district" to mean both an area and a zoning district. The General Plan has been revised to accurately reference "areas" and "districts," where applicable

Amendments to the North Costa Mesa Specific Plan, Newport Boulevard Specific Plan, and One Metro West Specific Plan.

The Project would apply the MUOD to Measure K sites within the North Costa Mesa Specific Plan, Newport Boulevard Specific Plan, and One Metro West Specific Plan. These changes would also be reflected in the General Plan Land Use Map and Zoning Map. While base zones would remain the same, the MUOD would be applied to Measure K sites. The specific plans would continue to apply to a property unless specifically superseded by a MUOD project when a property owner chooses to exercise provisions of the MUOD on a qualifying property. However, Housing Element sites would be governed by special provisions in the MUOD as required by state law, in which those provisions of the MUOD would supersede and prevail over any conflicting provisions of the underlying base zone, including, but not limited to, minimum residential densities and capacities, minimum residential floor area, ministerial review and approval, and permitted uses, and all other applicable zoning provisions, such as other urban plans, overlays, and specific plans.

3.4.2.2 Zoning Code Amendments

The Housing Element identifies sections of the City's Zoning Code that require amendments in order to comply with State law requirements, remove regulatory impediments or barriers to housing development, and streamline the housing development process. As such, the Project includes various amendments to the City's Zoning Code that would implement Housing Element Programs including, but not limited to, 2B, 2E, 2F, 2H, 2I, 2J, 2K, 2M, 2N, 2O, 2P, 3C, 3D, 3E, 3F, 3H, 3I, 3J, 3K, 3S, 4E, and 4G. These programs would update zoning provisions, including development standards, and provide for internal consistency and consistency with state law with regards to incentives for affordable housing; larger units for large-family households; persons with physical and developmental disabilities; farmworker housing; State Density Bonus incentives; transitional and supportive housing; parking standards for residential development; reasonable accommodations; single housekeeping units; group homes; accessory dwelling units (ADUs), motel conversions, efficiency units, and co-living housing types; marketing housing development on church sites; findings for conditional use permits, design review, and master plans; low barrier navigation centers; and parking for emergency shelters These programs would not result in physical changes to the environment. Instead, these would merely bring the City's Zoning Code into compliance with State law and/or would facilitate policy-level processes to streamline implementation.

Environmental Evaluation Methodology

Because some of the Zoning Code Amendments summarized above are intended to implement the requirements of State law, compliance is mandatory and would be required to occur regardless of whether they are codified in the City's Municipal Code. The City does not have the discretionary authority to consider whether or not the laws/orders are implemented; as such, the City is complying with these laws/orders in practice in the existing condition or will be required to comply upon the law's stated date of applicability. Therefore, the action of codifying these mandatory requirements is an administrative action and is not an action that could result in an impact on the environment. The City's codification of State law would not meet the definition of a project under CEQA Guidelines Section 15378(a), and would fit within the definition of an action that is not considered a project under CEQA Guidelines Section 15378(b)(2). Further, CEQA Guidelines Section 15268 states that ministerial projects (for which the governing body does not have discretion to deny) are exempt from the requirements of CEQA. Any environmental impacts that would occur due to the State laws are essentially a baseline condition, and the City must continue to operate in compliance.

Select aspects of the Zoning Code Amendments would be above and beyond the requirements of State law, such as the removal of Design Review and Minor Design Review approvals processes. While the provision of design review is not explicitly prohibited by State law, in accordance with the Housing Crisis Act of 2019, jurisdictions are prohibited from enforcing new, non-objective design standards passed after January 1, 2020, as it relates to the development of housing. Prior to 2020, the City adopted design guidelines for new residential construction and additions of two stories. The Project would sunset these guidelines and consolidate applicable requirements into Objective Design Standards. Further, for projects meeting the definition of a "housing development project" under the Housing Accountability Act, localities are prohibited from imposing conditions that would cause a project to be developed at a lower density where objective criteria are met and for "housing development projects" under the Permit Streamlining Act, only applicable standards and criteria may be enforced. However, these components do not have the potential for any environmental impacts.

Therefore, for the purposes of the analyses within this PEIR the evaluation of environmental impacts is limited to the buildout of the rezoning for Measure K sites, as realized through the buildout of the Project through 2056.

3.4.2.3 Objective Design Standards

Purpose and Applicability

The Citywide Multifamily Residential and Mixed-Use Objective Design Standards (Objective Design Standards) establish clear, measurable, and uniformly applicable design requirements for new multifamily residential and mixed-use development in the City of Costa Mesa. Enabled by recent state legislation, including Senate Bill (SB) 330 (2017) and 330 (2019), the Objective Design Standards are intended to improve predictability, efficiency, and transparency in project review while promoting high-quality design that aligns with state law, City goals, and the community's vision.

By relying on objective, externally verifiable criteria, the Objective Design Standards would reduce subjective interpretation and provide greater certainty to applicants, decision-makers, and the public. Applicants would be able to understand applicable requirements prior to submittal and design projects to comply with those requirements from the outset.

The Objective Design Standards would apply to all new construction multifamily residential and mixed-use buildings (consistent with California Government Code Section 65913.4) of three or more stories in height located in any zone. These requirements are intended to supplement, not replace, existing zoning and building regulations. In the event of a conflict, the more restrictive regulation would prevail.

The Objective Design Standards would implement and support policies contained in the Costa Mesa General Plan. Collectively, these policies emphasize neighborhood compatibility, pedestrian-oriented design, architectural quality, protection of privacy, noise mitigation, and context-sensitive development. The Objective Design Standards would also complement the Costa Mesa Municipal Code, including the Planning, Zoning, and Development Code and the Building and Structures Code. They are intended to function as site- and building-design regulations adopted by reference into the Municipal Code.

Administration and Review

The Objective Design Standards would be administered by the City's Planning Division and used by applicants during project design as well as by City staff and decision-makers during project review. Chapter III (Planning Applications)

of Title 13 of the Municipal Code establishes the review and approval procedures of applicable projects subject to these standards. Allowability and procedures for the deviation from these standards, if requested, would also be subject to the provisions of Chapter III (Planning Applications) of Title 13 of the Municipal Code. The Zoning Administrator would have the responsibility and authority to interpret the meaning and applicability of these Standards.

Building Design Objective Design Standards

The Building Design portion of the Objective Design Standards would address the massing, form, facade, and ground floor design of residential and mixed-use buildings. Key areas addressed would include:

- Building Mass and Form, to encourage compatibility in scale across buildings, minimize the perceived height and mass of buildings, and allow for space, light, air, and privacy in between buildings;
- Façade Design, to discourage "blank walls," reflect the eclectic character of Costa Mesa's built environment, and encourage a variety of façade designs and styles that are visually interesting and engaging; and
- Ground-Floor Design, to encourage human-scaled design, ensure that ground floor uses respond to and engage the sidewalk, ensure accessibility and visibility of ground floor uses, ensure the livability, privacy, and security of ground floor residential units, and foster "eyes on the street."

Collectively, these standards would be intended to enhance visual interest, protect privacy, and improve neighborhood compatibility while remaining objective and measurable.

Site Design Objective Design Standards

The Site Design portion of the Objective Design Standards would address how new multifamily residential and mixed-use development is arranged and functions on a site. These standards would guide the relationship between buildings, circulation systems, open spaces, and site features to support functional, attractive, and context-sensitive development that is compatible with surrounding uses and other conditions.

The Site Design Objective Design Standards would focus on site planning principles intended to promote safe and efficient movement for pedestrians, bicyclists, and vehicles. Consideration would be given to the placement and orientation of buildings, open spaces, walkways, paved areas, parking areas, underground services, and finished grade elevations as part of an integrated site design approach. They would address various topics, including access and circulation; open space and landscaping; walls, fences, and hedges; building utilities/equipment; trash and recycling areas; lighting, and parking and loading. These categories collectively would address how buildings are arranged on a site and how site features support functionality, aesthetics, and compatibility with surrounding uses.

Compliance Checklists and Definitions

The Objective Design Standards would include compliance checklists for multifamily residential projects and mixed-use development projects. These checklists would be intended to help applicants and City reviewers verify consistency with applicable standards in a clear and efficient manner. A definitions section would also be included to clarify key terms used throughout the document and ensure consistent interpretation.

Environmental Evaluation Methodology

Objective design standards are requirements related to the construction of the land uses within the MUOD to improve predictability, efficiency, and transparency in project review while promoting high-quality design that ensures compatibility between residential and non-residential uses within the same mixed-use development or building. The construction and operation of such buildings are comprehensively addressed through the environmental analyses set forth in this Draft PEIR, as analyzed at the programmatic level. There would be no additional impacts resulting in the construction or operation of the future buildout of the Project in accordance with the Performance Design Standards, beyond those already assessed in this Draft PEIR.

Therefore, for the purposes of the analyses within this PEIR the evaluation of environmental impacts is limited to the buildout of the rezoning for Measure K sites, as realized through the buildout of the Project through 2056.

3.5 Project Buildout and Assessment Methodology

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation does not include or propose any site-specific development that could directly result in construction or operational impacts to the environment. However, implementation of the Project would allow for future development within the MUOD at greater densities than currently allowed and on newly designated parcels, and could therefore facilitate future development. Therefore, this Draft PEIR does not assess the site-specific construction and operation details of individual future development projects within the Planning Area. Rather, it assesses the impacts associated with changes to existing land uses and the associated overall effects of buildout of the Project through 2056, where reasonably foreseeable physical changes to the environment could occur. The analyses included in this Draft PEIR are focused on potential environmental impacts that could occur due to the amended MUOD and associated implementation of the rezoning of Measure K sites. Project-specific and parcel-specific evaluations are not possible because the actual locations and intensity of project-level development (and its chronologic sequence or concurrence) that may be implemented in the future are speculative.

This Draft PEIR focuses on reasonably foreseeable impacts from proposed land use changes and amendments to Title 13 of the Municipal Code associated with buildout of the Project and impacts from the resultant population and employment growth in the Planning Area. The buildout year for the Project is 2056.

Future development and redevelopment in the Planning Area is expected to occur as a result of implementation of the amended MUOD on Measure K sites to accommodate new housing. The Project, as a whole, is considered and analyzed programmatically in this Draft PEIR; and the proposed Project components were determined to result in quantifiable growth in population and employment. Appendix B, Buildout Methodology, of this Draft PEIR provides a parcel list of the Planning Area, including existing and proposed land use designations/zoning, and demonstrates the methodologies used to calculate the anticipated housing, non-residential building area, population, and employment growth resulting from implementation of the Project.

In summary, and as described above, the Project would rezone all Measure K sites, including Housing Element and non-Housing Element sites, by applying the amended MUOD, which would include specific provisions regarding allowed uses, maximum residential densities, and other provisions. The rezoning would satisfy the requirements of Housing Element Programs 3C, 3D, and 3N, as well as 3G. Application and utilization of the amended MUOD assumes that residential-only or mixed-use (residential and commercial) would be developed on Measure K sites. As described below, Draft PEIR analyzes the potential buildout of 21,522 units and 10,630,361 square feet of non-

residential/commercial uses by 2056. The Planning Area buildout conditions, which include quantitative measures of anticipated Project buildout as compared to existing conditions, are provided below in Table 3-4, Population and Housing 2056 Buildout for the Planning Area, and Table 3-5, Employment Buildout for the Planning Area.

3.5.1 Realistic Residential Buildout

The proposed rezoning would allow opportunities for the development of housing or mixed-use on Measure K sites, including Housing Element and non-Housing Element sites, to address the RHNA of 11,760 units (and a buffer capacity) as well as a realistic capacity on non-Housing Element sites beyond the timeframe of the 2021-2029 Housing Element. As described in detail in Appendix B, Buildout Methodology, in order to calculate the realistic residential buildout on non-Housing Element sites, the following considerations were made on a parcel-by-parcel basis: (1) its area and ability for lot consolidation; (2) its location in the city; and (3) its likelihood for redevelopment. As a result, a realistic residential capacity was developed by calculating the future maximum residential capacity (based on full buildout of zoning allowance) multiplied by the likelihood of redevelopment, while subtracting existing developed uses on site. An overview of the methodology to determine the realistic residential buildout is summarized below:

Ineligible Sites. Non-Housing Element sites with an area less than 0.5 acres and ineligible for lot consolidation (i.e., not contiguous to an adjacent parcel where, if consolidated, amounted to an area of at least 0.5 acres) were removed and not included in the realistic residential buildout calculation.

Future Maximum Residential Capacity. For Housing Element sites, the maximum density assumed in the Housing Element was used (these densities vary per site between 40-90 du/ac). For non-Housing Element sites, parcels in North Costa Mesa (north of the I-405 freeway) were assigned a maximum density of 60 du/ac, and parcels elsewhere in the city (i.e., south of the I-405 freeway) were assigned a maximum density of 30 du/ac.

Existing Residential. Under existing conditions, it is estimated that there are approximately 508 residential units within the Planning Area.

Likelihood of Redevelopment. A percentage was assumed for each site that represents the likelihood of site redevelopment based on scoring criteria for the current site utilization and year built of structures recorded on site. The following considerations were made on each:

- Current Site Utilization. Sites with a lower improvement to land value (ILV) ratio are more likely to redevelop (i.e., improvement is worth less than the land). A site was considered to have a high likelihood if the ILV ratio is greater than 0.5, medium likelihood if the ILV ratio is between 0.5 and 1.0, and low likelihood if the ILV ratio is less than 1.0 (or no data available).
- Year Built. Sites with older structures are more likely to redevelop. Sites with structures recorded to be older than 1989 were considered to have a high likelihood, while sites with structures built between 1990 and 2004 were considered to have a medium likelihood, and sites with structures built between 2005 and today (or no data) were considered to have a low likelihood to redevelop.

The total future buildout for all Measure K sites, including Housing Element sites and non-Housing Element sites, is anticipated to be approximately 21,522 dwelling units. In compliance with State law[2], the amended MUOD will require that projects on Housing Element sites provide a minimum amount of residential floor area and achieve a

[2] Consistent with California Government Code §65583.2(h).

minimum residential density, such that projects consisting of 100 percent of residential uses would be permitted. Note that such requirements do not preclude the possibility of a mixed-use project on a Housing Element site, as long as it is compliant with State law, such as the requirement to provide at least 50 percent of the total floor area as residential uses with a minimum density of 20 du/ac. Table 3-4, Population and Housing Buildout for the Project Area, depicts the population and housing buildout of the Project.

Table 3-4. Population and Housing Buildout for the Planning Area

Description	Planning Area
Existing Population and Housing Conditions	
Dwelling Units [a]	508
Population [b] (2.56 persons per household)	1,300
Project-Facilitated Population and Housing Growth	
Dwelling Units [c]	22,030
Population (2.4 persons per household) [d]	52,872
2056 Planning Area Population and Housing Buildout *(Project - Existing)*	
Total Dwelling Units	**21,522**
Total Population	**51,572**

Sources: Appendix B
Notes: Estimates are rounded to the nearest whole number.

[a] The total number of existing dwelling units in the Planning Area was estimated at the time of NOP publication (November 2025) is based on parcel data exported from the Southern California Association of Governments (SCAG) Housing, Environment, and Land Use Parcel Tool (HELPR) Tool 3.0 (SCAG 2025) and desktop research (see Appendix B for more details).

[b] Baseline population for the Planning Area reflects population estimate for the City as recorded by the U.S. Census Bureau's 2020-2024 American Community Survey (Census 2026).

[c] The Project-facilitated dwelling unit growth reflects the "realistic" capacity (i.e., likelihood of redevelopment) of parcels at buildout (2056). See Appendix B for more details.

[d] The Project-facilitated population growth is based on a 2.4 persons per household (i.e., dwelling unit) generation factor, which represents the average household size of the Transportation Analysis Zones (TAZs) for the Planning Area (Appendix J).

3.5.2 Realistic Non-Residential/Commercial Buildout

For the purposes of determining the project's buildout in 2056, this following methodology assumes that the Project would facilitate the redevelopment of the Planning Area with mixed-use (residential and commercial uses) on Measure K sites. Therefore, in addition to a potential residential buildout, the proposed Project assumes a potential commercial buildout. Furthermore, given that the MUOD would not allow for development of new industrial uses on these sites, redevelopment of these sites would result in a variety of non-residential/commercial uses (i.e., retail or office) but would exclude industrial uses.

The amended MUOD would defer to the maximum intensities (by Floor Area Ratio or FAR) allowed per land use designation as established in Table LU-6, Land Use Density and Intensity Summary, of the General Plan. While maximum intensities range between 0.40 and 1.77 FAR for land use designations applicable to Measure K sites, the assumption was made that a maximum of 1.00 FAR is realistically feasible in typical mixed-use development typologies (i.e., commercial and residential mixed-use). Therefore, the applicable maximum intensity ranging between 0.40 and 1.00 FAR was applied to each site and totaled across all sites. In addition, the same likelihood of redevelopment considerations that were applied to the residential buildout (i.e., current site utilization and year built) were also applied to the commercial buildout. Given this buildout methodology, the Project could result in

approximately 17,306,003 square feet of total new non-residential/commercial uses by 2056 in the Planning Area, which assumes the redevelopment of approximately 6,675,642 square feet of commercial/industrial uses. (Note, the Planning Area contains approximately 10,878,773 square feet of existing commercial/industrial uses which are expected to remain as-is.) As a result, the net new non-residential buildout for all Measure K sites to be studied is approximately 10,630,361 square feet within the Planning Area in 2056, resulting in a net-new employment of 14,454 employees in the Planning Area. Table 3-5, Non-Residential Uses and Employment Buildout for the Planning Area, details the Project's buildout conditions for non-residential square footage and associated employment.

Table 3-5. Non-Residential Uses and Employment Buildout for the Planning Area

Description	Non-Residential Square Footage (SF)	Employees [a]
Existing Conditions		
Total Existing Planning Area	17,554,415	23,692
Existing (Assumed to Remain)	10,878,773	14,689
Redeveloped		
Existing (Likely to Redevelop) [b]	6,675,642	9,009
Post-Project Redeveloped Planning Area [c]	17,306,003	23,463
Planning Area Total		
Post-Project Total Planning Area [d]	28,184,776	38,152
Project-Generated Growth *(Post-Project - Total Existing)*		
Net New Project [e]	10,630,361	14,454

Sources: Appendix B; Appendix J.
Notes: Estimates are rounded to the nearest whole number.

[a] Employment data for the Planning Area was estimated using SCAG land use codes and parcel data exported SCAG's HELPR Tool 3.0 under existing conditions (2025) (SCAG 2025).
[b] This represents the difference between the total existing conditions and the portion of the Planning Area assumed to remain. Therefore, the data presents the existing conditions of parcels likely to redevelop prior to Project implementation (see Appendix B for discussion on site utilization and age of structures on site).
[c] This represents the total "realistic" buildout for the Planning Area in 2056. See Appendix B for more details.
[d] This represents the sum of the portion of existing conditions assumed to remain within the Planning Area and the total "realistic" buildout.
[e] This represents the difference between the post-Project non-residential square footage and employment and the total existing conditions within the Planning Area.

3.6 Intended Uses of the Draft PEIR

This Draft PEIR examines the environmental impacts of the Project and addresses various actions by the City and others to adopt and implement the Project. The intent of this Draft PEIR is to enable the City, other responsible agencies, and interested parties to evaluate the environmental impacts of the Project, thereby enabling them to make informed decisions with respect to the requested entitlements. This Draft PEIR is also intended to support other federal, state, and regional/local government discretionary approvals that may be required in connection with implementation of the proposed Project.

3.7 Discretionary Actions

The City, as lead agency for the Project, has the responsibility for reviewing, processing, and approving the Project. Anticipated approvals required to implement the Project would include, but are not limited to, the following:

3.7.1 Certification of the Program Environmental Impact Report

3.7.2 Adoption of Rezoning of Measure K Sites

To implement the rezoning of Measure K sites, the City Council would adopt an Ordinance to amend:

- The Zoning Map
- Chapter V, Development Standards, Article 11, Mixed-Use Overlay District, of Title 13 of the Municipal Code
- The North Costa Mesa Specific Plan
- The Newport Boulevard Specific Plan
- One Metro West Specific Plan
- The General Plan, including the following elements:
  - Land Use Element
  - Noise Element (for consistency with Land Use Element)
  - Community Design Element (for consistency with Land Use Element)
  - Open Space and Recreation Element (for consistency with Land Use Element)
  - Circulation Element (for consistency with Land Use Element)

3.7.3 Adoption of Zoning Code Amendments

To implement the Zoning Code Amendments, the City Council would adopt an Ordinance to amend the Zoning Code pertaining to definitions, review authorities, planning applications, allowable uses, development standards, and other topics related to residential and mixed-use development and uses.

3.7.4 Adoption of Objective Design Standards

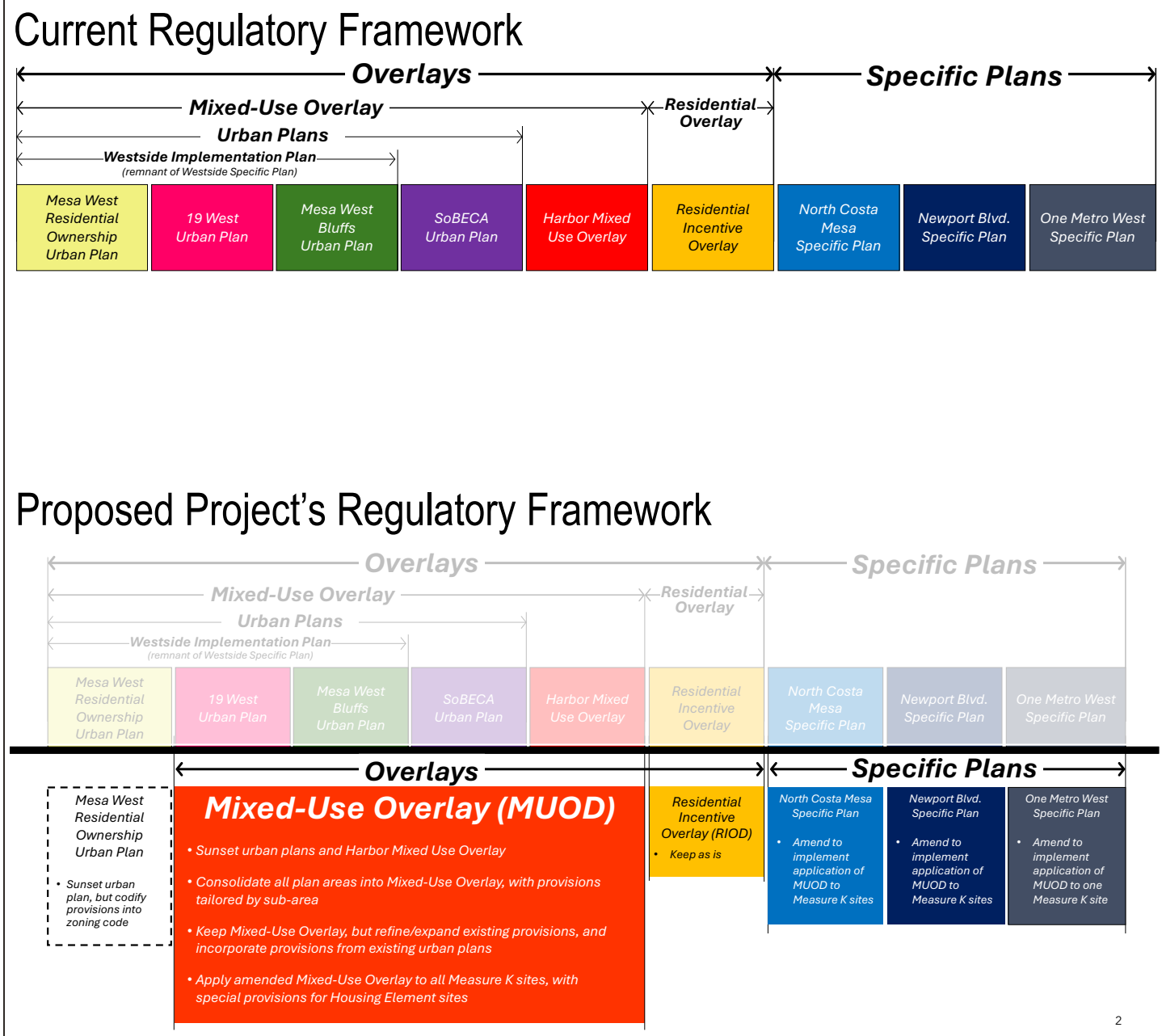
To implement the Objective Design Standards, the City Council would adopt an Ordinance to amend several chapters of Title 13 of the Municipal Code pertaining to design and development standards for residential and mixed-use projects.

3.8 References

City of Costa Mesa. 2025. Measure K: Ordinance to Revitalize Commercial and Industrial Areas and Protect Residential Neighborhoods. Accessed November 2025. https://www.costamesaca.gov/trending/measure-k.

SCAG (Southern California Association of Governments). 2025. Housing, Environment, and Land Use Parcel Tool (HELPR) Tool 3.0. Released February 2025. https://rdp.scag.ca.gov/helpr/.

Census (U.S. Census Bureau). 2026. QuickFacts: Costa Mesa City, California. Accessed February 2026. https://www.census.gov/quickfacts/fact/table/costamesacitycalifornia/HSD310224#HSD310224.



SOURCE:Dudek, 2026

FIGURE 3-1

Current and Proposed Regulatory Framework

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

DUDEK

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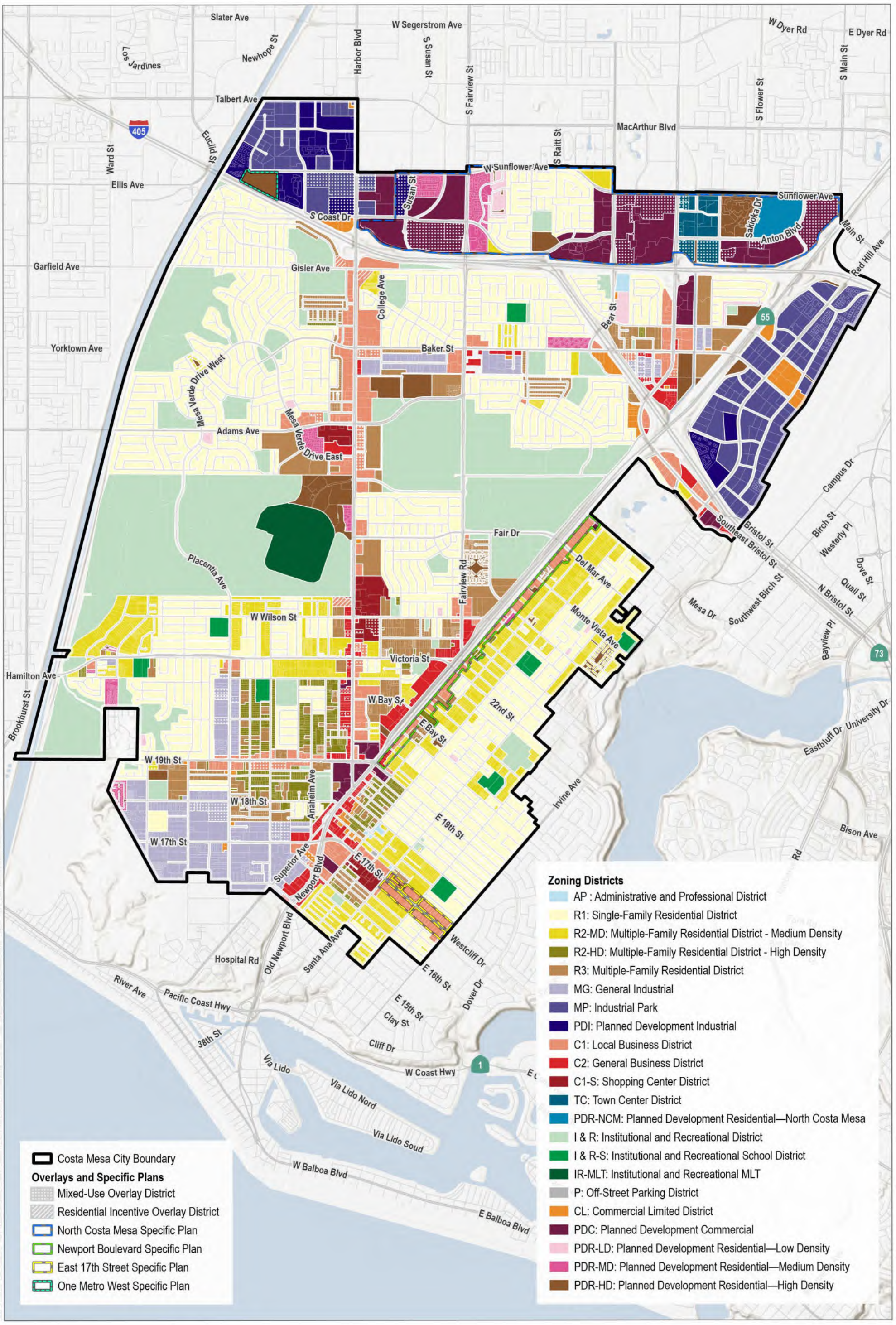

SOURCE: City of Costa Mesa 2025, Open Street Map 2019

FIGURE 3-2

Updated Zoning Map

DUDEK 0 0.25 0.5 Miles

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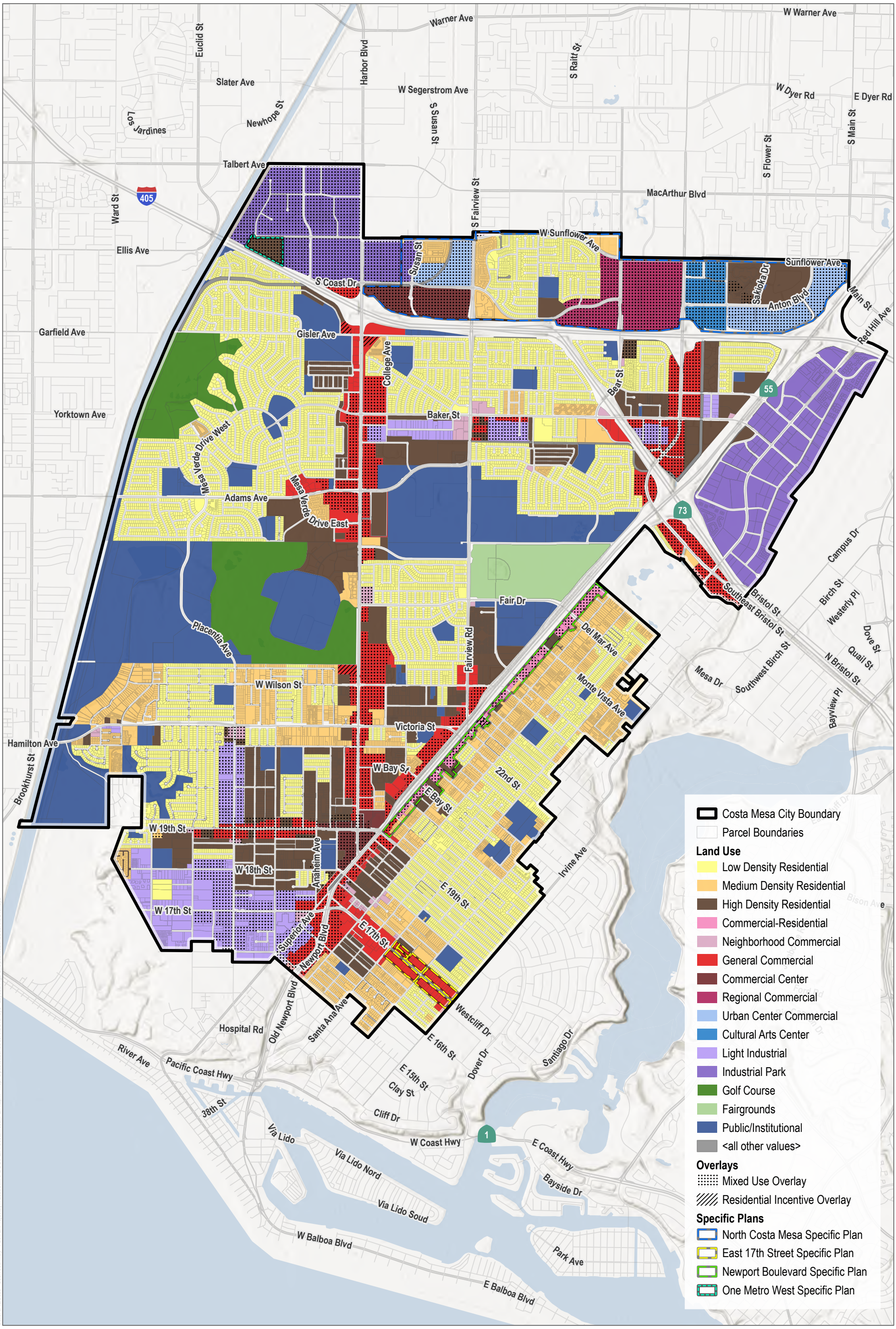

SOURCE: City of Costa Mesa 2025, Open Street Map 2019

FIGURE 3-3

Updated Land Use Map

DUDEK

0 0.25 0.5 Miles

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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4 Environmental Impact Analysis

This chapter is comprised of 19 sections that contain an analysis of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation (Project) potential environmental effects related to the following environmental issue areas:

Aesthetics (Section 4.1)
Agriculture and Forestry Resources (Section 4.2)
Air Quality (Section 4.3)
Biological Resources (Section 4.4)
Cultural Resources (Section 4.5)
Energy (Section 4.6)
Geology and Soils (Section 4.7)
Greenhouse Gas Emissions (Section 4.8)
Hazards and Hazardous Materials (Section 4.9)
Hydrology and Water Quality (Section 4.10)
Land Use and Planning (Section 4.11)
Mineral Resources (Section 4.12)
Noise (Section 4.13)
Population and Housing (Section 4.14)
Public Services (Section 4.15)
Recreation (Section 4.16)
Transportation (Section 4.17)
Tribal Cultural Resources (Section 4.18)
Utilities and Service Systems (Section 4.19)

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

- Existing Conditions
- Regulatory Requirements
- Thresholds of Significance
- Impacts Analysis
- Cumulative Impact Analysis
- Mitigation Measures
- Significance Conclusion
- References

As stated in the Notice of Preparation assessed in the Initial Study (see Appendix A-1), it was determined that the Project would have either no impact or a less-than-significant impact relative to several thresholds in the CEQA Guidelines Appendix G Checklist. Therefore, under each Section 4.1.3 through 4.19.3, Thresholds of Significance, the thresholds that were determined to be scoped out through the Initial Study, and therefore not further analyzed in this Draft PEIR, are listed. The only issue area that was scoped out in its entirety and therefore is not included as a stand-alone section in this Draft PEIR, is Wildfire.

Impacts are evaluated in terms of changes due to the Project as compared to existing conditions. For each environmental issue area, the conditions anticipated as the result of Project implementation are compared to baseline conditions (as of November 2025 when the Notice of Preparation was released or thereabouts), to characterize the anticipated change. It should be noted that existing conditions do not constitute a significant impact on the Project, for the purposes of CEQA. "[T]he purpose of an EIR is to identify the significant effects of a project on the environment, not the significant effects of the environment on the project" (*Ballona Wetlands Land Trust v. City of Los Angeles (2011) 201 Cal.App.4th 455, 473 and California Building Industry Association v. Bay area Air Quality Management District (2015) Cal.App 4th.).*

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4.1 Aesthetics

This section of the Draft PEIR analyzes the potential impacts from the implementation of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation (Project) on aesthetics, specifically, the potential for the Project to conflict with applicable zoning and other regulations governing scenic quality. A discussion of the existing visual character and land use context in the City of Costa Mesa (City), focusing on the Planning Area and vicinity, is also included in this section. This section describes the existing visual character and land use considerations within the city, identifies applicable regulatory requirements, and evaluates potential impacts related to implementation and buildout of the proposed Project. The analysis is based, in part, on information provided in the following resources: the Costa Mesa 2015-2035 General Plan (General Plan) and various Southern California Association of Governments (SCAG) and U.S. Census Bureau data. Other sources referenced for this section are listed below in Section 4.1.8, References.

4.1.1 Existing Conditions

4.1.1.1 Visual Character Overview

As discussed in Chapter 3, Project Description, of this PEIR, the Planning Area consists of 1,079 parcels totaling approximately 1,353.4 acres distributed throughout the city (see Figure 2-2, Planning Area in Chapter 2, Environmental Setting, of this PEIR). The Planning Area is primarily located along major transportation corridors, including Newport Boulevard, Harbor Boulevard, Bristol Street, Placentia Avenue, Baker Street, 17th Street, 18th Street, and 19th Street, as well as areas north of Interstate 405 (I-405). Due to its dispersed configuration, the Planning Area does not represent a single, cohesive visual environment; rather, it comprises multiple visually distinct areas that reflect their historic development patterns, existing land uses, and applicable planning frameworks.

Under existing conditions, the overall visual character of the Planning Area is urban and predominantly automobile-oriented. Development generally consists of low- to mid-rise buildings, typically one to two stories, with other buildings up to four stories in height, interspersed with surface parking lots, driveways, loading areas, and freestanding signage, as well as some parks and recreational facilities. Architectural styles vary widely and range from utilitarian industrial buildings and older commercial structures to more contemporary mixed-use and commercial developments. Landscaping and pedestrian amenities are limited in many locations, particularly within older commercial and industrial districts.

Commercial corridors within the Planning Area are visually characterized by strip commercial centers, standalone retail and service uses, office buildings, and regional commercial destinations. These areas often include wide curb cuts, minimal building articulation, and large paved areas, contributing to a fragmented streetscape appearance. Industrial areas are generally characterized by warehouse and light manufacturing buildings with large footprints, limited fenestration (e.g., windows, doors, and/or other openings in a building's envelope), and minimal ornamental design features. These areas typically include expansive paved yards and limited streetscape landscaping, reinforcing a utilitarian visual character.

In contrast, other portions of the Planning Area governed by adopted urban plans, specific plans, or overlay districts (such as the SoBECA Urban Plan, 19 West Urban Plan, Mesa West Bluffs Urban Plan, Harbor Mixed-Use Overlay, and North Costa Mesa Specific Plan) exhibit a more coordinated visual character. These areas generally include infill development with enhanced architectural treatments, landscaped setbacks, and pedestrian-oriented site design. Building heights and massing within these areas are generally between one and three stories. However,

many developments within the North Costa Mesa Specific Plan area include master planned commercial, residential, and entertainment projects reaching well over five stories.

Finally, although the majority of the Planning Area is developed with features typical of a low-to-midrise urban environment, there are two distinct areas with agrarian features that support active agricultural uses. One such area is located on Fairview Road adjacent and north of I-405, while the other is located on the east of Anton Boulevard and south side of Sunflower Avenue adjacent and northwest of the Costa Mesa Freeway/State Route 55 (see Figure 4.2-1, Important Farmland in Section 4.2, Agriculture and Forestry Resources of this PEIR for the location of the relevant agricultural parcels). In addition to several low-rise buildings and a mix of paved and unpaved parking areas, these areas feature large open fields that, depending on the season, display either a variety of growing crops or large patches of plowed dirt.

4.1.1.2 Land Use and Zoning

Land Use and Visual Context

Existing land uses within the Planning Area are dominated by commercial and industrial uses, consistent with the City's General Plan land use designations shown on Figure 2-3, Existing General Plan Land Use Designations in Chapter 2, Environmental Setting of this PEIR. General Commercial (GC), Regional Commercial (RC), Commercial Center (CC), Industrial Park (IP), and Light Industrial (LI) designations account for the majority of acreage within the Planning Area. These land uses support a wide range of retail, office, service, entertainment, warehousing, manufacturing, and creative industrial activities, which collectively contribute to a visually diverse urban environment.

Limited residential development is present within or adjacent to the Planning Area, primarily in the form of existing multifamily developments, live/work units, or other residential uses integrated into mixed-use projects. Residential uses are more prevalent within areas designated Commercial-Residential (CR), Urban Center Commercial (UCC), High-Density Residential (HDR), and Medium-Density Residential (MDR). Vacant or underutilized parcels are also present throughout the Planning Area, particularly within older commercial and industrial areas, resulting in visual conditions that include some inactive frontages, surface parking, and aging structures.

Land uses surrounding the Planning Area vary by location but generally transition from more intense commercial and industrial development along major corridors to being less intense commercial and industrial uses adjacent to established residential neighborhoods located on local streets. These surrounding residential areas are typically characterized by single-family homes and multifamily developments with lower building heights, consistent architectural styles, landscaped setbacks, and a pedestrian-scale streetscape. Civic, institutional, recreational, and regional facilities (including parks, schools, and the Orange County Fair and Event Center) also contribute to the broader visual context of the City.

Zoning and Planning Framework

Existing zoning within the Planning Area is mainly commercial and industrial. Predominant zoning designations include Local Business District (C1), General Business District (C2), Shopping Center District (C1-S), Planned Development Commercial (PDC), General Industrial (MG), Industrial Park (MP), and Planned Development Industrial (PDI), as illustrated on Figure 2-4, Existing Zoning in Chapter 2, Environmental Setting of this PEIR. Smaller portions of the Planning Area are zoned for multifamily residential development including the Multiple-Family Residential Districts and Planned Development Residential zones.

In addition to base zoning, many parcels within the Planning Area are subject to adopted urban plans, specific plans, and overlay districts that regulate allowable uses, development intensity, building height, and site design. These planning tools were adopted to guide redevelopment, encourage mixed-use development, enhance urban design quality, and address compatibility with surrounding neighborhoods.

The following table provides a summary of several existing development standards applicable to scenic quality in accordance with the base zoning, General Plan land use designations, or other local plans/overlays for the Planning Area.

Table 4.1-1. Existing Development Standards Applicable to Scenic Quality

Land Use Description	Maximum Allowable Density (DU per Acre)	Maximum Allowable Intensity (FAR)	Maximum Allowable Building Height (Stories/Feet)	Minimum Front Setback (Feet)
General Plan Land Use Designation				
Commercial Center (CC)		0.25 to 0.75 *	—	—
Commercial-Residential (CR)	12 to 17.4	0.20 to 0.40 *	—	—
Cultural Arts Center (CAC)	—[a]	1.77	—	—
General Commercial (GC)	—	0.20 to 0.75 *	—	—
High-Density Residential (HDR)	—	—	—	—
Industrial Park (IP)	—	0.20 to 0.75 *	—	—
Light Industrial (LI)	—	0.15 to 0.75 *	—	—
Medium-Density Residential (MDR)	12	—	—	—
Neighborhood Commercial (NC)	—	0.15 to 0.75 *	—	—
Regional Commercial (RC)	—	0.652 to 0.89 *	—	—
Urban Center Commercial (UCC)	20 or 80[a]	0.48 to 0.79 *	—	—
Zoning				
Administrative and Professional District (AP)	—	— [b]	2 / 30	20
Commercial Limited District (CL)	—	— [b]	2 / 30	20
General Business District (C2)	—	— [b]	2 / 30	20
General Industrial (MG)	—	— [b]	2 / 30	Interior lot: 10 e Corner lot: 15 e
Industrial Park (MP)	—	— [b]	3 / 45	20
Institutional and Recreational District (I&R)	—	— [b]	4 / — f	20
Local Business District (C1)	—	— [b]	2 / 30	20
Multiple-Family Residential District, High Density (R2-HD)	14.52	—	2 / 27 c	20
Multiple-Family Residential District, Medium Density (R2-MD)	12	—	2 /27 c	20
Planned Development Commercial (PDC)	—	— [b]	— [d]	— [d]

Table 4.1-1. Existing Development Standards Applicable to Scenic Quality

Land Use Description	Maximum Allowable Density (DU per Acre)	Maximum Allowable Intensity (FAR)	Maximum Allowable Building Height (Stories/Feet)	Minimum Front Setback (Feet)
Planned Development Industrial (PDI)	—	— [b]	— [d]	— [d]
Planned Development Residential—High Density (PDR-HD)	Up to 20	—	2 / 27	5
Planned Development Residential—Medium Density (PDR-MD)	Up to 12	—	2 / 27	5
Shopping Center District (C1-S)	—	— [b]	2 / 30	20
Town Center District (TC)	—	— [b]	4/ — [f]	20
Other Plans and Overlays				
Residential Incentive Overlay	30	—	3 / — [h]	20
SoBECA Mixed-Use Overlay	40	1.00/1.25 [g]	2 to 4 /40 to 60[i]	15 to 20 [j]
Harbor Mixed-Use Overlay	20	1.00/1.25 [k]	4 / —	15
19 West Urban Plan	20	1.00/1.25 [g]	2 to 4 /40 to 60[i]	15
Mesa West Bluffs Urban Plan	20	1.00/1.25 [g]	4 / 60	15
Mesa West Residential Ownership Urban Plan	20	1.00/1.25 [g]	3 / 45	—
North Costa Mesa Specific Plan	100	1.77	2 to 25 / 30 to 315	—
Newport Boulevard Specific Plan	20	0.40	—	—
One Metro West Specific Plan [l]	80	2.22	7 / 98	5

Sources: SCAG 2025; City of Costa Mesa 2006, 2016a, 2016b, 2016c, 2016d, 2021, 2025a, 2025b.
Notes: DU = dwelling units; FAR = floor area ratio; — = not applicable.

* The maximum allowable FAR for projects with these General Plan Land Use designations is dependent upon the anticipated level of traffic use, as shown in Zoning Code Table 13-69.

a. Refer to the North Costa Mesa Specific Plan for detailed density for specific sites.

b The applicable FAR for parcels within these zones is established pursuant to the corresponding General Plan Land Use designation.

c For residential land use only. Per Zoning Code Chapter 5, Article 8, Table 13-32, "The maximum number of stories and building height for nonresidential land uses shall be determined in conjunction with the conditional use permit review process."

d Per Zoning Code Section 13-62(f)(2), "Unless otherwise noted in [Zoning Code Chapter 5, Article 6], no specific yard, setbacks or building height requirements shall be imposed in the planned development district, except as provided in the master plan; provided, that the spirit and intent of this section and the planned development ordinance are met."

e Per Zoning Code Chapter 5, Article 5, Table 13-53, "If the property is adjacent to a residential zone on either side, the front setback is 20 feet."

f. Per Zoning Code Chapter 5. Article 7, Table 13-66, four stories is the maximum building height for TC district parcels south of I-405, but special purpose housing (e.g., affordable, elderly and student housing) may be granted additional building height.

g. Increase in FAR from 1.00 to 1.25 may be allowed for mixed-use plans exhibiting design excellence (City of Costa Mesa 2025a).

h Per Zoning Code Chapter 5, Article 12, Table 13-83.64, "Sites abutting R2-MD zones shall incorporate a stepped elevation from 2 to 3 stories. Rooftop terraces are permitted and not considered a story."

i Maximum building height is four stories for residential projects and two stories for non-residential projects.

j Setback is 20 feet along Bristol Stret and 15 feet along all other streets with9in the overlay area.

k Per Zoning Code Section 13-83.57, "A maximum one and one-quarter (1.25) FAR applies to projects that consist of both residential and commercial mixed uses; a one (1.00) FAR applies to stand-alone commercial projects. Live/Work development where the primary land use is residential and a workspace is provided on the ground level is not permitted in this overlay."

l Refer to the One Metro West Specific Plan for more detailed density, FAR, and setback information (City of Costa Mesa 2021).

Overall, the existing zoning and planning framework allows for a wide range of building types, scales, and intensities across the Planning Area. This regulatory context, combined with incremental development over time, has resulted in varied visual conditions ranging from coordinated, pedestrian-oriented environments to more fragmented, auto-oriented commercial and industrial areas.

4.1.2 Regulatory Requirements

4.1.2.1 Federal

There are no federal regulations pertaining to aesthetics and scenic resources that would apply to the proposed Project.[1]

4.1.2.2 State

Senate Bill 743

In September 2013, the Governor signed Senate Bill (SB) 743, which became effective on January 1, 2014. Among other provisions, SB 743 adds California Public Resources Code (PRC) Section 21099, which 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." PRC Section 21064.3, which was updated in 2025 per Assembly Bill 2443,defines "major transit stop" as "a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 20 minutes or less during the morning and afternoon peak commute periods." PRC Section 21099 defines an "infill site" as a lot located within an urban area that has been previously developed, or on a vacant site where at least 75 percent of the perimeter of the site adjoins or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses.

SB 743 (PRC Section 21099(d)) sets forth guidelines for evaluating project transportation impacts under CEQA, as follows: "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area (TPA) shall not be considered significant impacts on the environment." In addition, under California Public Resources Code, Section 21081.3, lead agencies are not required to evaluate the aesthetic impacts of any project that includes housing and consists of the refurbishment, conversion, repurposing, or replacement of an existing building that is abandoned, dilapidated, or has been vacant for more than a year. Aesthetic effects of projects meeting these requirements are not significant effects on the environment for purposes of CEQA.

[1] The existing regulatory environment includes numerous plans, policies, and programs related to the identification, designation, and preservation of historic places, landmarks, and properties, including: the National Historic Preservation Act (1966); National Register of Historic Places (1981); National Historic Landmarks Program (1982); and Secretary of the Interior's Standards for the Treatment of Historic Properties (1976). The regulatory environment as it relates to historic resources is discussed in further detail in Section 4.5, Cultural Resources of the Draft PEIR.

4.1.2.3 Local

Costa Mesa Municipal Code

The following sections of the Costa Mesa Municipal Code are applicable to aesthetics in the Planning Area.

Title 15, Public Works, Chapter 5, Parkway Trees.

The City's Municipal Code establishes regulations governing the planting, maintenance, alteration, and removal of trees within the public right-of-way, including parkways, medians, and designated tree easements, with the intent of protecting the City's community forest and maintaining streetscape aesthetics. Per Municipal Code Section 15-126, a City permit is required prior to the installation, replacement, removal, or alteration of any tree located within the public rights-of-way or tree easement. A tree easement means an area either dedicated by an adjacent property owner or a landscape setback required as a condition of development. Tree alteration includes pruning or trimming activities that remove more than 25 percent of a tree's canopy within a one-year period.

Per Municipal Code Section 15-131, for all planned public tree removals in the city:

> *The adjacent property owner/applicant shall pay for tree replacement costs on a 3:1 tree replacement ratio of (three new trees planted for every one mature tree removed one 24-inch box, and two 15-gallon trees) whenever such a removal is deemed a 'convenience removal.' Property owner/applicant agrees that the city shall select the species and approve the site of the tree to be replanted. 'Convenience removal' shall mean the removal of a tree with a genus and species designated as a problem tree by the department of public services to include, but is not limited to, Ficus nitida, Ficus retusa, Fraxinus uhdei, Schinus terebinthifolius, Cupania anacardiodes and that such removal is subject to a convenience tree removal agreement approved by the department.*

Furthermore, according to Municipal Code Section 15-132, trees in the public rights-of-way must also be protected during construction. Specifically, no person may begin any construction or excavation without first providing sufficient protection for trees on public property, such as a fence, guard or frame within a five-foot minimum distance of the tree trunk. The five foot minimum may be extended at the sole discretion of the director of public services for other "unforeseen horticultural circumstances" (Municipal Code Section 15-132).

In addition to public trees, Municipal Code Section 15-138 establishes a voluntary program for the nomination and preservation of "landmark trees" on private property. Landmark trees are defined an "any tree on public property which is designated by the city council to be particularly valuable due to its species, condition and/or age, or due to its cultural or historical significance" (Municipal Code Section 15-124). Landmark designation is initiated voluntarily by the property owner and does not preclude reasonable use of the property as otherwise allowed under applicable zoning regulations.

Title 13, Planning, Zoning and Development.

Title 13 (Planning, Zoning and Development; referred to herein as the "Zoning Code") describes the development standards that apply to each zone and includes regulations concerning where and under what conditions various land uses may occur in the city. It establishes zone-specific height limits, setback requirements, and other development standards for residential, mixed-use, commercial, industrial, and all other types of sites. Zoning Code Chapter V, Article I (Residential Districts), Article 2 (Residential Common Interest Developments), Article 2.5 (Residential Small Lot Subdivisions), Article 3 (Commercial Districts), and Article 5 (Industrial Distracts) contain

provisions that regulate the uses that are permitted in residential, commercial, and industrial zones, as well as the development standards that apply in those zones. Zoning Code Chapter V, Article 9 (General Site Improvement Standards) contains development standards and site regulations applicable to all zoning districts, including requirements pertaining to utility requirements, off-site improvement requirements, R1 sidewalk construction, trash enclosures, elevation and screening requirements, fences and walls, and right-of-way dedications. Provisions related to outdoor lighting and glare are included in Chapter V, Article 4 (Establishments Where Food or Beverages are Served), Chapter V, Article 11 (Mixed-Use Overlay District), and Chapter V, Article 12 (Residential Incentive Overlay). Other aesthetic-related provisions applicable to the Project and contained in the Zoning Code, including provisions related to signs are listed and discussed in further detail, below.

Chapter VIII, Signs. This chapter regulates the design, siting, and maintenance of signs in the city. These regulations are intended to provide standards for the type, size, and placement of signs, to balance the identification and communication needs of businesses with traffic safety and the needs of the citizens for a pleasant, uncluttered environment in which to live, work and play. These regulations aim to implement the goals of the General Plan to create and maintain an aesthetically pleasing and functional environment.

Costa Mesa 2015-2035 General Plan

The following provides a summary of the applicable aesthetics-related General Plan goals and policies that pertain to the Project and is not a comprehensive list. Project implementation would support and/or would not conflict with the implementation of the following goals and policies, as discussed in further detail in Section 4.1.4, Impact Analysis (City of Costa Mesa 2016e, 2016f, 2025a):

Land Use Element

Goal LU-2: **Preserve and Protect Residential Neighborhoods**.

Policy LU-2.7: Permit the construction of buildings over two stories or 30 feet only when it can be shown that the construction of such structures will not adversely impact surrounding developments and deprive existing land uses of adequate light, air, privacy, and solar access.

Goal LU-3: **Development that Maintains Neighborhood Integrity and Character**.

Policy LU-3.8: Ensure that new development reflects existing design standards, qualities, and features that are in context with nearby development and surrounding residential neighborhoods.

Policy LU-3.10: Minimize effects of new development on the privacy and character of surrounding neighborhoods.

Policy LU-3.12: Ensure that new development reflects existing design standards, qualities, and features that are in context with nearby development.

Safety Element

Policy S-1.2: Enforce standards, review criteria, and ensure that structures on or adjacent to bluffs are set back sufficiently to preserve the natural contours and aesthetic value of the bluff line and to provide sufficient access for fire protection.

Community Design Element

Policy CD-5.2. Control the visual impacts of new development on natural views of the coast and the wetlands.

Policy CD-7.2 Preserve the character and scale of Costa Mesa's established residential neighborhoods where possible; when new residential development is proposed, encourage that the new structures are consistent with the prevailing character of existing development in the immediate vicinity, and that new development does not have a substantial adverse impact on adjacent areas.

Policy CD-8.8. Require that exterior lighting on commercial properties be consistent with the architectural style of the commercial building. On each commercial site, all lighting fixtures should be from the same family of fixtures with respect to design, materials, color, fixture, and color of light. Lighting sources should be shielded, diffused or indirect to avoid spillover on adjacent properties, nighttime sky light pollution, and glare to pedestrians and motorists. To minimize the total number of freestanding light standards, wall-mounted and pathway lights should be utilized to the greatest extent possible.

Existing Community and Specific Plans

The 19 West Urban Plan, SoBECA Urban Plan, Mesa West Bluffs Urban Plan, Mesa West Residential Ownership Urban Plan/Mixed-Use Overlay, Harbor Mixed-Use Overlay, Residential Incentive Overlay, North Costa Mesa Specific Plan, One Metro West Specific Plan, and the Newport Boulevard Specific Plan are the existing community-based or specific plans applicable to the Planning Area.

19 West Urban Plan

The 19 West Urban Plan covers approximately 106.3 acres in the city. The overall purpose of the 19 West Urban Plan is to improve the area by providing visual enhancement through the development of mixed-use urban villages along specified areas of West 19th Street, West 17th Street, Superior Avenue, and Placentia Avenue within the city, and to implement the General Plan's goals, objectives, and policies for mixed-use development. The 19 West Urban Plan does not propose any major intensification of land uses.

Development standards established in the 19 West Urban Plan are tailored to address mixed-use development, public streetscapes, and urban design improvements and amenities. These standards regulate the development of buildings, streets, and public spaces with a focus on the physical built environment and the relationship between the private and public realms, including provisions related to building form, building frontages, open space, landscaping, signage, and parking (City of Costa Mesa 2016a).

SoBECA Urban Plan

The SoBECA Urban Plan covers approximately 39 acres, located south of Baker Street, east of State Route (SR-) 73, and north of the intersection of SR-73 and SR-55 freeways in the city. The overall purpose of the SoBECA Urban Plan is to establish the vision, development framework, and historical/local context for the SoBECA district, to improve the area by providing visual enhancement through the development of live/work units and residences, and to implement the General Plan's goals, objectives, and policies for mixed-use and residential development. The SoBECA Urban Plan does not propose any major intensification of land uses.

Development standards established in the SoBECA Urban Plan are tailored to address live/work unit and residential development, public streetscapes, and urban design improvements and amenities. These standards regulate the development of buildings, streets, and public spaces with a focus on the physical built environment and the relationship between the private and public realms, including provisions related to building form, building frontages, building materials, open space, landscaping, signage, parking, and window placement (City of Costa Mesa 2016b).

Mesa West Bluffs Urban Plan

The Mesa West Bluffs Urban Plan covers approximately 277 acres in the city. The overall purpose of the Mesa West Bluffs Urban Plan is to improve the area by providing visual enhancement through the development of live/work units and residences and to implement the General Plan's goals, objectives, and policies for mixed-use and residential development. The Mesa West Bluffs Urban Plan does not propose any major intensification of land uses.

Development standards established in the Mesa West Bluffs Urban Plan are tailored to address live/work unit and residential development, public streetscapes, and urban design improvements and amenities. These standards regulate the development of buildings, streets, and public spaces with a focus on the physical built environment and the relationship between the private and public realms, including provisions related to building form, building frontages, building materials, open space, landscaping, signage, and parking. This plan's development standards are split into three sections: Live/Work and Residential Standards, Live/Work Standards, and Residential Standards (City of Costa Mesa 2016c).

Mesa West Residential Ownership Urban Plan

The Mesa West Residential Ownership Urban Plan covers approximately 238 acres in the city. This plan includes many multi-family neighborhoods south of West 19th Street near Whittier Elementary School and Lions Park and additional portions of residential areas north of West 19th Street are located near Wilson Elementary School, Pomona Elementary School, and Rea Elementary School. The overall purpose of the Mesa West Residential Ownership Urban Plan is to promote the construction of condominium projects within the plan area, to encourage owner-occupied housing, and to revise development standards to promote facilitation of condominium conversion or new construction. The SoBECA Urban Plan does not propose any major intensification of land uses.

Development standards established in the Mesa West Residential Ownership Urban Plan are tailored to develop ownership-housing units. These standards regulate the development of buildings, streets, and public spaces, including provisions related to building height and building frontages (City of Costa Mesa 2006).

Harbor Mixed-Use Overlay

The Harbor Mixed-Use Overlay applies to select areas in the city along Harbor Boulevard, between Wilson Street and 19th Street. The overall intent of this Overlay is to introduce a diverse mix of uses, with the objective of creating a much more integrated, walkable, and complementary balance of creative commercial and office spaces, neighborhood serving retail and commercial services, and residential uses along the southern portion of Harbor Boulevard that intersects with 19th Street. The Overlay includes standards relating to building form that regulate development within the Overlay area (City of Costa Mesa 2025b).

Residential Incentive Overlay

The Residential Incentive Overlay applies at strategic locations along Harbor Boulevard and Newport Boulevard that exhibit excellence in design, site planning, integration of uses and structures, and protect the integrity of neighboring development. The overall intent of this Overlay is to create opportunities for residential development along Harbor Boulevard and Newport Boulevard. The Overlay includes standards related to building form, open space, landscaping, and parking (City of Costa Mesa 2025b).

North Costa Mesa Specific Plan

The North Costa Mesa Specific Plan covers approximately 423 acres in an established area within the city and includes several cultural and entertainment uses. The overall purpose of the North Costa Mesa Specific Plan is to establish unique development standards that recognize the higher intensity and density potential of the area and the need to sensitively integrate new development with the surrounding areas to promote both resident and business community confidence in the long-term vision for the plan area.

Development standards established in the North Costa Mesa Specific Plan are tailored to address live/work unit and residential development, non-residential development, cultural and entertainment uses, public streetscapes, and urban design improvements and amenities. These standards regulate the development of buildings, streets, and public spaces with a focus on the physical built environment and the relationship between the private and public realms, including provisions related to land use compatibility, building form and height, circulation, urban rail transit, parks and recreation, and fire protection services (City of Costa Mesa 2006d).

Newport Boulevard Specific Plan

The Newport Boulevard Specific Plan encompasses the properties fronting or adjacent to the east side of Newport Boulevard between Mesa Drive and 19th Street. The overall purpose of the Newport Boulevard Specific Plan is to provide the long-term vision for this area and to encourage viable commercial businesses to continue to prosper, to encourage marginal uses to redevelop, and to allow residential development. This Plan also aims to attract reinvestment in the area.

Development standards established in the Newport Boulevard Specific Plan are tailored to address commercial and residential uses, the public streetscape, and urban design improvements and amenities. These standards regulate the development of buildings, streets, and public spaces with a focus on the physical built environment and the relationship between the private and public realms, including provisions related to commercial and residential uses, land use compatibility, building form, and circulation (City of Costa Mesa 2006d).

One Metro West Specific Plan

The One Metro West Specific Plan establishes planning and design standards for a 15.23-acre site in the northwest area of the city. The Specific Plan replaces the base zoning district for the subject property with new development standards and guidelines specific to the project area. The Specific Plan provides policies, Development Regulations and Design Guidelines for the development and operation of a contemporary mixed-use community, including regulating the placement of structures, building height, open space, parking, landscaping, pedestrian and vehicular access, signage, and bulk and mass of the buildings (City of Costa Mesa 2021).

4.1.3 Thresholds of Significance

The significance criteria used to evaluate the Project impacts to aesthetics 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 aesthetics would occur if the Project would:

Threshold 4.1-1: 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.

The following threshold questions for this topic required in accordance with Appendix G of the CEQA Guidelines were scoped out of this Draft PEIR, having been adequately addressed in the Initial Study, wherein it was determined that the Project would have no impact or a less than significant impact on the environment:

- Would the project have a substantial adverse effect on a scenic vista?
- Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
- Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Thus, an analysis of these thresholds is included in Appendix A-1, NOP and Initial Study, of this Draft PEIR.

4.1.4 Impact Analyses

4.1.4.1 Methodology

As described in Chapter 3, Project Description, the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation Project is a policy document that does not include or propose any site-specific development that could directly result in construction or operational impacts to the environment. However, implementation of the Project would facilitate additional future development in the city. Therefore, this Draft PEIR does not assess the site-specific construction and operation details of each future development within the Planning Area. Rather, it assesses the impacts associated with changes to existing land uses and the associated overall effects of buildout of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation Project through 2056, where reasonably foreseeable physical changes to the environment could occur. Analysis at a parcel or site-specific level was not conducted because, unless otherwise noted within this assessment, the actual locations of Project development (and its chronologic sequence or concurrence) that may be implemented in the future are speculative.

The following analysis, along with the existing environmental conditions and regulatory requirements discussed above, focuses solely on aesthetic conditions, information, and environmental effects as they relate to the potential to conflict with applicable zoning and other regulations governing scenic quality. Most aesthetics threshold questions required in accordance with Appendix G of the CEQA Guidelines were scoped out of this PEIR, having been adequately addressed in the Initial Study, wherein it was determined that the Project would have no impact or a less than significant impact on the environment for such topics. Thus, the threshold questions related to scenic vistas, scenic resources within a state scenic highway, and new sources of substantial light or glare are discussed

briefly in Chapter 5, Other CEQA Considerations, of this PEIR, and not in this section, which only addresses aesthetic topics where, as determined in the Initial Study, the Project has the potential to result in a significant environmental effect.

Zoning or Other Regulations Governing Scenic Quality

As shown in Section 4.1.3, Thresholds of Significance, above, the relevant CEQA Guidelines Appendix G question addressed in this section makes a clear distinction between the analysis required for projects in urbanized versus non-urbanized areas. PRC Section 21071 defines an "urbanized area" as "(a)n 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." According to the U.S. Census Bureau, there were an estimated 109,131, residents in the city in 2024 (U.S. Census Bureau 2026). SCAG forecasts approximately 104,900 residents in the city by 2050 (SCAG 2024a). As such, although the City's population is anticipated to decrease slightly in the coming decades, both the existing and projected future population of the City is at least 100,000 persons. Therefore, in accordance with PRC Section 21071, the Planning Area is located in an urbanized area and the analysis provided in this section considers whether the project would conflict with applicable zoning or other regulations governing scenic quality (as opposed to the potential to substantially degrade the existing visual character or quality of public views of the Planning Area and its surroundings).

Zoning and related local plans in the city regulate the form and character of development, including allowable uses, height, massing, intensity, setbacks, frontage conditions, signage, and streetscape treatments, that together govern scenic quality along the City's commercial corridors and at transitions to surrounding neighborhoods. Within the Planning Area, this regulatory framework includes the City's Zoning Code, adopted urban plans, specific plans, and overlay districts, as summarized above in Section 4.1.2.3, Local (Regulatory Requirements). The City's General Plan provides additional policy context for permitted uses, density, and intensity. These tools collectively establish the baseline standards against which the project's potential to conflict with zoning and other regulations governing scenic quality is evaluated.

SB 743 Criteria for Aesthetics Analyses Under CEQA

Future development accommodated as a result of Project implementation in much of the Planning Area would meet the criteria set forth in SB 743 because development on these parcels would be limited to infill sites located within a TPA within 0.5 miles of a major transit stop. As shown in Figure 4.1-1, Transit Priority Areas, sites within a TPA include most Planning Area parcels south of Victoria Avenue, parcels along Harbor Boulevard south of Fair Drive, parcels along Bristol Street south of Sunflower Avenue, and parcels just south of Baker Street and east of Fairview Road (SCAG 2024b). Because some future development facilitated under the Project would meet the criteria set forth under SB 743, aesthetic impacts for such future projects would not be considered significant, as infill projects in a TPA are exempt from making significance findings for CEQA Guidelines Appendix G aesthetics checklist questions. However, as not all future development facilitated by the Project would qualify for exemption under SB 743, the analysis provided in this section considers the Project's potential to result in physical impacts on the environment related to a conflict with applicable zoning and other regulations governing scenic quality at a programmatic level.[2]

[2] Note that the aesthetics analysis does not focus on potential impacts to historic or cultural resources. Rather, potential impacts to historic or cultural resources are evaluated pursuant to CEQA in Section 4.5, Cultural Resources, and 4.18 Tribal Cultural Resources, of this PEIR.

4.1.4.2 Environmental Analyses

Threshold 4.1-1 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. For the reasons discussed below, the Project would not conflict with applicable zoning and other regulations governing scenic quality. Impacts would be less than significant, and no mitigation is required.

Applicable Zoning and Planning Framework

As relevant to scenic quality, the amended MUOD would refine the overlay's purpose, applicability, and development controls, and clarify its relationship to base zoning; other overlays, urban plans, and specific plans; State Density Bonus Law; and the Housing Element. The amended MUOD would apply to properties within the Planning Area and, when elected by a non-Housing Element Measure K property owner, would supersede conflicting base-zone or Specific Plan provisions; otherwise, the base zoning or Specific Plan provisions would remain operative. Adoption of the amended MUOD would sunset the currently applicable urban plans and the Harbor Mixed-Use Overlay, and consolidate all plan areas into the MUOD, with provisions tailored by subarea/district.

Regarding development standards, the MUOD amendment would establish a minimum residential floor area proportion and density tiers, together with a maximum non-residential floor area. It would pair these intensity controls with height limits that scale to the density tier, thereby helping to manage skyline and bulk relationships along corridors. Street-type-based minimum setbacks would be introduced to help facilitate a coherent street wall and support pedestrian-oriented public views. Additional provisions would require usable common residential open space, private open space, and publicly accessible open space, along with sign standards that reference the commercial zone framework and limit freestanding sign height along arterials to avoid visual clutter.

In addition, the amended MUOD would require adherence to performance standards addressing lighting, window orientation, privacy, and the commercial-residential interface (e.g., deliveries, loading, hours, and site maintenance).The MUOD amendment would also help formalize review procedures, allow special fee assessments, and authorizes the City Engineer to require proportional off-site improvements in the public right-of-way (e.g., sidewalks, parkway trees, landscaping, and street lighting) to reinforce corridor identity and scenic quality.

Furthermore, as discussed in Section 3.3.3, Objective Design Standards in Chapter 3, Project Description of this PEIR, the Project would establish Citywide Multifamily Residential and Mixed-Use Objective Design Standards (Objective Design Standards) to establish clear, measurable, and uniformly applicable design requirements for new residential and mixed-use development in the city. By relying on objective, externally verifiable criteria, the Objective Design Standards would reduce subjective interpretation and provide greater certainty to applicants, decision-makers, and the public. The Objective Design Standards would apply citywide to all new construction multifamily residential and mixed-use buildings (consistent with California Government Code Section 65913.4) of three or more stories in height located in any zone, as well as second-story additions to multifamily residential or mixed-use buildings. These requirements are intended to supplement, not replace, existing zoning and building regulations. In the event of a conflict, the more restrictive regulation would prevail. The Objective Design Standards would implement and support policies contained in the General Plan. Collectively, the Objective Design Standards emphasize neighborhood compatibility, pedestrian-oriented design, architectural quality, protection of privacy, noise mitigation, and context-sensitive development. The Objective Design Standards would also complement the Municipal Code as they are intended to function as site- and building-design regulations adopted by reference into the Municipal Code.

As stated above, the Project would sunset applicable urban plans and the Harbor Boulevard Mixed-Use Overlay, while the existing specific plans would be amended to implement application of the amended MUOD to Measure K sites. In the event that the underlying base zone or Specific Plan provisions conflict with the amended MUOD, the MUOD would ultimately preside (when a property owner chooses to exercise provisions of the amended MUOD, as codified in the Zoning Code). However, in order to minimize potential conflicts, preparation of the MUOD included a review of all existing urban plans, overlays, specific plans, and other Zoning Code standards applicable to the Planning Area. For example, as discussed above, the proposed MUOD requirements for various technical studies were consolidated from existing urban plans. The amended MUOD would create a universal framework for guiding residential and mixed-use development in the Planning Area, thereby reducing the potential for zoning conflicts to arise in the future while also accommodating the City's lower-, moderate-, and above-moderate-income Regional Housing Needs Allocation and satisfying the goals of the 2022 voter-approved Measure K to provide for future housing needs.

Based on this framework, the Project would implement, rather than conflict with, the City's adopted planning and zoning framework governing scenic quality. By codifying corridor-appropriate intensity, height, setback, frontage, open space, and signage parameters, clarifying the hierarchy between the overlay and base zoning, and committing the City to implementation of objective design standards, the amended MUOD would improve predictability and consistency in visual outcomes along major corridors for residential and mixed-use projects. The Project does not authorize physical construction; subsequent development facilitated by the Project would undergo project-level review to demonstrate compliance with amended MUOD standards, applicable specific plans, and other Municipal Code and Zoning Code provisions that regulate landscaping, signage, lighting, and public-realm improvements, thereby preserving the City's regulate scenic quality through adherence to code requirements (in accordance with the proposed Section 13-83.11.4 [Review and Approval of MUOD projects] of the MUOD amendment and Chapter 3, Planning Applications of the Zoning Code). Thus, the Project would not conflict with the applicable zoning and planning framework, and impacts would be less than significant.

Applicable General Plan Regulations

Zoning is the regulatory mechanism that directly implements the policies and land use designations established by the General Plan, which is more visionary and policy based. Thus, it is important for applicable zoning to be consistent with the General Plan, including as it relates to scenic quality. Table 4.1-2, General Plan Conflict Evaluation provides a brief evaluation of each applicable aesthetic-related General Plan goal or policy in relation to the Project to determine if the Project has the potential to result in a conflict.[3]

[3] Generally, goals and polices are considered "applicable" if they were adopted for the purpose of avoiding or mitigating an environmental effect related to scenic quality.

Table 4.1-2. General Plan Conflict Evaluation

Goals and Policies	Conflict Evaluation
Land Use Element	
Goal LU 2 Preserve and Protect Residential Neighborhoods	*No Conflict.* The Project is a program-level zoning action that amends and applies the MUOD to identified Measure K sites and would not approve or construct site-specific development; subsequent projects would undergo project-level review for compliance with applicable Zoning Code provisions and other regulatory requirements. The Project would focus additional residential capacity and mixed-use opportunities within primarily commercial and industrial corridors and subareas (as discussed above in Section 4.1.1, Existing Conditions), rather than within established single-family neighborhoods, thereby avoiding displacement of and direct changes to the visual character of those neighborhoods. The MUOD amendment expressly identifies maintaining the character of the City's single-family neighborhoods as a policy objective of the overlay while implementing additional housing, and it clarifies how the MUOD relates to base zoning, urban plans, overlays, and specific plans so that neighborhood-protective provisions remain operative unless an applicant elects to use the MUOD (in which case the overlay's objective standards apply). In addition, the MUOD establishes corridor-scaled height limits, frontage and setback controls, open space and landscaping requirements, and performance standards (including privacy-protective window orientation/screening and lighting controls), all of which are designed to minimize adverse effects on adjacent neighborhoods when future residential/mixed-use projects are proposed at corridor edges. The amended MUOD would also implement Objective Design Standards to emphasize neighborhood compatibility, architectural quality, protection of privacy, and context-sensitive development, as discussed in further detail below for Policy LU 2.7. For these reasons, the Project would not conflict with this goal.
Policy LU 2.7 Permit the construction of buildings over two stories or 30 feet only when it can be shown that the construction of such structures will not adversely impact surrounding developments and deprive existing land uses of adequate light, air, privacy, and solar access.	*Potential to Conflict.* The Project is a program-level zoning action that does not approve or construct any specific buildings; compliance with height-related and adjacency standards would be demonstrated at the time of future, site-specific project review. The amended MUOD sets maximum building heights tied to residential density tiers (ranging from 40 feet for non-residential buildings to 108 feet for residential-only or vertical mixed-use buildings in the North Coast Mesa subarea).[4] As shown in Table 4.1-1, existing allowable maximum building height in the Planning Area ranges from two stories or 27 feet (i.e., in the RS-HD, R2-MD, PDR-HD, and PDR-MD) to 25 stories or 315 feet in the North Costa Mesa Specific Plan area. Non-Housing element parcels in the Planning Area would continue to have the opportunity to develop under the existing zoning, in which case they would be subject to these existing building height maximums.

[4] The building height maximums for residential and vertical mixed-use projects allowed per the amended MUOD would fluctuate depending on the maximum allowable residential density. Maximum density from 20 dwelling units per acre to 40 dwelling units per acre would have a maximum allowable building height of 60 feet. Maximum building height would increase to 72 feet for projects with a maximum density of 60 dwelling units per acre and to 108 feet for projects with a maximum density of 90 dwelling units per acre. Parcels with a 108-foot building height maximum would be limited to the North Coast Mesa subarea and other parcels north of I-405. There are some instances of proposed 72-foot building height maximums located south of I-405; however, for the majority of the Planning Area, the maximum residential or mixed-use building height would be 60 feet. Maximum building height for all non-residential buildings under the amended MUOD would be 40 feet.

Table 4.1-2. General Plan Conflict Evaluation

Goals and Policies	Conflict Evaluation
	Building heights of existing, on-the ground development in the Planning Area south of I-405 are generally low-profile (between one and three stories) while developments north of I-405 include master planned commercial, residential, and entertainment projects reaching well over five stories. As discussed above Section 4.1.4.1, Methodology, aesthetic impacts for future projects in a TPA are not considered significant in accordance with SB 743. However, as illustrated in Figure 4,1-1, not all of the Planning Area is within a TPA. Areas outside of the TPA and adjacent to existing single-family or lower-profile multifamily residences include parcels along Harbor Boulevard north of Fair Drive and south of Gisler Avenue and along Newport Boulevard northeast of Bay Street. Other Planning Area parcels outside of a TPA (generally north of I-405) are predominantly across the street or the freeway from single-family residential. Proposed building heights in Planning Area parcels north of I-405 would generally be the same or reduced compared to the maximum allowable building heights permitted in this area under existing zoning conditions (with some exceptions) and would not have a potential to adversely impact surrounding developments due to building height increases. Despite the proximity of existing residential uses, existing development in this area (including the North Cost Mesa Specific Plan area) includes regional commercial/industrial with taller or undefined building heights. Furthermore, Planning Area parcels subject to building height changes in this area are generally separated from single-family residential by existing developed parcels or other linear infrastructure (such as I-405, the Santa Ana River channel, or multilane roadways such as Sunflower Avenue, Fairview Road, and Susan Street). This includes, for example, APNs 140-041-81 and 140-041-82, which would both be subject to an allowable building height maximum of 108 feet (compared to 45 feet and 36 feet, respectively, under existing conditions), but are both separated from existing multifamily residential to the east by multilane roadways (and, as with all potential MUOD projects, would be subject to required setbacks and other Objective Design Standards, discussed in further detail below, to help address potential aesthetics concerns, such as shade/shadow). However, the maximum allowable building height would increase from 30 feet to 72 feet on two parcels in the North Costa Mesa Specific Plan area north of I-405 (specifically, APNs 412-482-01 and 412-481-07 on the north side of South Coast Drive) that are adjacent to an existing R1 zone with single-family residences to the north and west. Additionally, the maximum allowable building height would increase from approximately 30 feet to 60 feet for parcels directly adjacent to existing single-family or lower-profile multifamily uses (within R1, R2, or R3 zones) in the aforementioned areas along Harbor and Newport Boulevards. As these areas are outside of a TPA, conflicts with General Plan policies related to building height or other compatibility concerns have a potential to result in a significant aesthetic impact under CEQA. Furthermore, existing development in the Planning Area does not always reflect the maximum allowable building height permitted under existing zoning conditions. Thus, the Project still has potential to result in increased building heights on parcels where the maximum allowable building height established per the zoning would not change (or

Table 4.1-2. General Plan Conflict Evaluation

Goals and Policies	Conflict Evaluation
	would be reduced) by implementation of the Project. This is due to the fact that any future development under the Project would likely replace existing, lower profile buildings with taller buildings. To address potential compatibility issues such building height discrepancies, MM-4.1-1, Shade and Shadow Analysis is required. MM-4.1-1 requires a shade/shadow analysis for proposed structures on non-Housing Element sites that exceed four stories in height adjacent to residentially zoned properties (i.e., R1, R2, and R3 zones). The shade/shadow analysis, prepared by a qualified design professional, must evaluate project-specific shading relative to existing conditions using hourly shadow diagrams. MM-4.1-1 specifies timing and agency responsibility, establishes objective performance standards, helps to ensure enforceability, and, by virtue of its inclusion in the Project's Mitigation Monitoring and Reporting Program, establishes a clear commitment that mitigation will be implemented (where applicable and feasible, as discussed in further detail below). MM-4.1-1 also establishes a clear, objective threshold of significance for future projects shading adjacent residential parcels. Specifically, a project would result in a significant shade/shadow impact if new project-related shading would reduce direct sunlight to private or common residential outdoor living areas or other shade-sensitive features beyond defined hourly thresholds. If a significant impact is identified, the applicant must implement City-approved design modifications (such as height reductions, stepbacks, massing adjustments, or increased setback) to reduce shading effects to below the applicable significance thresholds prior to project approval. Additionally, the Project would implement Objective Design Standards that would be applicable to all new residential buildings of two or more stories and new mixed-use buildings (either horizontal or vertical formats) located in any zone. These include new building and site design standards addressing building mass and form, façade design, outdoor lighting, open space, and landscaping. It is the purpose and intent of these proposed standards to encourage compatibility in scale across adjacent buildings; minimize the perceived height and mass of buildings; allow for space, light, air, and privacy in between buildings; and encourage a diversity of facade designs and styles that are visually interesting and engaging. For example, the proposed building design standards would require upper-story setbacks for residential or mixed-use structures of three or more stories when abutting R1, R2, or R3 zoned properties, thereby introducing horizontal separation at taller building levels where privacy, shading, and visual dominance impacts are most pronounced. These upper-story setbacks, combined with the amended MUOD's minimum set back requirements (i.e., street-front setbacks ranging from 10 to 20 feet and a side/rear setback of 20 feet for buildings abutting a residential zone), would reduce the potential for taller buildings to impede light, air, or solar access to adjacent residences by increasing physical distance and reducing wall height at sensitive edges. In addition, the Object Design Standards include detailed modulation and articulation standards intended to minimize perceived bulk and visual mass. Requirements such as maximum façade lengths, mandatory façade breaks, minimum façade modulation percentages, and base-middle-top articulation

Table 4.1-2. General Plan Conflict Evaluation

Goals and Policies	Conflict Evaluation
	for residential and mixed-use buildings three or more stories in height would help prevent long, uninterrupted vertical building planes that could otherwise exacerbate shadowing or enclosure effects along residential property lines.[5] Roof height modulation standards for flat or partially flat roofs further interrupt rooflines and reduce the apparent height of taller structures when viewed from neighboring residential properties. The proposed Objective Design Standards would also protect light and air through landscaping, open space, and site design provisions. Required landscape setbacks, minimum tree canopy and layered planting requirements, and limits on blank walls along residential interfaces would soften building edges and maintain visual openness. The proposed open space standards would ensure that required private, common, and publicly accessible open spaces remain usable, open to the sky, and appropriately located to avoid crowding or excessive enclosure of adjacent properties. Together, these standards would support adequate air circulation and access to daylight both on site and across shared property boundaries. Outdoor lighting standards would also help facilitate compatibility with existing residential uses by requiring all lighting to be downward-directed, shielded, pedestrian-scaled, and designed to prevent glare and spillover onto adjacent properties. These objective controls would apply regardless of building height and prevent taller buildings from introducing new sources of light intrusion into nearby residential areas. Importantly, the proposed Objective Design Standards would be mandatory, uniformly applicable, and not subject to discretionary interpretation. Accordingly, although the Project would expand height allowances, it would do so within a regulatory framework that would require most site-specific projects to demonstrate compatibility through setbacks, massing controls, fenestration limits, landscaping, and lighting standards. Future proposals, including future development exceeding two stories or 30 feet, would be subject to objective constraints calibrated to protect light, air, privacy, and solar access at the project-level entitlement stage, while certain proposed buildings over four stories would be required to prepare a shade/shadow analysis, in accordance with MM-4.4-1. However, as explained in further detail below, compliance with MM-4.1-1 may not be feasible for certain projects implemented under the MUOD (e.g., non-discretionary projects or projects on Housing Element sites). Thus, future development implemented under the Project may conflict with this policy.
Goal LU-3 Development that Maintains Neighborhood Integrity and Character.	*No Conflict.* Refer to the conflict analysis provided above for Goal LU-2.
Policy LU-3.8 Ensure that new development reflects existing design standards, qualities, and features that are in context with nearby development and	*No Conflict.* Regarding building height standards and potential adverse impacts to adjacent residential properties related to shade/shadow, please refer to the conflict analyses provided above for Policy LU-2.7 and below of Policy 3.8. As previously stated, no site-specific construction is proposed or would be approved as part of the Project. The amended

[5] Although not a strictly an aesthetics concern, privacy impacts would also be addressed through the proposed objective fenestration (e.g., window arrangement) and orientation standards. The proposed standards would prohibit direct window alignment between adjacent dwelling units, require horizontal offsets for windows located within 20 feet of an adjacent residence, and allow clerestory windows, privacy glazing, architectural screening, or landscaping where necessary to block direct lines of sight.

Table 4.1-2. General Plan Conflict Evaluation

Goals and Policies	Conflict Evaluation
surrounding residential neighborhoods.	MUOD would codify new standards for height, setbacks, street-wall continuity, sign scale, and publicly visible open-space treatments, to reduce the risk of visually discordant residential/mixed-use development projects within the Planning Area. The amended MUOD would also authorize the City to require off-site right-of-way improvements where warranted (e.g., sidewalks, parkway trees, street lighting), which would strengthen corridor identity and transitions to neighborhoods. As discussed above under the "Applicable Zoning and Planning Framework" subheading, preparation of the MUOD included a review of all existing urban plans, overlays, specific plans, and other Zoning Code standards applicable to the Planning Area, and, where appropriate, consolidated certain aspects of those provisions that would help achieve the vision and purpose of the MUOD, including satisfying the goals of the 2022 voter-approved Measure K to provide for future housing; maintain the character of the City's single-family neighborhoods; protect the environment and open space; attract new businesses; and maintain local control. The Project would focus additional residential capacity and mixed-use opportunities within primarily commercial and industrial corridors and subareas, rather than within established single-family neighborhoods, thereby avoiding displacement of and direct changes to the visual character of those neighborhoods. Additionally, as discussed in further detail in the analysis for Policy LU-2.7 and under the "Applicable Zoning and Planning Framework" subheading, the Project would establish Objective Design Standards to establish clear, measurable, and uniformly applicable design requirements for new residential and mixed-use development in the city. Collectively, the Objective Design Standards emphasize neighborhood compatibility, pedestrian-oriented design, architectural quality, protection of privacy, noise mitigation, and context-sensitive development. The Objective Design Standards would also complement the Municipal Code as they are intended to function as site- and building-design regulations adopted by reference into the Municipal Code. Ultimately, the MUOD would help facilitate future residential, commercial, and mixed-use projects that apply context-sensitive standards appropriate for the City's urban corridors. As such, the Project would not conflict with this policy.
Policy LU-3.10 Minimize effects of new development on the privacy and character of surrounding neighborhoods.	*No Conflict*. Please refer to the discussions provided above for Policies LU-2.7 and 3.8. The MUOD includes performance standards and Objective Design Standards that address privacy explicitly, such as requiring new residential windows abutting commercial/industrial uses to be oriented or screened to avoid direct views, regulating lighting to avoid spillover, and calling for edge treatments (e.g., enhanced landscaping) to improve compatibility where mixed-use projects interface with neighborhoods. Regarding existing development, in accordance with MM-4.1-1, shade/shadow analyses required for taller buildings near residential zones would reduce potential privacy and character effects by informing massing, step-backs, or orientation changes before approval (refer to Policy LU-2.7 for additional discussion on building height compatibility as it relates to shade/shadow). The Project also includes Objective Design standards that emphasize neighborhood compatibility, pedestrian-oriented design, architectural quality, protection of privacy,

Table 4.1-2. General Plan Conflict Evaluation

Goals and Policies	Conflict Evaluation
	noise mitigation, and context-sensitive development. For the reasons discussed above, at the program level, the Project would not conflict with this policy.
Policy LU-3.12 Ensure that new development reflects existing design standards, qualities, and features that are in context with nearby development.	*No Conflict.* Refer to the conflict analysis provided above for Policy LU-3.8.
Safety Element	
Policy S-1.2 Enforce standards, review criteria, and ensure that structures on or adjacent to bluffs are set back sufficiently to preserve the natural contours and aesthetic value of the bluff line and to provide sufficient access for fire protection	*No Conflict.* The amended MUOD's proposed development standards table includes a specific "Abutting bluff crest" line item requiring a minimum 10-foot setback, and explicitly cross-references Section 13-34 (Bluff-Top Development) of Title 13 of the Municipal Code, thereby preserving the City's existing bluff-top standards and review criteria. Because the Project neither proposes specific construction nor alters these bluff-related requirements, the Project would not conflict with this policy.
Community Design Element	
Policy CD-5.2 Control the visual impacts of new development on natural views of the coast and the wetlands.	*No Conflict.* The Planning Area is not located in the immediate vicinity of the coast or wetlands. Specifically, the nearest Planning Area parcels are located approximately 0.7 miles northwest of Newport Bay and approximately 0.9 miles northeast of the Pacific Ocean coastline. Future development accommodated by the amended MUOD would occur primarily on infill sites within established commercial and industrial corridors, rather than within or adjacent to coastal resources or wetland areas. As such, the Project would not facilitate development in locations where direct obstruction of coastal or wetland views would typically occur. Accordingly, the Project would not conflict with this policy.
Policy CD-7.2 Preserve the character and scale of Costa Mesa's established residential neighborhoods where possible; when new residential development is proposed, encourage that the new structures are consistent with the prevailing character of existing development in the immediate vicinity, and that new development does not have a substantial adverse impact on adjacent areas.	*Potential to Conflict.* The Project would facilitate future residential and mixed-use development at increased intensities and heights on Measure K sites, including sites located adjacent to established residential neighborhoods. As such, future development enabled by the amended MUOD could, in some locations, introduce building forms, massing, or height that differ from the prevailing scale of nearby residential development, thereby creating the potential for conflicts with Policy CD7.2. The Project would nonetheless incorporate a comprehensive regulatory framework intended to preserve neighborhood character and minimize adverse effects on adjacent residential areas. Specifically, the amended MUOD would focus higher intensity development within primarily commercial and industrial corridors and retain existing single-family neighborhoods outside the Planning Area, thereby avoiding direct changes to the character of established residential neighborhoods. Where mixed-use or residential development occurs near residential zones, the amended MUOD and associated Objective Design Standards would require context sensitive building design, including corridor-scaled height limits tied to residential density tiers, minimum setbacks, upper story stepbacks, façade modulation, landscaping, and performance standards addressing privacy, lighting, and the residential-commercial interface. These objective,

Table 4.1-2. General Plan Conflict Evaluation

Goals and Policies	Conflict Evaluation
	uniformly applicable standards are intended to reduce perceived bulk, preserve access to light and air, and ensure that new development transitions appropriately to adjacent residential uses. In addition, MM-4.1-1 would apply to future discretionary projects where MUOD standards are elected. MM-4.1-1 establishes objective thresholds and enforceable requirements to evaluate and, where necessary, mitigate shading effects on adjacent residential properties through design-based measures such as height reductions, stepbacks, massing reconfiguration, and increased setbacks. Together with the Objective Design Standards, this measure is intended to reduce the potential for substantial adverse impacts, such as loss of sunlight, visual dominance, or diminished outdoor usability, at residential edges. However, as discussed in further detail below, there are circumstances under which compliance with MM-4.1-1 may not be feasible. Accordingly, while the Project includes MM-4.1-1 and proposes substantial regulatory controls designed to preserve neighborhood character, there remains a possibility that certain future projects facilitated under the amended MUOD could have a substantial adverse impact on adjacent residential properties due to increased building height and resulting shade/shadow impacts. Thus, future development implemented under the Project may conflict with this policy.
Policy CD-8.8 Require that exterior lighting on commercial properties be consistent with the architectural style of the commercial building. On each commercial site, all lighting fixtures should be from the same family of fixtures with respect to design, materials, color, fixture, and color of light. Lighting sources should be shielded, diffused or indirect to avoid spillover on adjacent properties, nighttime sky light pollution, and glare to pedestrians and motorists. To minimize the total number of freestanding light standards, wall-mounted and pathway lights should be utilized to the greatest extent possible.	*No Conflict*. Future projects implemented under the amended MUOD would be mixed use and residential, not strictly commercial. However, future mixed-use projects would have both commercial and residential components. As previously stated above, the amended MUOD would require proportional off-site improvements in the public right-of-way for future development projects, including street lighting, to reinforce corridor identity and scenic quality. The amended MUOD would also require adherence to performance and development standards that protect visual compatibility at sensitive edges and include lighting controls to avoid adverse spillover onto sensitive edges and that call for edge treatments (e.g., enhanced landscaping) to improve compatibility where mixed-use projects interface with neighborhoods. In addition, the proposed Objective Design Standards would require that all outdoor lighting fixtures be designed and installed to match or complement the architectural style, color, materials, and finishes of the development. In addition, exterior lighting would be required to be downward-directed, recessed, and/or shielded to prevent illumination beyond the intended area, including onto adjacent properties. These standards would also prohibit lighting that blinks, flashes, or oscillates, and would require that lighting be designed to avoid glare and excessive brightness. Finally, the Objective Design Standards would reinforce appropriate lighting scale and placement by prioritizing pedestrian-scaled lighting and limiting the height of freestanding light fixtures (e.g., a maximum height of 15 feet for pathway lighting). By requiring lighting along pedestrian pathways at regular intervals and encouraging integrated building lighting (e.g., at entries and along façades), these proposed standards would reduce reliance on tall, freestanding light poles. Overall, the Project's Objective Design Standards and other proposed development/performance standards are designed to

Table 4.1-2. General Plan Conflict Evaluation

Goals and Policies	Conflict Evaluation
	reduce potentially adverse lighting and glare impacts associated with future development and redevelopment.

Source: City of Costa Mesa 2016e, 2016f, 2025a.

The analysis provided in Table 4.1-2 shows that the Project would not conflict with most existing General Plan goals and policies governing to scenic quality. The Project is a program level zoning action that does not approve site-specific development or physical construction. It implements Measure K and Housing Element direction by applying an amended MUOD with objective, corridor-appropriate development standards, and privacy and lighting performance measures, while retaining existing blufftop protections. Furthermore, the amended MUOD includes a requirement that, for properties where the MUOD does not currently apply, all future projects on those properties implemented under the amended MUOD standards must also be consistent with the provisions of the General Plan. In these instances, subsequent projects would have to demonstrate compliance with applicable development standards during project level review in accordance with the provisions of the MUOD amendment and Chapter 3, Planning Applications of the Zoning Code.

However, as shown above, the Project would have the potential to conflict with two of the General Plan polices discussed above (specifically, LU 2.7 and CD-7.2). With regulatory compliance and implementation MM-4.1-1, most future discretionary development projects implemented under the MUOD would not be anticipated to conflict. However, even though still subject to the Objective Design Standards and other proposed MUOD standards, future non-discretionary projects that would be implemented under the amended MUOD would not be subject to CEQA review and would not be required to implement MM-4.1-1 as set forth in this PEIR. Additionally, although still subject to CEQA, discretionary projects that include affordable housing (and qualify for a Density Bonus under state law) could potentially request an incentive or waiver to avoid compliance with building height restrictions or other design changes intended to reduce shade/shadow impacts for adjacent residential properties. Thus, although a shade/shadow study would be required under CEQA in accordance with MM-4.1-1, it would not be applicable to non-discretionary projects and it may not be feasible to implement the recommended design changes if doing so would conflict with state law. Thus, there is a possibility that some future projects implemented under the MUOD may conflict with applicable General Plan policies governing scenic quality. As such, even with implementation of existing regulations, proposed design and development standards, and MM-4.1-1, potential impacts would be significant and unavoidable

Other Applicable Regulations Governing Scenic Quality

Other applicable regulations governing scenic quality include Municipal Code Title 15, Public Works, Chapter 5, Parkway Trees, summarized above in Section 4.1.2.3, Local (Regulatory Requirements). As stated above, the Project is a program-level zoning update; it does not authorize or entitle any site-specific development or tree work. Although the Project would facilitate additional future residential/mixed-use development, these future projects would proceed through standard City review and would remain subject to all applicable municipal requirements governing public right-of-way landscaping and tree protection, including parkway and landmark tree provisions. Treatment of streetscape trees would be addressed at future entitlement under applicable City codes and standards. Furthermore, the amended MUOD would include a provision authorizing the City Engineer to require proportional offsite public realm improvements for future MUOD projects, specifically including parkway trees and other parkway landscaping, thereby supporting cohesive corridor tree planting and long-term streetscape quality under City oversight. In addition, the MUOD amendment would require adherence to design/performance standards

(e.g., lighting controls, window orientation and screening, edge treatments) that function with the parkway tree program to preserve public views, sidewalk shade, and neighborhood privacy.

Ultimately, the Project would not authorize removal or alteration of any street trees and would leave the City's permit, replacement, and protection requirements fully in force. If a future mixed-use project proposes frontage work or other off-site improvements that could affect existing right-of-way trees, the project proponent would be required to obtain a permit, comply with construction protection measures, adhere to species/placement standards in the Street Tree Master Plan and adopted guidelines, and implement replacement ratios where applicable, all under City review and enforcement. Similarly, for landmark trees, the Project neither modifies the landmark tree program nor authorizes any tree work affecting designated trees. If a future project involves a designated landmark tree, the existing City process would govern and the City's intent to encourage preservation while allowing reasonable property use would continue to apply. Because those procedures remain intact and are independent of the amended MUOD, the Project would not conflict with applicable tree standards or their scenic quality objectives, and impacts would be less than significant.

4.1.5 Cumulative Impact Analyses

Where a lead agency concludes that the cumulative effects of a project, taken together with the impacts of other closely related past, present, and reasonably foreseeable future projects are significant, the lead agency then must determine whether the project's incremental contribution to such significant cumulative impact is "cumulatively considerable" (and thus significant in and of itself). The cumulative geographic study area used to assess potential cumulative aesthetic impacts includes the Planning Area, as well as portions of adjacent urban areas that are within the viewshed of the Planning Area. Aesthetic impacts are localized to the Planning Area and its immediate surroundings. The full list of related plans applicable to this Project's cumulative analyses is provided in Section 2.5, Cumulative Impact Analysis, in Chapter 2, Environmental Setting of the PEIR.

Threshold 4.1-1. Conflicts with applicable zoning and land use regulations are project specific and do not combine to create cumulatively considerable effects. Similarly, impacts to scenic quality in general are location specific. Consequently, changes to the scenic quality of one area of the cumulative study area would not alter the scenic quality of other districts/subareas or otherwise have additive effects on the scenic quality of another district/subarea. As such, although development across the cumulative study area may collectively alter the visual character of a district or subarea, cumulative impacts to visual character would not occur. Furthermore, the Project would account for the majority of future "cumulative" buildout in the Project area with the potential to result in additive shade/shadow impacts. Although the cumulative condition for this Project includes buildout of the General Plan, buildout of non-Project parcels in the vicinity of the Planning Area is assumed to comply with existing zoning and the corresponding maximum building height requirement, which, outside of urban and specific plan areas (most of which are included as part of the Project area), is generally a maximum of approximately 30 feet and thus unlikely to result in a cumulatively significant shade/shadow impact. Furthermore, the Fairview Development Center Specific Plan area is located on the west side of Harbor Boulevard, and the nearest buildings under that development would likely be at least 750 away from the nearest Project parcel (separated by portions of a golf course and/or a residential neighborhood) and thus would not be likely to result in a cumulatively significant shade/shadow impact. For these reasons, the Project's incremental contribution, although significant and unavoidable at the Project level, would not be cumulatively considerable.

4.1.6 Mitigation Measures

MM-4.1-1 Shade and Shadow Analysis. Prior to entitlement or issuance of a building permit (whichever comes first) for any development project pursuant to the MUOD that is located outside of a Transit Priority Area on a non-Housing Element site, the applicant shall prepare and submit a Shade/Shadow Analysis if *both* of the following conditions apply: (1) The proposed project is over four stories in height, and (2) the subject property is adjacent to a residential parcel zoned R1, R2, or R3. ("Adjacent to" shall be defined as being within 100 feet of the subject parcel, measured from the respective parcel boundaries.) The Shade/Shadow Analysis shall be prepared by a qualified design professional with demonstrated experience in shade and shadow analyses. If triggered, the Shade/Shadow Analysis shall include the following:

- Project-Specific Shadow Diagrams. The study shall include shadow diagrams showing shade/shadows cast by the proposed project as designed, accounting for existing buildings and permanent infrastructure. Vegetation shall not be included as an existing source of shadow. Shade/shadow diagrams shall be prepared for the following days:
  - Winter Solstice (December 21)
  - Summer Solstice (June 21)
  - Spring/Fall Equinox (March 21 and/or September 21)

  For each required day, shade/shadows shall be illustrated hourly (at a minimum), from one hour after sunrise to one hour before sunset. Shorter, time-based increments (e.g., 30- or 15-minute intervals) may be required to determine impacts.
- Diagram Content and Formatting. All shade/shadow diagrams shall show the project site boundaries and adjacent residential structures and yards. The diagrams shall clearly distinguish between existing baseline shadow and net new shade/shadow attributable to the proposed project.
- Significance Threshold Conclusion. The study shall determine whether new project-related shade/shadows would reduce access to direct sunlight of a private or common outdoor residential living area (e.g., a yard or courtyard) or other shade-sensitive outdoor feature (e.g., swimming pool) for more than three hours between the hours of 9:00 a.m. and 3:00 p.m. Pacific Standard Time (between early November and mid-March), or for more than four hours between the hours of 9:00 a.m. and 5:00 p.m. Pacific Daylight Time (between mid-March and early November).

If the analysis determines that significant shade/shadow impacts would result, the project applicant shall implement one or more of the following design-based measures, or equally effective measure, to reduce impacts in accordance with the stated significance thresholds:

- Reduce overall building height or step back upper stories;
- Modify building footprint, orientation, or upper-level articulation;
- Increase setbacks to preserve solar access; and/or
- Incorporate other design alternatives.

The selected design measures shall be subject to review and approval by the City to ensure impacts are reduced in accordance with the stated significance thresholds. The selected design measures shall be reflected in the final project plan set(s) and submitted to the City for review prior to entitlement or issuance of a building permit, whichever comes first.

4.1.7 Level of Significance Conclusion

Threshold 4.1-1: Even after implementation of MM-4.1-1, the Project would result in a **significant unavoidable impact** related to conflicts with applicable zoning and other regulations governing scenic quality and impacts would not be cumulatively considerable.

4.1.8 References

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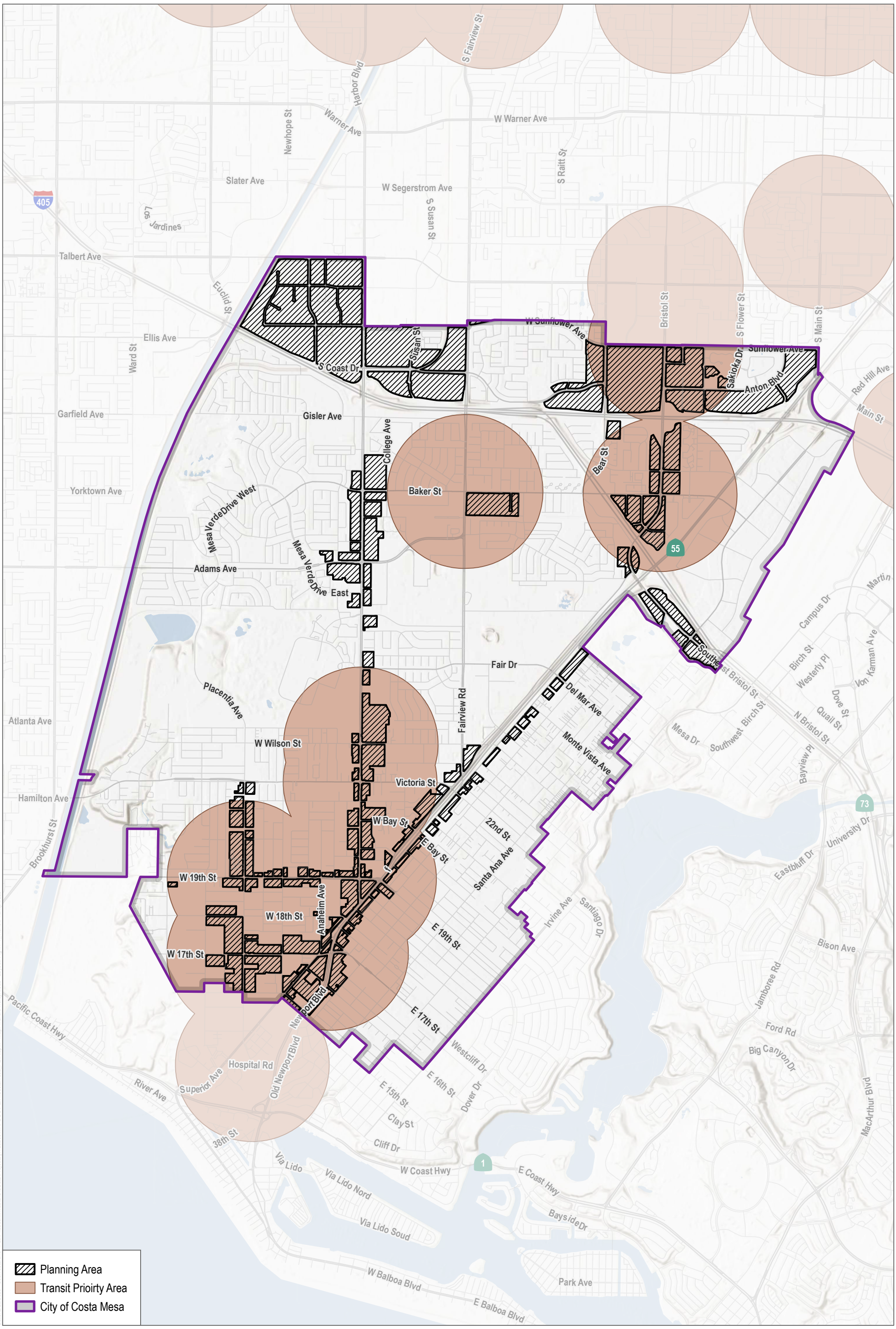

SOURCE: Esri, Open Street Map, SCAG 2026

DUDEK

0 1,500 3,000 Feet

FIGURE 4.1-1

Transit Priority Areas

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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4.2 Agriculture and Forestry Resources

This section of the Draft PEIR analyzes the potential impacts from the implementation of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation (Project) on agriculture and forest resources, including conversion of farmland to non-agricultural use, conflicts with zoning for agricultural use, and loss of forest land. A description of the existing agriculture and forestry resources for the City and Planning Area is also provided to present the environmental baseline for the Project. The analysis is based, in part, on review of the Costa Mesa 2015-2035 General Plan (General Plan), California Department of Conservation Farmland Mapping and Monitoring Program maps, and aerial images, as well as the following:

Appendix C Land Evaluation & Site Assessment Report for the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation Project, prepared by Dudek, February 2026

Other sources consulted are listed in Section 4.2.8, References.

4.2.1 Existing Conditions

4.2.1.1 Mapped Important Farmland

As discussed in Section 4.2.2, Regulatory Requirements, the FMMP produces Important Farmland Maps, which are a hybrid of resource quality (soils) and land use information. Agricultural land is rated according to soil quality and irrigation status. For environmental review purposes under CEQA, the categories of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland constitute 'agricultural land' pursuant to Public Resources Code Section 21060.1 (also referred to as 'Farmland' in Appendix G of the State CEQA Guidelines). As shown in Figure 4.2-1, Important Farmland, most of the city and surrounding areas are mapped as Urban and Built-Up Land. However, there are two agricultural parcels in the northeast portion of the city that contain Important Farmland consisting of Prime Farmland and Farmland of Statewide Importance, and two relatively small portions identified as Other Land along the city's western and eastern borders (DOC 2026a).

"Prime Farmland" is land with the best combination of physical and chemical features able to sustain long term agricultural production and needed to produce sustained high yields; "Farmland of Statewide Importance" is similar but has minor shortcomings, such as greater slopes or less ability to store soil moisture (DOC 2025). "Urban and Built-Up Land" is defined as land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. Common examples of Urban and Built-Up Land include residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures (DOC 2025). "Other Land" is defined as land not included in any other mapping FMMP Important Farmland category. The lands shown as Other Land in the city (see Figure 4.2-1) consist of parkland (e.g. vacant and nonagricultural land) surrounded on all sides by urban development. As such, there is no other agricultural land (i.e., Farmland) in the city aside from the two Important Farmland parcels included in the proposed Project's Planning Area.

For informational purposes, although there is no other Farmland in the city outside of the Planning Area, land within approximately 0.5-mile of the city is shown on maps made pursuant to the FMMP as Unique Farmland, as summarized below:

Huntington Beach/Santa Ana River: Unique Farmland is mapped in the City of Huntington Beach along the Santa Ana River and the City of Costa Mesa's western boundary. This area consists of various plant structures and the Santa Ana River Trail, which are surrounded by urban development.

4.2.1.2 Existing Zoning for Agricultural Use

As illustrated on Figure 2-4, Existing Zoning, in Chapter 2, Environmental Setting, of this Draft PEIR, under existing conditions, the Planning Area includes land that is zoned to support agricultural use. The two parcels containing Important Farmland are zoned as Planned Development Commercial (PDC), as shown on Figure 2-4. The City does not include any land zoned solely for commercial agriculture (City of Costa Mesa 2016a).

4.2.1.3 Forest Land

The Planning Area and surrounding area within the city consists of developed urban land uses. The Planning Area is not located within or near to any areas defined as forest land, timberland, or timberland production, and the City does not contain or permit forest land, timberland, or Timberland Production per the Zoning Code as none exists within the city (City of Costa Mesa 2016a).

4.2.2 Regulatory Requirements

4.2.2.1 Federal

There are no federal regulations that pertain to agricultural or forestry resources that would apply to the Project.

4.2.2.2 State

Department of Conservation Farmland Mapping and Monitoring Program

The Department of Conservation's (DOC's) Farmland Mapping and Monitoring Program (FMMP) provides consistent and impartial data to decision makers for use in assessing present status, reviewing trends, and planning for the future of California's agricultural land resources. The FMMP produces Important Farmland Maps, which are a hybrid of resource quality (soils) and land use information. Agricultural land is rated according to soil quality and irrigation status; the best quality land is called Prime Farmland. The maps are updated every 2 years with the use of a computer mapping system, aerial imagery, public review, and field reconnaissance. Data are also released in statistical formats—principally the biennial California Farmland Conversion Report. For environmental review purposes under CEQA, the categories of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland constitute 'agricultural land' (Public Resources Code Section 21060.1). The remaining categories are used for reporting changes in land use in the California Farmland Conversion Report (DOC 2025).

The following describes the FMMP Important Farmland categories (DOC 2025):

Prime Farmland. Farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

Farmland of Statewide Importance. Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

Unique Farmland. Farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.

Farmland of Local Importance. Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

Grazing Land. Land on which the existing vegetation is suited to the grazing of livestock.

Urban and Built-Up Land. Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

Other Land. Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry, or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than forty acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

California Land Conservation Act (Williamson Act)

The Williamson Act provides tax incentives to retain prime agricultural land and open space in agricultural use, which subsequently slows its conversion to urban development. The Williamson Act requires a 10-year contract between the City and landowners who enter into contracts with local government for long-term use restrictions on qualifying agricultural and open space land. There is no agricultural land under a Williamson Act contract in the city (City of Costa Mesa 2016a).

California Public Resources Code

The California Public Resources Code (PRC) defines forest land and timberland resources, provided below. The City does not contain any forestry resources that meet either definition.

Public Resources Code Section 12220(g). "Forest land" is land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

Public Resources Code Section 4526. "Timberland" means land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis.

California Government Code

The California Government Code includes a definition for a "timberland production zone". The City does not contain any timber resources that would qualify as a timberland production zone.

4.2.2.3 Local

There are no local regulations that pertain to agricultural or forestry resources that would apply to the Project.

4.2.3 Thresholds of Significance

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

Threshold 4.2-1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.

Threshold 4.2-2: Conflict with existing zoning for agricultural use, or with a Williamson Act contract.

Threshold 4.2-3: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

The following threshold questions for this topic required in accordance with Appendix G of the CEQA Guidelines were scoped out of this Draft PEIR, having been adequately addressed in the Initial Study, wherein it was determined that the Project would have no impact or a less than significant impact on the environment:

- Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?
- Would the project result in the loss of forest land or conversion of forest land to non-forest use?

Thus, an analysis of these thresholds is included in Appendix A-1, NOP and Initial Study, of this Draft PEIR.

4.2.4 Impact Analyses

4.2.4.1 Methodology

As described in Chapter 3, Project Description, the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation Project is a policy document that does not include or propose any site-specific development that could directly result in construction or operational impacts to the environment. However, implementation of the Project would facilitate additional future development in the city. Therefore, this Draft PEIR does not assess the site-specific construction and operation details of each future development within the Planning Area. Rather, it assesses the impacts associated with changes to existing land uses and the associated overall effects of buildout of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation Project through 2056, where reasonably foreseeable physical changes to the environment could occur. Analysis at a parcel or site-specific level was not conducted because, unless otherwise noted within this assessment, the actual locations of Project development (and its chronologic sequence or concurrence) that may be implemented in the future are speculative.

The FMMP Important Farmland Maps and aerial images were used to evaluate known agricultural resources located in the city. The potential for the proposed Project to impact agricultural resources is dependent upon the locations of Project's land use and/or zoning changes where subsequent future development may occur as a result of Project implementation.

4.2.4.2 Environmental Analyses

Threshold 4.2-1 Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Significant and Unavoidable Impact. As discussed in Section 4.2.1, Existing Conditions, the Planning Area consists of Urban and Built-Up Land, Other Land, as well as Prime Farmland and Farmland of Statewide Importance (Important Farmland), and Water, as identified on the maps prepared in accordance with the Farmland Mapping and Monitoring Program (see Figure 4.2-1). The Project consists of a citywide land use action to amend and apply the MUOD to Measure K sites, encompassing Housing Element and non-Housing Element sites, together with Zoning Code and General Plan amendments for internal consistency, which would allow for future redevelopment on sites within the Planning Area by utilizing the applied MUOD or a parcel's underlying base zone.

As described in Chapter 3, Project Description, of this Draft PEIR, the MUOD would supersede the base zones of identified Housing Element sites, meaning that if and when Housing Element sites under the Project are redeveloped, they must redevelop under the provisions of the MUOD, with a minimum of 50 percent residential floor area and a minimum density of 20 units per acre. The Project would apply to parcels in the identified Planning Area within the city, which includes two Important Farmland parcels consisting of Prime Farmland and Farmland of Statewide Importance that total 68.9 acres.

Buildout of the Project through 2056 is anticipated to result in the conversion of the City's last agricultural parcels consisting of Prime Farmland and Farmland of Statewide Importance within the Planning Area. Therefore, a Land Evaluation Site Assessment (LESA) analysis was conducted for the proposed Project (Appendix C of this Draft PEIR), which evaluates the quality of the agricultural resources in the Planning Area based on a numerical rating system, including factors such as soil type, water availability, and surrounding agricultural land. The LESA Report rates the site on a scale from 0-100 points. The LESA Report resulted in a numerical rating score of 54.17 points. As such, per the LESA Instruction Manual, the identified agricultural resources within the Planning Area are considered to be significant agricultural resources (Appendix C).

The Project would facilitate the eventual conversion of Prime Farmland and Farmland of Statewide Importance within the Planning Area to non-agricultural use for the purposes of new residential development. In addition, the agricultural resources in the Planning Area were determined to be significant agricultural resources (Appendix C). The direct loss of Prime Farmland and Farmland of Statewide Importance to non-agricultural use and a loss of significant agricultural resources per the LESA Report would be considered a significant impact to agricultural resources, and mitigation would be required. Requirements to partially mitigate for the loss of farmland are typically achieved through in lieu fees or direct purchases of conservation easements on similar land (DOC 2026b). The City and Orange County do not currently have an agricultural mitigation program to mitigate impacts to agricultural

lands. Thus, the City and Orange County do not have the mechanism currently available to mitigate the loss of Important Farmland.[1]

Because there is no established fee program in place to address the loss of agricultural lands, and therefore no mechanism to ensure nexus for a fee payment to reduce agricultural impacts, no mitigation measures are feasible to reduce the significant impact associated with the loss of Prime Farmland and Farmland of Statewide Importance. Thus, the impact relating to Prime Farmland, Unique Farmland, or Farmland of Statewide Importance cannot be reduced to a less-than-significant level. Therefore, the permanent conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use would constitute a significant and unavoidable impact.

Threshold 4.2-2 Would the project conflict with existing zoning for agricultural use, or with a Williamson Act contract?

Less Than Significant Impact. For the reasons discussed below, the Project would not conflict with existing zoning for agricultural use, or with a Williamson Act contract, and impacts would be less than significant.

Zoning for Agricultural Use

As mentioned above in Section 4.2.1, two parcels within the Planning Area support agricultural uses. As shown in Figure 2-4, Existing Zoning, in Chapter 2, Environmental Setting of this Draft PEIR, and on Figure 4.2-1, Important Farmland, the Planning Area includes two parcels that are zoned Planned Development Commercial. The City does not maintain any zones specifically for agricultural use.

According to Article 6, Section 13.57(b), Planned Commercial Development, of Title 13 (Planning, Zoning and Development) of the City's Municipal Code, this zone is established to provide retail shops, offices and service establishments, including but not limited to, hotels, restaurants, theaters, museums, financial institutions and health clubs are appropriate, and to serve adjacent residential areas, and the entire community and region. Furthermore, under the PDC zone, agricultural uses such as Christmas tree lots, pumpkin patches, and produce stands are permitted, and complementary residential, mixed-use, and industrial uses are allowed upon approval by the City's Planning Commission (City of Costa Mesa 2016b, 2025). Therefore, the existing zoning on the two agricultural parcels within the Planning Area is not solely designated for agricultural use and can accommodate residential and mixed-use development. As such, although the Project would rezone the agricultural parcels within the Planning Area utilizing the amended MUOD and would be required to redevelop with residential uses in the future, the existing underlying base zoning of PDC on these sites can accommodate residential and mixed uses. Thus, the Project would not conflict with existing zoning for agricultural use, and a less than significant impact would occur.

[1] To use as an example of an agricultural mitigation program in the region, San Diego County operates the Purchase of Agricultural Conservation Easement (PACE) Program that promotes the long-term preservation of agriculture in the San Diego County and allows agricultural property owners to be compensated for placing a perpetual easement on their property that limits future uses to agriculture (County of San Diego 2026). Under the PACE Program, credits can be purchased by discretionary project applicants to mitigate agricultural impacts at a 1:1 ratio, where one credit is equal to one acre of agricultural land. As an example, the PACE Program Mitigation Credit Fee is $3,827 per credit, or $3,827 per acre of agricultural land (County of San Diego 2018).

Williamson Act Contract

As stated in the City's General Plan EIR, there is no land within the city under a Williamson Act contract (City of Costa Mesa 2016a). Therefore, the proposed Project would not conflict with an existing Williamson Act contract and no impact would occur.

Threshold 4.2-3 **Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?**

No Impact. The proposed Project would involve changes in the existing environment that would result in the conversion of Farmland into non-agricultural uses, as described in Thresholds 4.2-1 and 4.2-2, above. Aside from the two Farmland parcels within the Planning Area, no other Farmland exists in the city; thus, no other Farmland would be indirectly affected by the Project and its Planning Area. Although land within the City of Huntington Beach and along the City's western border is shown on maps made pursuant to the FMMP as Unique Farmland (discussed above in Section 4.2.1), future redevelopment associated with Project implementation would not indirectly result in the conversion of Farmland to a non-agriculture use given that the existing and surrounding conditions of the Unique Farmland are urban and developed, and that the Project would only affect the Planning Area. The Unique Farmland consists of a relatively small area with various plant nursery structures surrounded by urban, developed uses and the Santa Ana River Trail and Santa Ana River. Due to the intervening distance between the Planning Area and the Unique Farmland, and the existing development conditions around the Unique Farmland, the Project would not exacerbate the existing potential for redevelopment of Farmland near the city. In addition, the City does not contain any forest land or timberland (City of Costa Mesa 2016a). Therefore, the Project would not involve other changes that would result in the conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use; no impact would occur.

4.2.5 Cumulative Impact Analyses

Where a lead agency concludes that the cumulative effects of past, present, and reasonably foreseeable future projects are significant, the lead agency then must determine whether the proposed project has any contribution to the cumulative impact, and if so, whether the project's incremental effect is "cumulatively considerable." The cumulative geographic study area used to assess potential cumulative agriculture and forestry impacts includes the City of Costa Mesa. The full list of related plans applicable to the cumulative analyses in Chapter 4 is provided in Section 2.5, Cumulative Impact Analysis, in Chapter 2, Environmental Setting of the Draft PEIR.

Threshold 4.2-1. The Project would result in the conversion of Prime Farmland and Farmland of Statewide Importance to non-agricultural use. The Project would rezone the City's last agricultural farmland parcels that consist of Important Farmland. These parcels would be designated for future development of residential and mixed units under the provisions of the MUOD. Therefore, the Project would contribute a cumulatively considerable contribution to a cumulatively significant impact with respect to land designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

Threshold 4.2-2. The Project consists of a citywide land use action to amend and apply the MUOD to Measure K sites and includes Zoning Code and General Plan amendments for internal consistency. No site-specific development is proposed by the Project; rather, the approval and implementation of the Project would facilitate future residential and mixed-use development in accordance with the City's Housing Element and Measure K. There is no land within the city under a Williamson Act contract (City of Costa Mesa 2016a). The Project would not result

in conflicts with existing zoning for agricultural use, as described in Threshold 4.2-2 above. Thus, the proposed rezoning of the two agricultural parcels would not constitute a significant cumulative impact to agricultural resources. Therefore, this impact would not be cumulatively considerable.

Threshold 4.2-3. The Project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use as no forest land and no other farmland not already analyzed above exists in the Planning Area or in the city. Therefore, this impact would not be cumulatively considerable.

4.2.6 Mitigation Measures

No mitigation measures are available to feasibly reduce impacts to less-than-significant.

4.2.7 Level of Significance Conclusion

Threshold 4.2-1. The Project would result in a **significant and unavoidable impact** related to the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to non-agricultural use and a cumulatively considerable impact.

Threshold 4.2-2. The Project would have a **less than significant impact** related to conflicts with existing zoning for agricultural use, or with a Williamson Act contract and impacts would not be cumulatively considerable.

Threshold 4.2-3. The Project would have **no impact** related to other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use and no cumulatively considerable impacts would occur.

4.2.8 References

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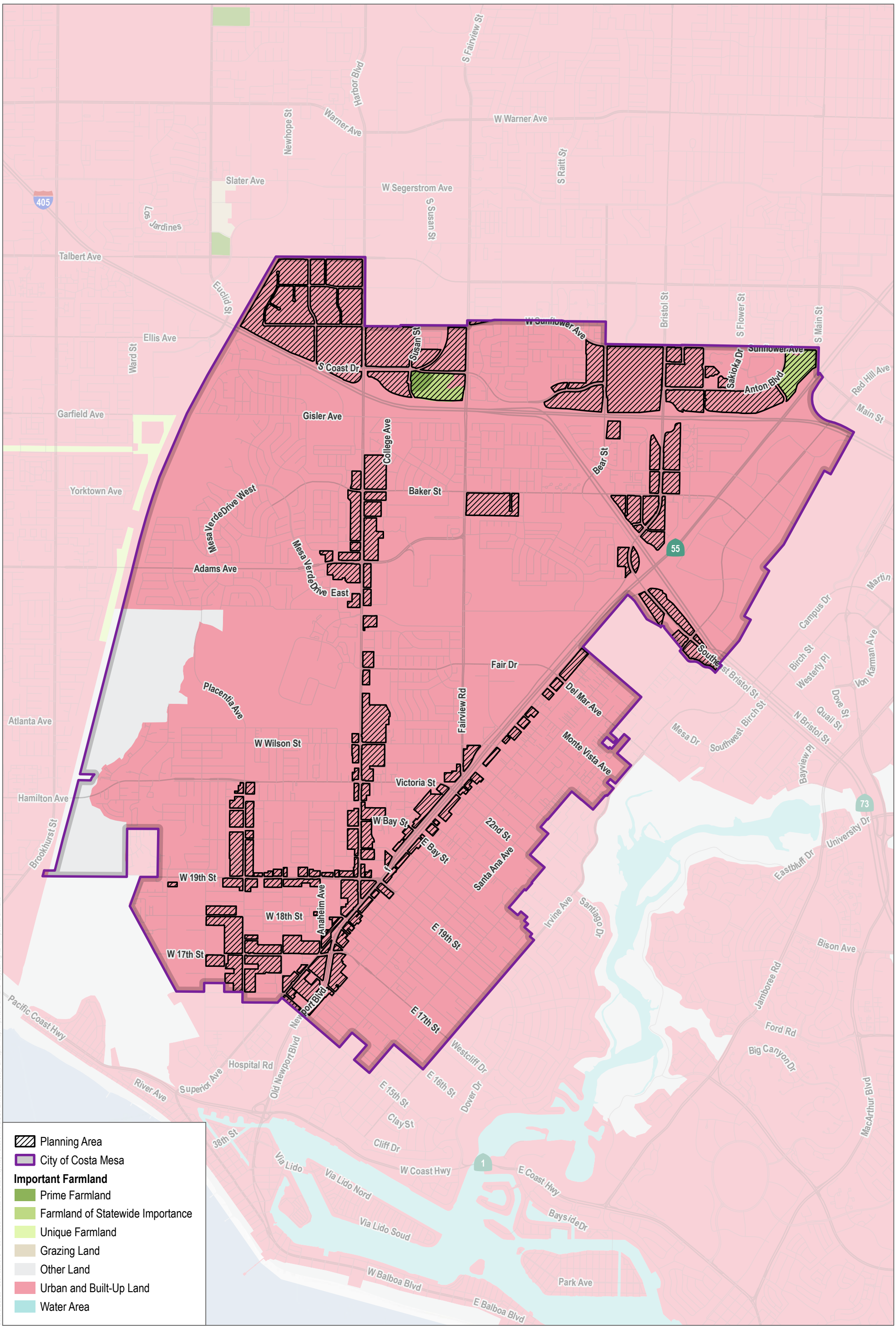

SOURCE: Esri, Open Street Map, California Dept. of Conservation

FIGURE 4.2-1

Important Farmland

DUDEK

0 1,500 3,000 Feet

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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4.3 Air Quality

This section of the Draft PEIR analyzes the potential impacts from the implementation of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation (Project) on air quality, including potential for obstruction with the air quality management plan, increases in criteria pollutants, exposure of sensitive receptors to pollutants, and odors. A discussion of the existing air quality conditions within the Project area and the surrounding areas is also included in this section to present the environmental baseline for the Project. The analysis is based, in part, on review of information from the California Air Resources Board (CARB), Environmental Protection Agency (EPA), the South Coast Air Quality Management District (SCAQMD), the transportation impact analysis (Section 4.17, Transportation, of this Draft PEIR) and information provided in the following technical appendix:

Appendix D Air Quality and Greenhouse Gas Emissions Modeling and Energy Calculations, prepared by Dudek

Other sources consulted are listed in Section 4.3.8, References.

4.3.1 Existing Conditions

This section discusses the existing environmental setting relative to air quality. As described in Chapter 3, Project Description, the Project is evaluated at a programmatic level and the analysis is based on information available to the City where reasonably foreseeable, direct, and indirect physical changes in the environment could be considered. As a result, this section generally describes the Project area and, where applicable, the general areas where land use changes are proposed, as those are the areas that could accommodate unplanned growth in the form of new or more dense development and resulting population and/or employment.

The Project site is located in the City of Costa Mesa (City) within the South Coast Air Basin (SCAB). The SCAB is a 6,745-square-mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The SCAB's air pollution problems are a consequence of the combination of emissions from the nation's second-largest urban area, meteorological conditions that hinder dispersion of those emissions, and mountainous terrain surrounding the SCAB that traps pollutants as they are pushed inland with the sea breeze (SCAQMD 2022). Meteorological and topographical factors that affect air quality in the SCAB are described below.

4.3.1.1 Climate and Meteorology

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

Moderate temperatures, comfortable humidity, and limited precipitation characterize the climate in the SCAB. The average annual temperature varies little throughout the basin, averaging 75 degrees Fahrenheit (°F). However, with a less pronounced oceanic influence, the eastern inland portions of the basin show greater variability in annual minimum and maximum temperatures. All portions of the SCAB have recorded temperatures over 100°F in recent years. Although the SCAB has a semiarid climate, the air near the surface is moist because of the presence of a

shallow marine layer. Except for infrequent periods when dry air is brought into the basin by offshore winds, the ocean effect is dominant. Periods with heavy fog are frequent, and low stratus clouds, occasionally referred to as "high fog," are a characteristic climate feature. Annual average relative humidity is 70 percent at the coast and 57 percent in the eastern part of the basin. Precipitation in the SCAB is typically 9 to 14 inches annually and is rarely in the form of snow or hail, due to typically warm weather. The frequency and amount of rainfall is greater in the coastal areas of the basin.

Sunlight

The presence and intensity of sunlight are necessary prerequisites for the formation of photochemical smog. Under the influence of the ultraviolet radiation of sunlight, certain primary pollutants (mainly reactive hydrocarbons and oxides of nitrogen [NO_x][1]) react to form secondary pollutants (primarily oxidants). Since this process is time dependent, secondary pollutants can be formed many miles downwind of the emission sources. Southern California also has abundant sunshine, which drives the photochemical reactions that form pollutants such as O_3 and a substantial portion of fine particulate matter ($PM_{2.5}$; particulate matter 2.5 microns or less in diameter). In the SCAB, high concentrations of O_3 are normally recorded during the late spring, summer, and early autumn months, when more intense sunlight drives enhanced photochemical reactions. Because of the prevailing daytime winds and time-delayed nature of photochemical smog, oxidant concentrations are highest in the inland areas of Southern California.

Temperature Inversions

Under ideal meteorological conditions and irrespective of topography, pollutants emitted into the air mix and disperse into the upper atmosphere. However, the Southern California region frequently experiences temperature inversions in which pollutants are trapped and accumulate close to the ground. The inversion, a layer of warm, dry air overlaying cool, moist marine air, is a normal condition in coastal Southern California. The cool, damp, and hazy sea air capped by coastal clouds is heavier than the warm, clear air, which acts as a lid through which the cooler marine layer cannot rise. The height of the inversion is important in determining pollutant concentration. When the inversion is approximately 2,500 feet above mean sea level, the sea breezes carry the pollutants inland to escape over the mountain slopes or through the passes. At a height of 1,200 feet above mean sea level, the terrain prevents the pollutants from entering the upper atmosphere, resulting in the pollutants settling in the foothill communities. Below 1,200 feet above mean sea level, the inversion puts a tight lid on pollutants, concentrating them in a shallow layer over the entire coastal basin. Usually, inversions are lower before sunrise than during the daylight hours.

Mixing heights for inversions are lower in the summer and inversions are more persistent, being partly responsible for the high levels of O_3 observed during summer months in the SCAB. Smog in Southern California is generally the result of these temperature inversions combining with coastal day winds and local mountains to contain the pollutants for long periods, allowing them to form secondary pollutants by reacting in the presence of sunlight. The SCAB has a limited ability to disperse these pollutants due to typically low wind speeds and the surrounding mountain ranges.

As with other regions within the SCAB, the County is susceptible to air inversions, which trap a layer of stagnant air near the ground where pollutants are further concentrated. These inversions produce haziness, which is caused by moisture, suspended dust, and a variety of chemical aerosols emitted by trucks, automobiles, furnaces, and other

[1] NO_x is a general term pertaining to compounds of nitric oxide, nitrogen dioxide, and other oxides of nitrogen.

sources. Elevated concentrations of coarse particulate matter (PM_{10}; particulate matter 10 microns or less in diameter) and $PM_{2.5}$ can occur in the SCAB throughout the year, but they occur most frequently in fall and winter. Although there are some changes in emissions by day of the week and by season, the observed variations in pollutant concentrations are primarily the result of seasonal differences in weather conditions.

4.3.1.2 Pollutants and Effects

Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The national and California standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include O_3, NO_2, CO, SO_2, PM_{10}, $PM_{2.5}$, and lead. In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants. These pollutants, as well as toxic air contaminants (TACs), are discussed in the following paragraphs.[2]

Ozone

O_3 is a strong-smelling, pale blue, reactive, toxic chemical gas consisting of three oxygen atoms. It is a secondary pollutant formed in the atmosphere by a photochemical process involving the sun's energy and O_3 precursors. These precursors are mainly NO_x and volatile organic compounds (VOCs). The maximum effects of precursor emissions on O_3 concentrations usually occur several hours after they are emitted and many miles from the source. Meteorology and terrain play major roles in O_3 formation, and ideal conditions occur during summer and early autumn on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. O_3 exists in the upper atmosphere O_3 layer (stratospheric O_3) and at the Earth's surface in the troposphere (ground-level O_3).[3] The O_3 that EPA and CARB regulate as a criteria air pollutant is produced close to the ground level, where people live, exercise, and breathe. Ground-level O_3 is a harmful air pollutant that causes numerous adverse health effects and is thus considered "bad" O_3. Stratospheric, or "good," O_3 occurs naturally in the upper atmosphere, where it reduces the amount of ultraviolet light (i.e., solar radiation) entering the Earth's atmosphere. Without the protection of the beneficial stratospheric O_3 layer, plant and animal life would be seriously harmed.

O_3 in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes (EPA 2013).

Inhalation of O_3 causes inflammation and irritation of the tissues lining human airways, causing and worsening a variety of symptoms. Exposure to O_3 can reduce the volume of air that the lungs breathe in, thereby causing shortness of breath. O_3 in sufficient doses increases the permeability of lung cells, rendering them more susceptible to toxins and microorganisms. The occurrence and severity of health effects from O_3 exposure vary widely among individuals, even when the dose and the duration of exposure are the same. Research shows adults and children who spend more time outdoors participating in vigorous physical activities are at greater risk from the harmful

[2] The descriptions of the criteria air pollutants and associated health effects are based on EPA's "Criteria Air Pollutants" (EPA 2026a), as well as CARB's "Glossary" (CARB 2026a).

[3] The troposphere is the layer of the Earth's atmosphere nearest to the surface of the Earth. The troposphere extends outward about 5 miles at the poles and about 10 miles at the equator.

health effects of O_3 exposure. While there are relatively few studies on the effects of O_3 on children, the available studies show that children are no more or less likely to suffer harmful effects than adults. However, there are a number of reasons why children may be more susceptible to O_3 and other pollutants. Children and teens spend nearly twice as much time outdoors and engaged in vigorous activities as adults. Children breathe more rapidly than adults and inhale more pollution per pound of their body weight than adults. Also, children are less likely than adults to notice their own symptoms and avoid harmful exposures. Further research may be able to better distinguish between health effects in children and adults. Children, adolescents, and adults who exercise or work outdoors, where O_3 concentrations are the highest, are at the greatest risk of harm from this pollutant (CARB 2026b).

Nitrogen Dioxide

NO_2 is a brownish, highly reactive gas that is present in all urban atmospheres. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide, which is a colorless, odorless gas. NO_x plays a major role, together with VOCs, in the atmospheric reactions that produce O_3. NO_x is formed from fuel combustion under high temperature or pressure. In addition, NO_x is an important precursor to acid rain and may affect both terrestrial and aquatic ecosystems. The two major emissions sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers.

A large body of health science literature indicates that exposure to NO_2 can induce adverse health effects. The strongest health evidence, and the health basis for the ambient air quality standards for NO_2, results from controlled human exposure studies that show that NO_2 exposure can intensify responses to allergens in allergic asthmatics. In addition, a number of epidemiological studies have demonstrated associations between NO_2 exposure and premature death, cardiopulmonary effects, decreased lung function growth in children, respiratory symptoms, emergency room visits for asthma, and intensified allergic responses. Infants and children are particularly at risk because they have disproportionately higher exposure to NO_2 than adults due to their greater breathing rate for their body weight and their typically greater outdoor exposure duration. Several studies have shown that long-term NO_2 exposure during childhood, the period of rapid lung growth, can lead to smaller lungs at maturity in children with higher levels of exposure compared to children with lower exposure levels. In addition, children with asthma have a greater degree of airway responsiveness compared with adult asthmatics. In adults, the greatest risk is to people who have chronic respiratory diseases, such as asthma and chronic obstructive pulmonary disease (CARB 2026c).

Carbon Monoxide

CO is a colorless, odorless gas formed by the incomplete combustion of hydrocarbon, or fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, such as the Project location, automobile exhaust accounts for the majority of CO emissions. CO is a nonreactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions—primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, which is a typical situation at dusk in urban areas from November to February. The highest levels of CO typically occur during the colder months of the year, when inversion conditions are more frequent.

CO is harmful because it binds to hemoglobin in the blood, reducing the ability of blood to carry oxygen. This interferes with oxygen delivery to the body's organs. The most common effects of CO exposure are fatigue, headaches, confusion and reduced mental alertness, light-headedness, and dizziness due to inadequate oxygen

delivery to the brain. For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress. Inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance. Unborn babies whose mothers experience high levels of CO exposure during pregnancy are at risk of adverse developmental effects. Unborn babies, infants, elderly people, and people with anemia or with a history of heart or respiratory disease are most likely to experience health effects with exposure to elevated levels of CO (CARB 2026d).

Sulfur Dioxide

SO_2 is a colorless, pungent gas formed primarily from incomplete combustion of sulfur-containing fossil fuels. The main sources of SO_2 are coal and oil used in power plants and industries; as such, the highest levels of SO_2 are generally found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels.

Controlled human exposure and epidemiological studies show that children and adults with asthma are more likely to experience adverse responses with SO_2 exposure, compared with the non-asthmatic population. Effects at levels near the 1-hour standard are those of asthma exacerbation, including bronchoconstriction accompanied by symptoms of respiratory irritation such as wheezing, shortness of breath, and chest tightness, especially during exercise or physical activity. Also, exposure at elevated levels of SO_2 (above 1 part per million [ppm]) results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality. Older people and people with cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most likely to experience these adverse effects (CARB 2026e).

SO_2 is of concern both because it is a direct respiratory irritant and because it contributes to the formation of sulfate and sulfuric acid in particulate matter (NRC 2005). People with asthma are of particular concern, both because they have increased baseline airflow resistance and because their SO_2-induced increase in airflow resistance is greater than in healthy people, and it increases with the severity of their asthma (NRC 2005). SO_2 is thought to induce airway constriction via neural reflexes involving irritant receptors in the airways (NRC 2005).

Particulate Matter

Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Coarse particulate matter (PM_{10}) consists of particulate matter that is 10 microns or less in diameter, which is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. Fine particulate matter ($PM_{2.5}$) consists of particulate matter that is 2.5 microns or less in diameter, which is roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., from motor vehicles and power generation and industrial facilities), residential fireplaces, and woodstoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as sulfur oxides (SO_x), NO_x, and VOCs.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the

body's ability to fight infections. Very small particles of substances such as lead, sulfates, and nitrates can cause lung damage directly or be absorbed into the bloodstream, causing damage elsewhere in the body. Additionally, these substances can transport adsorbed gases such as chlorides or ammonium into the lungs, also causing injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissue. Suspended particulates also damage and discolor surfaces on which they settle and produce haze and reduce regional visibility.

A number of adverse health effects have been associated with exposure to both $PM_{2.5}$ and PM_{10}. For $PM_{2.5}$, short-term exposures (up to 24-hour duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases. In addition, of all of the common air pollutants, $PM_{2.5}$ is associated with the greatest proportion of adverse health effects related to air pollution, both in the United States and worldwide based on the World Health Organization's Global Burden of Disease Project. Short-term exposures to PM_{10} have been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits (CARB 2026f).

Long-term exposure (months to years) to $PM_{2.5}$ has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children. The effects of long-term exposure to PM10 are less clear, although several studies suggest a link between long-term PM10 exposure and respiratory mortality. The International Agency for Research on Cancer published a review in 2015 that concluded that particulate matter in outdoor air pollution causes lung cancer (CARB 2026f).

Lead

Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paints, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phaseout of leaded gasoline reduced the overall inventory of airborne lead by nearly 95 percent. With the phaseout of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emissions sources of greater concern (CARB 2026g).

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient (IQ) performance, psychomotor performance, reaction time, and growth. Children are highly susceptible to the effects of lead (CARB 2026g).

Sulfates

Sulfates are the fully oxidized form of sulfur, which typically occur in combination with metals or hydrogen ions. Sulfates are produced from reactions of SO_2 in the atmosphere and can result in respiratory impairment, as well as reduced visibility (CARB 2026h).

Vinyl Chloride

Vinyl chloride is a colorless gas with a mild, sweet odor, which has been detected near landfills, sewage plants, and hazardous waste sites, due to the microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air can cause nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure through inhalation can cause liver damage, including liver cancer (CARB 2026i).

Hydrogen Sulfide

Hydrogen sulfide is a colorless and flammable gas that has a characteristic odor of rotten eggs. Sources of hydrogen sulfide include geothermal power plants, petroleum refineries, sewers, sewage treatment plants, and stagnant runoff from clogged water basins. Exposure to hydrogen sulfide can result in nuisance odors, as well as headaches and breathing difficulties at higher concentrations (CARB 2026j).

Visibility-Reducing Particles

Visibility-reducing particles are any particles in the air that obstruct the range of visibility. Effects of reduced visibility can include obscuring the viewshed of natural scenery, reducing airport safety, and discouraging tourism. Sources of visibility-reducing particles are the same as for $PM_{2.5}$ (CARB 2026k).

Volatile Organic Compounds

Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O_3 are referred to and regulated as VOCs (also referred to as reactive organic gases). Combustion engine exhaust, oil refineries, and fossil-fueled power plants are the sources of hydrocarbons. Other sources of anthropogenic and bio-pedogenic hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

The primary health effects of VOCs result from the formation of O_3 and its related health effects. High levels of VOCs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered TACs. There are no separate ambient air quality standards for VOCs as a group.

Non-Criteria Air Pollutants

Toxic Air Contaminants

A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic non-cancer health effects. A toxic substance released into the air is considered a TAC. TACs are identified by federal and state agencies based on a review of available scientific evidence. In the state of California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air.

Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources, such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources, such as automobiles; and area sources, such as landfills and oil and

gas facilities. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and non-carcinogenic effects. Non-carcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

Diesel Particulate Matter

Diesel particulate matter (DPM) is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. More than 90 percent of DPM is less than 1 micrometer in diameter (about 1/70 the diameter of a human hair), and thus is a subset of $PM_{2.5}$ (CARB 2026l). DPM is typically composed of carbon particles ("soot," also called black carbon) and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene (CARB 2026l). The CARB classified "particulate emissions from diesel-fueled engines" (i.e., DPM) (17 CCR 93000) as a TAC in August 1998. DPM is emitted from a broad range of diesel engines: on-road diesel engines, including trucks, buses, and cars, and off-road diesel engines, including locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70 percent of all airborne cancer risk in California is associated with DPM (CARB 2000). To reduce the cancer risk associated with DPM, CARB adopted a diesel risk reduction plan in 2000 (CARB 2000). Because it is part of $PM_{2.5}$, DPM also contributes to the same non-cancer health effects as $PM_{2.5}$ exposure. These effects include premature death; hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma; increased respiratory symptoms; and decreased lung function in children. Several studies suggest that exposure to DPM may also facilitate development of new allergies (CARB 2026l). Those most vulnerable to non-cancer health effects are children, whose lungs are still developing, and older people, who often have chronic health problems.

Odorous Compounds

Odors are generally regarded as an annoyance or a quality of life impact, rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and overall is quite subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be perfectly acceptable to another (e.g., coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. In a phenomenon known as odor fatigue, a person can become desensitized to almost any odor, and recognition may only occur with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; microclimate; relative humidity; temperature; topography; and the sensitivity of receptors.

Valley Fever

Coccidioidomycosis, more commonly known as "valley fever," is an infection caused by inhalation of the spores of the *Coccidioides immitis* fungus, which grows in the soils of the southwestern United States. The fungus is very prevalent in the soils of California's San Joaquin Valley, particularly in Kern County. The ecologic factors that appear to be most conducive to survival and replication of the spores are high summer temperatures, mild winters, sparse rainfall, and alkaline, sandy soils. Orange County is not considered a highly endemic county ("highly endemic" meaning more than 20 cases annually of valley fever per 100,000 people) based on the incidence rates reported through 2022. The latest report from the California Department of Public Health indicates that Orange County had 297 cases in 2022, or 9.4 cases per 100,000 people (CDPH 2023).

Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where these air-pollution-sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses where air-pollution-sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (sensitive sites or sensitive land uses) (CARB 2005).

The SCAQMD identifies sensitive receptors as residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes (SCAQMD 1993). Of note, the proposed residential land uses are considered sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present.

Background Health Risk

The SCAQMD conducted its first Multiple Air Toxics Exposure Study (MATES) in 1986 and 1987. The SCAQMD provided updates and expanded information in the MATES program as follows: MATES II (2000), MATES III (2008), MATES IV (2015), and MATES V (2021). MATES V includes a monitoring program, an updated emissions inventory of TACs, and a modeling effort to characterize risk across the SCAB. MATES V focuses on the carcinogenic risk from exposure to air toxics and includes an exploratory evaluation of chronic non-cancer health impacts, but it does not estimate mortality or other health effects from criteria air pollutant exposures. The key findings of MATES V are as follows (SCAQMD 2021):

- During the study period, the average SCAB cancer risk from air toxics based on the annual average levels calculated from the 10 monitoring sites data ranged from 585 to 842 per million. The carcinogenic risk from air toxics in the Basin is about 40 percent lower than the monitored average in MATES IV and 84 percent lower than the average in MATES II.
- Diesel exhaust was the key driver for air toxics risk, accounting for nearly 50 percent of the total air toxics risk estimated from monitoring. However, the average levels of diesel PM in MATES V are 53 percent lower at the 10 monitoring sites compared to MATES IV and 86 percent lower since MATES II based on monitored data. These reductions reflect recent and continued efforts by the District, CARB and US EPA, that reduce diesel PM emissions, especially from mobile sources.
- Model estimated air toxics risk showed an overall SCAB-wide reduction. The SCAB-wide estimated population-weighted risk was 54 percent lower in MATES V compared to MATES IV. Furthermore, the population-weighted cancer risk decreased by 57 percent in communities experiencing environmental injustices (EJ communities) overall compared to a 53 percent reduction in non-EJ communities.
- The chronic non-cancer health impacts monitoring data indicate that chronic non-cancer health impacts have decreased significantly since MATES III, however, the chronic hazard indices have remained similar at the fixed monitoring locations since MATES IV.

4.3.2 Regulatory Requirements

4.3.2.1 Federal

Federal Clean Air Act

The federal Clean Air Act, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. EPA is responsible for implementing most aspects of the Clean Air Act, including setting National Ambient Air Quality Standards (NAAQS) for major air pollutants; setting hazardous air pollutant (HAP) standards; approving state attainment plans; setting motor vehicle emissions standards; issuing stationary source emissions standards and permits; and establishing acid rain control measures, stratospheric O_3 protection measures, and enforcement provisions. NAAQS are established for criteria pollutants under the Clean Air Act, which are O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The NAAQS (other than for O_3, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O_3, NO_2, SO_2, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over one-to-three-year periods, depending on the pollutant. The Clean Air Act requires EPA to reassess the NAAQS at least every five years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare State Implementation Plans that demonstrate how those areas will attain the NAAQS within mandated timeframes.

Hazardous Air Pollutants

The 1977 federal Clean Air Act amendments required the EPA to identify National Emission Standards for HAPs to protect public health and welfare. HAPs include certain volatile organic chemicals, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 federal Clean Air Act amendments, which expanded the control program for HAPs, 189 substances and chemical families were identified as HAPs.

4.3.2.2 State

California Criteria Air Pollutants

The federal Clean Air Act delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for ensuring implementation of the California Clean Air Act of 1988, responding to the federal Clean Air Act, and regulating emissions from motor vehicles and consumer products.

CARB has established the California Ambient Air Quality Standards (CAAQS), which are generally more restrictive than the NAAQS. As stated previously, an ambient air quality standard defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without harm to the public's health. For each pollutant, concentrations must be below the relevant CAAQS before a geographical area can attain the corresponding CAAQS. Air quality is considered “in attainment” if pollutant levels are continuously below the CAAQS and violate the standards no more than once each year. The CAAQS for O_3, CO, SO_2 (1-hour and 24-hour), NO_2,

PM_{10}, and $PM_{2.5}$ and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded.

California air districts have based their thresholds of significance for California Environmental Quality Act (CEQA) purposes on the levels that scientific and factual data demonstrate that the air basin can accommodate without affecting the attainment date for the NAAQS or CAAQS. Since an ambient air quality standard is based on maximum pollutant levels in outdoor air that would not harm the public's health, and air district thresholds pertain to attainment of the ambient air quality standard, this means that the thresholds established by air districts are also protective of human health. The NAAQS and CAAQS are presented in Table 4.3-1, Ambient Air Quality Standards.

Table 4.3-1. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	Primary[c,d]	Secondary[c,e]
Ozone (O_3)	1 hour	0.09 ppm (180 μg/m³)	—	Same as Primary Standard[f]
	8 hours	0.070 ppm (137 μg/m³)	0.070 ppm (137 μg/m³)f	
Nitrogen dioxide (NO_2)[g]	1 hour	0.18 ppm (339 μg/m³)	0.100 ppm (188 μg/m³)	Same as Primary Standard
	Annual Arithmetic Mean	0.030 ppm (57 μg/m³)	0.053 ppm (100 μg/m³)	
Carbon monoxide (CO)	1 hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	None
	8 hours	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	
Sulfur dioxide (SO_2)[h]	1 hour	0.25 ppm (655 μg/m³)	0.075 ppm (196 μg/m³)	—
	3 hours	—	—	0.5 ppm (1,300 μg/m³)
	24 hours	0.04 ppm (105 μg/m³)	0.14 ppm (for certain areas)[g]	—
	Annual	—	0.030 ppm (for certain areas)[g]	—
Course Particulate Matter (PM_{10})[i]	24 hours	50 μg/m³	150 μg/m³	Same as Primary Standard
	Annual Arithmetic Mean	20 μg/m³	—	
Fine Particulate Matter ($PM_{2.5}$)[i]	24 hours	—	35 μg/m³	Same as Primary Standard
	Annual Arithmetic Mean	12 μg/m³	9.0 μg/m³	15.0 μg/m³
Lead[j,k]	30-day Average	1.5 μg/m³	—	—
	Calendar Quarter	—	1.5 μg/m³ (for certain areas)[k]	Same as Primary Standard
	Rolling 3-Month Average	—	0.15 μg/m³	
Hydrogen sulfide	1 hour	0.03 ppm (42 μg/m³)	—	—
Vinyl chloride[j]	24 hours	0.01 ppm (26 μg/m³)	—	—
Sulfates	24 hours	25 μg/m³	—	—

Table 4.3-1. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	Primary[c,d]	Secondary[c,e]
Visibility-reducing particles	8 hour (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to particles when the relative humidity is less than 70 percent	—	—

Source: CARB 2024.

Notes: ppm = parts per million by volume; μg/m³ = micrograms per cubic meter; mg/m³= milligrams per cubic meter; PST = Pacific Standard Time.

a California standards for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, suspended particulate matter—PM_{10}, $PM_{2.5}$, and visibility-reducing particles—are values that are not to be exceeded. All others are not to be equaled or exceeded. California Ambient Air Quality Standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

b National standards (other than O_3, NO_2, SO_2, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 μg/m³ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

d National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

e National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

f On October 1, 2015, the primary and secondary National Ambient Air Quality Standards for O_3 were lowered from 0.075 ppm to 0.070 ppm

g To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (ppb). Note that the national 1-hour standard is in units of ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

h On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment of the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

i On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 μg/m³ to 12.0 μg/m³. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 μg/m³, as was the annual secondary standard of 15 μg/m³. The existing 24-hour PM_{10} standards (primary and secondary) of 150 μg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

j CARB has identified lead and vinyl chloride as toxic air contaminants (TACs) with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

k The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 μg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

Toxic Air Contaminants

The State Air Toxics Program was established in 1983 under Assembly Bill (AB) 1807. The California toxic air contaminant (TAC) list identifies more than 200 pollutants, of which carcinogenic and non-carcinogenic toxicity criteria have been established for a subset of these pollutants pursuant to the California Health and Safety Code. In accordance with AB 2728, the state list includes the (federal) HAPs.

In 1987, the legislature enacted the Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) to address public concern over the release of TACs into the atmosphere. AB 2588 law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years. TAC emissions from individual facilities are quantified and prioritized. "High-priority" facilities are required to perform a health risk assessment, and if specific thresholds are exceeded, the facility operator is required to communicate the results to the public in the form of notices and public meetings.

Truck Idling Regulations

Section 2485 in Title 13 of the CCR states that the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to 5 minutes at any location. In addition, Section 93115 in Title 17 of the CCR states that operations of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emissions standards.

California Health and Safety Code Section 41700

Section 41700 of the Health and Safety Code states that a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or that endanger the comfort, repose, health, or safety of any of those persons or the public; or that cause, or have a natural tendency to cause, injury or damage to business or property. This section also applies to sources of objectionable odors.

4.3.2.3 Local

South Coast Air Quality Management District

The SCAQMD is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations within the South Coast Air Basin (SCAB), which includes the Orange County and the Project area. SCAQMD operates monitoring stations in the SCAB, develops rules and regulations for stationary sources and equipment, prepares emissions inventory and air quality management planning documents, and conducts source testing and inspections. SCAQMD's Air Quality Management Plans (AQMPs) include control measures and strategies to be implemented to attain the CAAQS and NAAQS in the SCAB. SCAQMD then implements these control measures as regulations to control or reduce criteria pollutant emissions from stationary sources or equipment.

The 2022 AQMP was adopted on December 2, 2022, and was developed to address the 2015 national ozone standard. The 2022 AQMP provides the regional path towards improving air quality and meeting federal standards for air pollutants. The 2022 AQMP builds upon measures already in place from previous AQMPs. It also includes a variety of additional strategies such as regulation, accelerated deployment of available cleaner technologies (e.g., zero emissions technologies, when cost-effective and feasible, and low NO_x technologies in other applications), best

management practices, co-benefits from existing programs (e.g., climate and energy efficiency), incentives, and other Clean Air Act measures to achieve the 2015 federal ozone standard (SCAQMD 2022).

SCAQMD Applicable Rules and Regulations

Emissions generated by the Project within SCAQMD jurisdiction will be subject to SCAQMD rules and regulations. The SCAQMD rules that may apply to future development under the Project include but may not be limited to the following:

SCAQMD Rule 401 – Visible Emissions. This rule establishes the limit for visible emissions from stationary sources for a period or periods aggregating more than three minutes in any hour. This rule prohibits visible emissions dark or darker than Ringelmann No. 1 for periods greater than three minutes in any hour or such opacity which could obscure an observer's view to a degree equal or greater than does smoke.

SCAQMD Rule 402 – Nuisance. This rule prohibits the discharge of air pollutants from a facility that cause injury, detriment, nuisance, or annoyance to the public or damage to business or property.

SCAQMD Rule 403 – Fugitive Dust. This rule requires fugitive dust sources to implement best available control measures for all sources and prohibits all forms of visible particulate matter from crossing any property line. SCAQMD Rule 403 is intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust.

SCAQMD Rule 445 – Wood Burning Devices. The purpose of this rule is to reduce the emission of particulate matter from woodburning devices and establish contingency measures for applicable O_3 standards for the reduction of VOCs. Per Rule 445, no person shall permanently install a wood-burning device into any new development.

SCAQMD Rule 1110.2 – Emissions from Gaseous- and Liquid-Fueled Engines. This rule applies to stationary and portable engines rated at greater than 50 horsepower. The purpose of Rule 1110.2 is to reduce NOx, VOCs, and CO emissions from engines. Emergency engines, including those powering standby generators, are generally exempt from the emissions and monitoring requirements of this rule because they have permit conditions that limit operation to 200 hours or less per year as determined by an elapsed operating time meter.

SCAQMD 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.

SCAQMD Rule 1146 – Emissions of NO_x from Small Industrial, Institutional, and Commercial Boilers, Steam Generators and Process Heaters. The purpose of this rule is to reduce NO_x emissions from natural gas-fired water heaters, boilers, and process heaters. This rule applies to boilers, steam generators, and process heaters that are greater than 2 million Btu per hour rated heat input capacity used in any industrial, institutional, or commercial operation.

SCAQMD Rule 1153.1 – Emissions of Oxides of Nitrogen from Commercial Food Ovens. The purpose of this rule to reduce NO_x emissions from gaseous and liquid fuel combustion equipment. This rule applies to in-use ovens, dryers, smokers, and dry roasters with NO_x emissions from fuel combustion that require SCAQMD permits and are used to prepare food or products for human consumption.

SCAQMD Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities. This rule states that an owner or operator of any demolition or renovation activity is required to have an asbestos study performed prior to demolition and to provide notification to SCAQMD prior to commencing demolition activities.

Southern California Association of Governments

The Southern California Association of Governments (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. SCAG serves as the federally designated metropolitan planning organization for the Southern California region and is the largest metropolitan planning organization in the United States.

On April 4, 2024, SCAG's Regional Council adopted the Connect SoCal 2024 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Connect SoCal is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. Connect SoCal charts a path toward a more mobile, sustainable, and prosperous region by making connections between transportation networks, between planning strategies and between the people whose collaboration can improve the quality of life for Southern Californians. Connect SoCal embodies a collective vision for the region's future and is developed with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses, and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura (SCAG 2024). The updated growth projections from the 2024 RTP/SCS have not yet been incorporated into an adopted AQMP. As stated above, the SCAQMD adopted the 2022 AQMP, which incorporates previous regional growth projections (SCAG 2020; SCAQMD 2022).

South Coast Air Basin Attainment Designation

Table 4.3-2, South Coast Air Basin Attainment Classification, states the current attainment status of the SCAB with respect to the NAAQS and CAAQS.

Table 4.3-2. South Coast Air Basin Attainment Classification

Pollutant	Designation/Classification	
	National Standards	California Standards
Ozone (O_3), 1-hour	No national standard	**Nonattainment**
Ozone (O_3), 8-hour	**Extreme Nonattainment**	**Nonattainment**
Nitrogen Dioxide (NO_2)	Attainment/Maintenance	Attainment
Carbon Monoxide (CO)	Attainment/Maintenance	Attainment
Sulfur Dioxide (SO_2)	Unclassifiable/Attainment	Attainment
Coarse Particulate Matter (PM_{10})	Attainment/Maintenance	**Nonattainment**
Fine Particulate Matter ($PM_{2.5}$)	**Serious Nonattainment**	**Nonattainment**
Lead	**Nonattainment**[1]	Attainment
Hydrogen Sulfide	No National Standard	Unclassified
Sulfates	No National Standard	Attainment
Visibility-Reducing Particles	No National Standard	Unclassified
Vinyl Chloride	No National Standard	No designation

Sources: EPA 2025a (national); CARB 2023 (California).
Notes: Bold text = not in attainment; attainment = meets the standards; attainment/maintenance = achieves the standards after a nonattainment designation; nonattainment = does not meet the standards; unclassified or unclassifiable = insufficient data to classify; unclassifiable/attainment = meets the standard or is expected to be meet the standard despite a lack of monitoring data.
[1] Partial Nonattainment designation – Los Angeles County portion of Basin only for near-source monitors.

In summary, the SCAB is designated as a nonattainment area for federal and state O_3 standards and federal and state $PM_{2.5}$ standards. The SCAB is designated as a nonattainment area for state PM_{10} standards; however, it is designated as an attainment/maintenance area for federal PM_{10} standards. While the SCAB has been designated as nonattainment for the federal rolling 3-month average lead standard, it is designated attainment for the state lead standard. The SCAB is designated as an attainment and maintenance area for all other pollutants (EPA 2025a; CARB 2023).

Despite the current nonattainment status, air quality in the SCAB has generally improved since the inception of air pollutant monitoring in 1976. This improvement is mainly a result of lower-polluting on-road motor vehicles, more stringent regulation of industrial sources, and the implementation of emission reduction strategies by SCAQMD. This trend toward cleaner air has occurred in spite of continued population growth. Air quality has improved significantly over the years, primarily because of the impacts of the region's air quality control program. although the rate of O_3 decline has slowed in recent years.

Ambient Air Quality

CARB, air districts, and other agencies monitor ambient air quality at approximately 250 air quality monitoring stations across the state. The SCAQMD monitors local ambient air quality within the SCAB. 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.

The ambient data presented in Table 4.3-3 reflect the highest concentrations reported at the monitoring station located at 1630 W. Pampas Lane, Anaheim Of the available monitoring stations within the SCAB, the Anaheim station is the closest station to the Project area and is considered representative of the air quality experienced in

the Project vicinity. Ambient concentration estimates for SO_2 were not available at the Anaheim monitoring station, so the next nearest monitoring station, located at 1710 E 20th street Signal Hill, was used for this pollutant. The most recent background ambient air quality data from 2022 to 2024 are presented in Table 4.3-3, Local Ambient Air Quality Data.

Table 4.3-3. Local Ambient Air Quality Data

Averaging Time	Unit	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Days of Exceedance by Year		
				2022	2023	2024	2022	2022	22024
Ozone (O_3)[1]									
Maximum 1-hour concentration	ppm	California	0.12	0.102	0.089	0.104	1	0	3
Maximum 8-hour concentration	ppm	California	0.070	0.077	0.077	0.079	1	2	3
		National	0.070	0.076	0.076	0.076	1	2	3
Nitrogen Dioxide (NO_2)[1]									
Maximum 1-hour concentration	ppm	California	0.18	0.053	0.050	0.053	0	0	0
		National	0.100	0.053	0.051	0.053	0	0	0
Annual concentration	ppm	California	0.030	0.011	0.010	0.010	—	—	—
		National	0.053	0.012	0.010	0.011	—	—	—
Carbon Monoxide (CO)[1]									
Maximum 1-hour concentration	ppm	California	20						
		National	35	2.4	2.5	2.8	0	0	0
Maximum 8-hour concentration	ppm	California	9						
		National	9	1.4	1.6	2.4	0	0	0
Sulfur Dioxide (SO_2)[2]									
Maximum 1-hour concentration	ppm	National	0.075	0.006	0.023	0.008	0	0	0
Maximum 24-hour concentration	ppm	National	0.14	0.002	0.005	0.001	0	0	0
Annual concentration	ppm	National	0.030	0.0047	0.0028	0.0034	0	0	0
Coarse Particulate Matter (PM_{10})[1,a]									
Maximum 24-hour concentration	µg/m³	California	50	66.7	99.4	42.4	ND (1)	ND (1)	ND (0)
		National	150	67.0	97.8	118.9	ND (0)	ND (0)	0 (0)
Annual concentration	µg/m³	California	20	20.9	20.6	27.7	—	—	—

Table 4.3-3. Local Ambient Air Quality Data

Averaging Time	Unit	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Days of Exceedance by Year		
				2022	2023	2024	2022	2022	22024
Fine Particulate Matter ($PM_{2.5}$)[1,a]									
Maximum 24-hour concentration	µg/m³	National	35	33.1	45.6	49.7	0 (0)	1 (1)	5 (5)
Annual concentration	µg/m³	California	12	9.9	ND	10.5	—	—	—
		National	12.0	9.8	9.1	10.5	—	—	—

Sources: CARB 2026m; EPA 2025b.
Notes: ppm = parts per million by volume; — = not available; µg/m³ = micrograms per cubic meter; ND = insufficient data available to determine the value.
Data taken from CARB iADAM (http://www.arb.ca.gov/adam) and EPA AirData (http://www.epa.gov/airdata/) represent the highest concentrations experienced over a given year.
1 Anaheim monitoring station data
2 1710 E. 20th Street, Signal Hill monitoring station data
Exceedances of national and California standards are only shown for O_3 and particulate matter. Daily exceedances for particulate matter are estimated days because PM_{10} and $PM_{2.5}$ are not monitored daily. All other criteria pollutants did not exceed national or California standards during the years shown. There is no national standard for 1-hour O_3, annual PM_{10}, or 24-hour SO_2, nor is there a California 24-hour standard for $PM_{2.5}$.
a Measurements of PM_{10} and $PM_{2.5}$ are usually collected every 6 days and every 1 to 3 days, respectively. Number of days exceeding the standards is a mathematical estimate of the number of days concentrations would have been greater than the level of the standard had each day been monitored.

City of Costa Mesa 2015-2035 General Plan

The following goals and policies from the City of Costa Mesa's 2015-2035 General Plan may be applicable to the proposed Project specifically regarding air quality or having the co-benefit of reducing air pollutant emissions.

Conservation Element

Goal CON-4: **Improved Air Quality.** Take steps to improve and maintain air quality for the benefit of the health and vitality of residents and the local economy. In alignment with State emissions reduction goals and in cooperation with the South Coast Air Quality Management District, pursue regional collaboration to reduce emissions from all sources.

Policy CON-4.A.1: Support regional policies and efforts that improve air quality to protect human and environmental health, and minimize disproportionate impacts on sensitive population groups.

Policy CON-4.A.2: Encourage businesses, industries and residents to reduce the impact of direct, indirect, and cumulative impacts of stationary and non-stationary pollution sources.

Policy CON-4.A.4: Continue to participate in regional planning efforts with the Southern California Association of Governments, nearby jurisdictions, and the South Coast Air Quality Management District to meet or exceed air quality standards.

Policy CON-4.A.5: Encourage compact development, infill development, and a mix of uses that are in proximity to transit, pedestrian, and bicycling infrastructures.

Policy CON-4.A.6: Enhance bicycling and walking infrastructure, and support public bus service, pursuant to the Circulation Element's goals, objectives, and policies.

Policy CON-4.A.7: Encourage installation of renewable energy devices for businesses and facilities and strive to reduce communitywide energy consumption.

Policy CON-4.A.8: Develop long-term, community-wide strategies and programs that work at the local level to reduce greenhouse gases and Costa Mesa's "carbon footprint".

Circulation Element

Goal C-11: **Promote the Positive Air Quality, Health, and Economic Benefits of Active Transportation.** Encourage active transportation by promoting air quality, health, and economic benefits, and by pursuing multiple sources of funding for active transportation programs and facilities.

Policy C-11.3: Increase pedestrian and bicycle trips, thereby reducing vehicle trips and vehicle miles Traveled.

Policy C-11.7: Encourage developers to include features, amenities and programs that are proven to increase walking and/or bicycling.

Policy C-11.8: Offer incentives for businesses whose employees walk or bike to work.

Existing Community-Based and Specific Plans

The 19 West Urban Plan, SoBECA Urban Plan, Mesa West Bluffs Urban Plan, Mesa West Residential Ownership Urban Plan/Mixed-Use Overlay, Harbor Mixed-Use Overlay, Residential Incentive Overlay, North Costa Mesa Specific Plan, One Metro West Specific Plan, and the Newport Boulevard Specific Plan are existing community-based or specific plans within the city. However, there are no goals or policies pertaining to air quality within these plans.

4.3.3 Thresholds of Significance

Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.) indicates that, where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to determine whether the Project would have a significant impact on air quality.

SCAQMD has established Air Quality Significance Thresholds, as revised in March 2023, that set forth quantitative emission significance thresholds below which a project would not have a significant impact on ambient air quality, as shown in Table 4.3-4 (SCAQMD 2023).

Table 4.3-4. SCAQMD Air Quality Significance Thresholds

Criteria Pollutants Mass Daily Thresholds		
Pollutant	**Construction (pounds per day)**	**Operation (pounds per day)**
VOCs	75	55
NO_x	100	55
CO	550	550
SO_x	150	150
PM_{10}	150	150
$PM_{2.5}$	55	55
Lead[a]	3	3
TACs and Odor Thresholds		
TACs[b]	Maximum incremental cancer risk ≥10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥1 in 1 million) Chronic and acute hazard index ≥1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality Standards for Criteria Pollutants[c]		
NO_2 1-hour average NO_2 annual arithmetic mean	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (state) 0.030 ppm (state) and 0.0534 ppm (federal)	
CO 1-hour average CO 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) and 35 ppm (federal) 9.0 ppm (state/federal)	
PM_{10} 24-hour average PM_{10} annual average	10.4 μg/m³ (construction)[d] 2.5 μg/m³ (operation) 1.0 μg/m³	
$PM_{2.5}$ 24-hour average	10.4 μg/m³ (construction)[d] 2.5 μg/m³ (operation)	

Source: SCAQMD 2023.
Notes: SCAQMD = South Coast Air Quality Management District; VOC = volatile organic compounds; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; TAC = toxic air contaminant; NO_2 = nitrogen dioxide; ppm = parts per million by volume; μg/m³ = micrograms per cubic meter.

[a] The phaseout of leaded gasoline started in 1976. Since gasoline no longer contains lead, the Project is not anticipated to result in impacts related to lead; therefore, it is not discussed in this analysis.
[b] TACs include carcinogens and noncarcinogens.
[c] Ambient air quality standards for criteria pollutants are based on SCAQMD Rule 1303, Table A-2, unless otherwise stated.
[d] Ambient air quality threshold are based on SCAQMD Rule 403.

The phasing out of leaded gasoline started in 1976. As gasoline no longer contains lead, the development of the Project is not anticipated to result in impacts related to lead; therefore, it is not discussed in this analysis.

Threshold 4.3-1

The evaluation of whether the Project would conflict with or obstruct implementation of the applicable SCAQMD AQMP is based on the SCAQMD CEQA Air Quality Handbook (SCAQMD 1993), Chapter 12, Sections 12.2 and 12.3. The first criterion assesses whether the potential future development of the additional 21,522 units and

10,630,361 square feet of commercial uses by 2056 would result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, which is addressed in detail under Threshold 4.3-2. The second criterion is whether implementation of the Project would exceed the assumptions in the SCAQMD AQMP or increments based on the year of buildout.

Threshold 4.3-2

By its nature, air pollution is largely a cumulative impact. However, project-level thresholds of significance for criteria pollutants are used in the determination of whether a project's individual emissions would have a cumulatively considerable contribution on air quality. If the Project's emissions would exceed the applied significance thresholds, it would have a cumulatively considerable contribution. Conversely, if the emissions from Project implementation do not exceed the project-specific thresholds, it is generally not considered to result in a cumulatively significant impact (SCAQMD 2003a). Accordingly, to evaluate the potential for the Project to result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state AAQS, this analysis applies SCAQMD's criteria pollutants thresholds, as shown in Table 4.3-4, above.

Threshold 4.3-3

For project-level evaluations, the SCAQMD recommends a localized significance threshold (LST) analysis to evaluate the potential of localized air quality impacts to sensitive receptors in the immediate vicinity of a proposed project from construction and operation; however, an operational LST analysis is only applicable to land uses with on-site emission sources and is generally not applicable to residential land uses as they do not include substantial on-site sources of localized emissions. The LST methodology was developed to be used as a tool to assist lead agencies to analyze localized impacts associated with project-level impacts. However, the LSTs are applicable to projects at the project-specific level and are not applicable to regional projects, such as General Plans or the project, as specific discretionary projects have not been detailed at this time for the proposed Project. Accordingly, the application of the LSTs, which is voluntary, is not provided herein due to the applicability of LSTs on a site-by-site basis.

Traffic-congested roadways and intersections have the potential to generate localized high levels of CO. Localized areas where ambient concentrations exceed federal and/or state standards for CO are termed "CO hotspots." The transport of CO is extremely limited, as it disperses rapidly with distance from the source. However, under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthy levels, affecting sensitive receptors. The assessment of the potential for the proposed Project to result in a CO hotspot is based on comparison to the SCAQMD 2003 AQMP CO hotspot analysis.

The assessment of the Project's potential to expose sensitive receptors to substantial pollutant concentrations also includes a qualitative evaluation regarding exposure to TACs from construction and operation (and associated health risk) of future development accommodated as a result of the Projects proposed land use changes.

Threshold 4.3-4

The potential for the Project to result in other emissions, specifically an odor impact (CEQA Guidelines, Appendix G, Threshold 4), is based on the Project's land-use types and anticipated construction activity, and the potential for the Project to create an odor nuisance pursuant to SCAQMD Rule 402.

4.3.4 Impact Analysis

4.3.4.1 Methodology

As described in Chapter 3, Project Description, the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation Project is a policy document that does not include or propose any site-specific development that could directly result in construction or operational impacts to the environment. However, implementation of the Project would facilitate additional future development in the city. Therefore, this Draft PEIR does not assess the site-specific construction and operation details of each future development within the Planning Area. Rather, it assesses the impacts associated with changes to existing land uses and the associated overall effects of buildout of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation Project through 2056, where reasonably foreseeable physical changes to the environment could occur. Analysis at a parcel or site-specific level was not conducted because, unless otherwise noted within this assessment, the actual locations of project development (and its chronologic sequence or concurrence) that may be implemented in the future are speculative.

Therefore, since specifics for construction and operation of future development under the proposed Project are not known, the California Emissions Estimator Model (CalEEMod) default values were assumed based on development land use type and size.

Construction Emissions

Development Construction Scenario

To determine if the Project, particularly the land-use changes that would provide for approximately 21,522 additional dwelling units and approximately 10,630,320 square feet of commercial building square footage, would exceed the SCAQMD mass daily thresholds, a development scenario was modeled using CalEEMod Version 2022.1.

For purposes of estimating Project emissions, construction is assumed to start in 2027 and have a duration of 30 years. While construction specifics for buildout of the Project are not known, the analysis contained herein is based on the first full year of construction (2027), which is the estimated worst-case construction year because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years. To estimate a single year of construction, the entire Project buildout land use quantities was scaled by 30-years of construction (i.e., 3.3 percent of total buildout) and then compressed to a one-year period. CalEEMod default values for buildout of 3.3 percent of the Project was estimated to take approximately 1.5 years; therefore, corresponding construction equipment were multiplied by a factor of 1.5 to account for the compressed one-year period (i.e., reducing schedule to half and increasing intensity by multiplying the equipment by 1.5). Worker and vendor trips were similarly multiplied by 1.5. CalEEMod default trip length values were used for the distances for all construction-related trips. The resulting one-year construction assumptions are provided for each year of construction (duration of phases is approximate):

- Demolition: 12 days
- Site Preparation: 7 days
- Grading: 19 days
- Building Construction: 193 days

- Paving: 14 days
- Application of Architectural Coatings: 14 days

While only one phase of each type of construction activity is included in the model run, it is anticipated that this model scenario would include construction activity at more than one site within the Project area. Not all future development would require all the construction phases assumed above. However, the following six default CalEEMod construction phases were included to present a reasonable range of activities and capture a potential maximum daily and annual scenario: demolition, site preparation, grading, building construction, paving, and architectural coating. For example, due to the developed nature of most parcels in the Project area, many future projects may only require a demolition phase (of existing buildings and asphalt pavement) and minor site preparation phase prior to building construction, while some future projects may require renovation, which would be less intensive (and therefore, less polluting) than a full reconstruction of a development site. In addition, some future projects may not require any demolition, but would require site preparation and/or grading to prepare the site for development. To conservatively estimate emissions from demolition, it was assumed that 100 percent of the potential residential and commercial space would require demolition of existing structures. Due to the speculative nature of the amount of asphalt paving associated with potential future development, VOC off-gassing from asphalt pavement application is not included in the emissions estimates; however, paving phase emissions associated with paving equipment and vehicle trips are captured. Grading quantities are currently not identified; grading is anticipated to be minimal within the Project area because the Project area is generally built out, and therefore, it is likely that the majority of grading for the Project area took place during initial building development.

The construction equipment mix and vehicle trips used for estimating the Project-generated construction emissions are shown in Table 4.3-5, Construction Scenario Assumptions. For the analysis, it was assumed that heavy construction equipment would be operating at the site 5 days per week (22 days per month) during proposed Project construction.

Table 4.3-5. Development Construction Scenario Assumptions

Construction Phase	Average Daily One-Way Vehicle Trips			Equipment		
	Worker Trips	Vendor Truck Trips	Truck Trips	Equipment Type	Quantity	Usage Hours
Demolition	38	10	84	Concrete/industrial saws	2	8
				Excavators	5	8
				Rubber-tired dozers	3	8
Site Preparation	42	10	94	Rubber-tired dozers	5	8
				Tractors/loaders/backhoes	6	8
Grading	48	10	97	Excavators	3	8
				Graders	2	8
				Rubber-tired dozers	2	8
				Scrapers	3	8
				Tractors/loaders/backhoes	3	8
Building construction	1,450	309	0	Cranes	2	7
				Forklifts	5	8
				Generator sets	2	8
				Tractors/loaders/backhoes	5	7
				Welders	2	8
Paving	36	10	0	Pavers	3	8
				Paving equipment	3	8
				Rollers	3	8
Architectural coating	292	0	0	Air compressors	2	8

Notes: See Appendix D, Air Quality and Greenhouse Gas Emissions Modeling, for details.

Infrastructure Construction Scenario

Infrastructure construction activities for the Project were modeled in CalEEMod using the linear land use type. The land use subtypes included water distribution, sewer infrastructure, and/or storm water pipeline upgrades necessitated by the increase in development. For the purposes of modeling, it was assumed that the upgrades would commence at the same time as the development construction scenario. It was assumed that approximately 27 cubic yards would be required to be exported each day. Buildout of infrastructure construction assumptions, including phasing and equipment information, are based on CalEEMod default values and included below in Table 4.3-6.

Table 4.3-6. Open Trench Construction Infrastructure Scenario Assumptions

Equipment Type [1, 2]	Quantity	Usage Hours
Excavators	1	5
Cranes	1	4
Generators (Generator Sets)	1	2
Backhoes (Tractors/Loaders/Backhoes)	1	4
Front End Loaders (Rubber Tired Loaders)	1	4
Welders	1	6
Power Brooms (Sweepers/Scrubbers)	1	3
Carry Decks (Cranes)	1	5
Concrete/Asphalt Saw Cutters (Concrete/Industrial Saws)	1	8
Blower Mounted Trailers (Generator Sets)	1	6
Skid Steer Loaders	1	4
Forklifts	1	5
Air Compressors	1	5
Paving Equipment	1	8
Plate Compactors	1	8
Rollers	1	8
Pavement Grinders (Concrete/Industrial Saws)	1	8
Asphalt Paver Machine (Pavers)	1	8
Terrain Cranes (Cranes)	1	8

Notes: See Appendix A for details.

1 Modeling assumes the following one-way vehicle trips: 48 average daily worker trips; 4 average daily vendor trucks; 4 average daily haul trucks.

2 Equipment in parentheses are the representative equipment modeled in CalEEMod.

Any future construction resulting from implementation of the Project would be required to comply with SCAQMD Rule 403 to control dust emissions during any dust-generating activities. SCAQMD Rule 403 requires implementation of various best available fugitive dust control measures for all construction activity sources within its jurisdictional boundaries. Dust control measures include, but are not limited to, maintaining stability of soil through pre-watering of site prior to clearing, grubbing, cut and fill, and earth-moving activities; stabilizing soil during and immediately after clearing, grubbing, cut and fill, and other earth-moving activities; stabilizing backfill during handling and at completion of activity; and pre-watering material prior to truck loading and ensuring that freeboard exceeds 6 inches. While SCAQMD Rule 403 requires fugitive dust control beyond watering control measures, compliance with Rule 403 is represented in CalEEMod by assuming twice daily watering of active sites (55 percent reduction in PM_{10} and $PM_{2.5}$ [CAPCOA 2022]).

Operational Emissions

To determine if the Project would exceed the SCAQMD mass daily emission thresholds, the full future potential buildout of the Project, including an increase of 21,522 dwelling units and 10,630,361 square feet of commercial building square footage was modeled using CalEEMod Version 2022.1. The operational year of 2056 was assumed to provide an estimate of emissions of the anticipated buildout of development.

Area Sources

CalEEMod was used to estimate operational emissions from area sources, including emissions from hearths, consumer product use, architectural coatings, and landscape maintenance equipment. Emissions associated with natural gas usage in space heating, water heating, and stoves are calculated in the building energy use module of CalEEMod, as described in the following text.

It is assumed that any future residential development resulting from implementation of the proposed Project would not include woodstoves or wood-burning fireplaces, per SCAQMD Rule 445. SCAQMD Rule 445, Wood Burning Devices, states that "no person shall permanently install a wood-burning device into any new development" (SCAQMD 2020). Exemptions to SCAQMD Rule 445 include where there is no existing infrastructure for natural gas service within 150 feet of the property line or those 3,000 or more feet above mean sea level; however, given the developed nature of the Project area and the availability of existing natural gas utility infrastructure, these exemptions are not anticipated to be common for the parcels subject to propose land use changes.

Consumer products are chemically formulated products used by household and institutional consumers, including detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products. Other paint products, furniture coatings, or architectural coatings are not considered consumer products (CAPCOA 2022). Consumer product VOC emissions are estimated in CalEEMod based on the floor area of residential buildings and on the default factor of pounds of VOC per building square foot per day.

VOC off-gassing emissions result from evaporation of solvents contained in surface coatings such as in paints and primers used during building maintenance. CalEEMod calculates the VOC evaporative emissions from application of residential surface coatings based on the VOC emission factor, the building square footage, the assumed fraction of surface area, and the reapplication rate. The VOC emission factor is based on the VOC content of the surface coatings and CalEEMod default values, which include 50 grams per liter VOC for residential interior and exterior surfaces. SCAQMD's Rule 1113 (Architectural Coatings) would govern the VOC content for interior and exterior coatings.[4] The CalEEMod default reapplication rate of 10 percent of area per year is assumed.

Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers. The emissions associated from landscape equipment use are estimated based on CalEEMod default values for emission factors (grams per residential dwelling unit per day) and number of summer days (when landscape maintenance would generally be performed) and winter days.

Energy Sources

As represented in CalEEMod, energy sources include emissions associated with building electricity and natural gas usage. Electricity use would contribute indirectly to criteria air pollutant emissions; however, the emissions from electricity use are only quantified for greenhouse gas emissions in CalEEMod, since criteria pollutant emissions would occur at the site of power plants. However, natural gas combustion would occur within the Project area itself, in association with equipment that uses natural gas. As such, its use within the Project area is estimated and modeled in CalEEMod. The natural gas use from residential land uses is calculated in CalEEMod based on the

[4] SCAQMD Rule 1113 includes a 50 grams per liter VOC content limit for both flat and non-flat coatings, which are the most common coatings for interior and exterior paint applications. Accordingly, the CalEEMod default values applied are generally consistent with the air district architectural coating rules.

Residential Appliance Saturation Study. For nonresidential buildings, CalEEMod energy intensity values (natural gas usage per square foot per year) assumptions were based on the California Commercial End-Use Survey database.

Mobile Sources

Mobile sources for the development scenario would primarily be motor vehicles (automobiles and light-duty trucks) traveling to and from the parcels developed. Motor vehicles may be fueled with gasoline, diesel, or alternative fuels. The default vehicle mix provided in CalEEMod 2022.1, which is based on CARB's Mobile Source Emissions Inventory model (EMFAC) version 2021, was applied for all land use types. Emission factors representing year 2050[5] were used to estimate emissions associated with the final buildout year associated with implementation of the Project.

Applied trip generation rates for the buildout development scenario are based on the traffic data provided in Section 4.17, Transportation, of this Draft PEIR and Institute of Transportation Engineers 12th edition trip rates for the proposed land uses. Mid-rise apartments were assumed for all proposed dwelling units. The commercial land uses were broken out into several categories based on SCAG's land use categories including mixed retail, entertainment retail, hotels, office, medical office, religious and educational.

Following the Trump administration's 2025 rescission of California's Clean Air Act waivers—implemented through Congressional Review Act resolutions—the State is currently preempted from enforcing its own vehicle emission standards, including those originally adopted under the Advanced Clean Trucks (ACT), Zero-Emission Airport Shuttle, Heavy-Duty Vehicle and Engine Emission Warranty and Maintenance Provisions (Warranty Phase 1), and Heavy-Duty Omnibus (Omnibus) regulations, unless and until ongoing litigation restores this authority. In response, CARB has developed off-model adjustment factors to remove the emissions-reduction benefits of regulations. The CARB adjustment factors describe the methodology used to generate these factors by comparing EMFAC scenarios with and without these regulations, enabling consistent calculation of adjusted emissions across vehicle classes, pollutants, and calendar years. Implementation of these federal standards, along with natural fleet turnover (replacement of older vehicles with newer ones), will gradually reduce emissions from the Project's motor vehicles. The effectiveness of fuel-economy improvements was evaluated by using the CalEEMod emission factors for motor vehicles in 2050 for the Project to the extent that these efficiencies are reflected in EMFAC 2021.

Given the uncertainty surrounding the legality of the federal actions affecting California's vehicle-emission standards, the criteria air pollutant analysis in the EIR will present adjusted operational emissions consistent with the documentation and off-model factors released by CARB and approved by EPA, ensuring that the analysis remains aligned with the most current, federally recognized modeling guidance.

4.3.4.2 Environmental Analyses

Threshold 4.3-1 Would the project conflict with or obstruct implementation of the applicable air quality plan?

Significant and Unavoidable Impact. For the reasons discussed below, even with implementation of MM-4.3-1 through MM-4.3-11, the Project could conflict with or obstruct implementation of the applicable air quality plan, and impacts would be significant and unavoidable.

[5] CalEEMod's latest forecast year for mobile source emissions factors is 2050. Therefore, while the Project's buildout year is 2056, 2050 emissions factors for mobile sources were utilized

The Project area is within the jurisdiction of the SCAQMD, as detailed above. The applicable air quality plan for the Project area is the SCAQMD's 2022 AQMP. The regional emissions inventory for the SCAB is compiled by the SCAQMD and SCAG. The SCAQMD has established criteria for determining consistency with the AQMP in Chapter 12, Sections 12.2 and 12.3 of the SCAQMD's CEQA Air Quality Handbook (SCAQMD 1993). The criteria are as follows:

- **Consistency Criterion No. 1:** The Project will 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 air quality standards of the interim emissions reductions specified in the AQMP.
- **Consistency Criterion No. 2:** The Project will not exceed the assumptions in the AQMP or increments based on the year of Project buildout and phase.

Regarding Consistency Criterion No.1, the response to Threshold 4.3-2, below, evaluates the potential for the Project to violate any air quality standard or contribute substantially to an existing or projected air quality violation, which applies the SCAQMD mass daily construction and operational thresholds.

As discussed below, based on the three percent construction scenario discussed in Section 4.3.2.1, it was determined that construction of future development projects from implementation of the Project could potentially exceed the SCAQMD mass daily construction thresholds for VOC and NO_x, as shown in Table 4.3-6, below. In addition, the operation of any future development projects, as allowed by the Project, could exceed the SCAQMD mass daily operational thresholds for VOC, NO_x, CO, PM_{10}, and $PM_{2.5}$, for full operational buildout of the Project and for a combined construction and operational scenario, as detailed in Table 4.3-7, below.

All future projects would be required to adhere to all existing regulations to protect air quality which include, but are not limited to:

- The California Airborne Toxics Control Measure (Title 13, Section 2485 of the California Code of Regulations [CCR]), which requires that construction contractors shall minimize equipment idling times either by shutting equipment off when not in use or reducing the maximum idling time to five minutes;
- The most recent California Green Building and Standards Code (CALGreen).

Nonetheless, because the total anticipated development associated with implementation of the Project could potentially exceed the SCAQMD mass daily regional thresholds, even with implementation of mitigation measures MM-4.3-1 through MM-4.3-11 and compliance with existing regulations, the Project could potentially result in an increase in the frequency or severity of existing air quality violations. As such, the Project would conflict with Consistency Criterion No. 1 of the SCAQMD CEQA Air Quality Handbook.

Regarding Consistency Criterion No. 2, while striving to achieve the NAAQS for O_3 and $PM_{2.5}$ and the CAAQS for O_3, PM_{10}, and $PM_{2.5}$ through a variety of air quality control measures, the 2022 AQMP also accommodates planned growth in the SCAB. Projects are considered consistent with and would not conflict with or obstruct implementation of the 2022 AQMP, if the growth in socioeconomic factors (e.g., population, employment) is consistent with the underlying regional plans used to develop the AQMP (per Consistency Criterion No. 2 of the SCAQMD CEQA Air Quality Handbook).

The SCAQMD primarily uses demographic growth forecasts for various socioeconomic categories (e.g., population, housing, employment by industry) developed by the SCAG for its RTP/SCS (SCAG 2020), which is based on general plans for cities and counties in the SCAB, for the development of the AQMP emissions inventory (SCAQMD 2022a).

The SCAG 2022 RTP/SCS, and associated Regional Growth Forecast, are generally consistent with the local plans; therefore, the 2022 AQMP is generally consistent with local government plans. While no specific development projects are proposed at this time, implementation of the Project would facilitate additional population growth, additional housing units, and an increase in density of commercial space within the Project area. Changes in the population, housing, or employment growth projections associated with the Project have the potential to affect SCAG's demographic projections, and therefore, the assumptions of the SCAQMD's AQMP. However, development that occurs from implementation of the Project would be consistent with SCAG's regional goals of providing infill housing, improving the jobs-to-housing balance, and integrating land uses near major transportation corridors.

However, it is anticipated that Project implementation could potentially exceed the growth forecasts and change the underlying land use assumptions utilized in the 2022 AQMP. As such the Project would conflict with Consistency Criterion No.2 of the SCAQMD CEQA Air Quality Handbook. Implementation of MM-4.14-1 would ensure that the appropriate residential and employment growth projections of the Project would be incorporated into the next SCAG RTP/SCS (anticipated to be the 2028 RTP/SCS). As SCAG is in process of preparing their next RTP/SCS and SCAQMD has not identified the next target year for updating the AQMP, there is an anticipated interim period where the SCAG RTP/SCS growth projections and the SCAQMD AQMP do not reflect the appropriate residential and employment growth associated with the Project; however, this will eventually be resolved with updates of both plans. Nonetheless, the Project would still conflict with the regional growth projections used to prepare the air quality management plans for the SCAB.

Additionally, Mitigation Measure (MM)-4.3-1 through MM-4.3-11 are included to reduce air quality impacts for short-term construction and operational emissions. However, these measures do not ensure that all impacts from future development projects would be mitigated to a level of less than significant. Future non-discretionary projects that would be implemented under Neighborhoods Where We All Belong Zoning would be subject to the federal, state and local regulations mentioned above; however, these non-discretionary projects would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. As such, even with implementation of existing regulations, and MM-4.3-1 through MM-4.3-11 as applied to future discretionary projects, potential impacts related to the Project's potential to conflict with or obstruct implementation of the applicable air quality plan would be significant and unavoidable.

Threshold 4.3-2 **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?**

Significant and Unavoidable Impact. For the reasons discussed below, even with the implementation of MM-4.3-1 through MM-4.3-11, the Project could result in a cumulatively considerable net increase of criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard, and impacts would be significant and unavoidable.

Construction Emissions

Construction activities resulting from potential future projects developed under Project implementation would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment, soil disturbance, and VOC off-gassing from architectural coatings and asphalt pavement application) and off-site sources (i.e., on-road haul trucks, delivery trucks, and worker vehicle trips). Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the

prevailing weather conditions. Therefore, such emissions levels can only be estimated, with a corresponding uncertainty in precise ambient air quality impacts.

While the exact number and timing of individual development projects and infrastructure improvements that could occur as a result of implementation of the Project are unknown at this time, construction activities associated with future development facilitated by the Project would generate criteria air pollutant emissions from the on- and off-site sources described above. Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM_{10} and $PM_{2.5}$ emissions. Construction of future development would be required to comply with SCAQMD Rule 403 to control dust emissions generated during the grading activities, which was assumed in the quantification of Project emissions, detailed below. Internal combustion engines used by construction equipment, haul trucks, vendor trucks (i.e., delivery trucks), and worker vehicles would result in emissions of VOCs, NO_x, CO, PM_{10}, and $PM_{2.5}$. The application of architectural coatings, such as exterior application/interior paint and other finishes, and application of asphalt pavement would also produce VOC emissions; however, the contractor is required to procure architectural coatings from a supplier in compliance with the requirements of SCAQMD Rule 1113. Due to the speculative nature of the amount of asphalt paving associated with any future development resulting from the Project, VOC off-gassing from asphalt pavement application is not included in the emissions estimates.

As discussed in the Construction Emissions subsection in Section 4.3.2.1, Methodology, to provide a conservative scenario of potential construction activity as a result of the Project, this analysis assumes that three percent of the Project would be developed within one year (i.e., 1 year of 30 years, which is the estimated buildout of the Project, is three percent). Construction emissions were calculated for the estimated worst-case day over the construction period associated with each phase and reported as the maximum daily emissions estimated during construction of the eight percent development scenario. Due to the speculative nature of construction, CalEEMod default values were relied upon for the assumed land use type and size, with minor exceptions, as detailed in Section 4.3.2.1.

Table 4.3-7 presents the estimated maximum daily construction emissions generated during construction of the three percent construction scenario, for the first year of construction. Details of the emission calculations are provided in Appendix D.

Table 4.3-7. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per day					
1 Year of Construction (3 percent of total construction)	169.67	143.10	153.95	5.26	72.03	36.50
SCAQMD Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold Exceeded?	**Yes**	**Yes**	**No**	**No**	**No**	**No**

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = particulate matter with an aerodynamic diameter equal to or less than 10 microns; $PM_{2.5}$ = particulate matter with an aerodynamic diameter equal to or less than 2.5 microns; SCAQMD = South Coast Air Quality Management District
See Appendix D for complete results.
The values shown are the maximum summer or winter daily emissions results from CalEEMod and provided in Appendix D.
The estimates reflect control of fugitive dust (watering two times daily) required by SCAQMD Rule 403.

As shown in Table 4.3-7, although construction-related CO, SO_x, PM_{10} and $PM_{2.5}$ emissions would not exceed the SCAQMD thresholds during the construction of the 3.3 percent construction scenario, the Project would exceed the SCAQMD mass daily threshold for VOCs, and NO_x during construction. Therefore, impacts related to exceedance of

SCAQMD mass daily regional thresholds during construction of the Project would be potentially significant. All projects would be required to adhere to all existing regulations during construction to protect air quality which include, but are not limited to:

- The California Airborne Toxics Control Measure (Title 13, Section 2485 of the California Code of Regulations [CCR]), which requires that construction contractors minimize equipment idling times either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes;
- The most recent California Green Building and Standards Code (CALGreen).

These regulations would reduce potentially significant impacts. However, mitigation is required to address potentially significant impacts. Implementation of MM-4.3-1 through MM-4.3-6, would reduce NO_x and PM emissions from equipment exhaust, VOC emissions from architectural coatings and PM emissions associated with fugitive dust. However, due to the programmatic nature of the Project, the accuracy of the reductions that would be realized from MM-4.3-1 through MM-4.3-6 are not able to be accurately quantifiable. Further, MM-4.3-1 through MM-4.3-6 would not ensure that all impacts from future development projects would be mitigated to a level of less than significant. Future non-discretionary projects that would be implemented under the Neighborhoods Where We All Belong Zoning would be subject to the federal, state and local regulations mentioned above; however, these non-discretionary projects would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. As such, even with implementation of existing regulations, and MM-4.3-1 through MM-4.3-6 as applied to future discretionary projects, potential impacts related to short-term construction emissions would be significant and unavoidable.

Operational Emissions

As described in response to Threshold 4.3-1, while the Project consists of a policy document and does not propose any direct development, the Project's proposed land-use changes would allow for new or more dense development than is currently allowed within the Project area. Operation of the Project, due to future development within the Project area, could potentially generate VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from mobile sources, including vehicular traffic; energy sources from natural gas usage; area sources, including the use of landscaping equipment and consumer products; and from architectural coatings. As discussed in the Operational Emissions subsection of Section 4.3.2.1, pollutant emissions associated with long-term operations were quantified using CalEEMod using a combination of Project-specific information (i.e., land use inputs and trip rates) and CalEEMod default values for the buildout of the Project.

The SCAQMD does not provide emission-based thresholds or provide guidance on how to evaluate large area projects and programmatic development such as the Project. To provide a conservative analysis of indirect emissions associated with buildout of the Neighborhoods Where We All Belong Zoning Updates, emissions from full buildout of the Project are compared to the SCAQMD's project-level emission-based daily thresholds. Furthermore, because of the potential for Project construction to overlap with operation of portions of the Project, construction emissions from Table 4.3-6 are added to operational emissions in Table 4.3-7, below.

Table 4.3-8 presents the maximum daily area, energy, mobile, off-road equipment, and stationary source emissions associated with total operational buildout of the Project as compared to the SCAQMD's thresholds. The SCAQMD operational thresholds are expressed as mass daily thresholds in pounds per day. Details of the emission calculations are provided in Appendix D.

Table 4.3-8. Estimated Combined Construction and Operational Criteria Air Pollutant Emissions

Estimated Maximum Daily Operational Emissions for Project Implementation						
Emission Source	VOC	NO_x	CO	SO_X	PM_{10}	$PM_{2.5}$
	Pounds per day					
Area	949.14	345.41	1,862.88	2.19	28.06	27.72
Energy	6.89	121.31	76.21	0.75	9.52	9.52
Mobile	773.22	419.07	5,418.44	14.17	1,743.51	445.7
Total	*1,729.25*	*885.79*	*7,357.53*	*17.11*	*1,781.09*	*482.94*
SCAQMD Operational Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Threshold Exceeded?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**
Combined Construction and Operational Emissions (Worst-Case)						
Combined Construction and Operation Emissions	1,898.92	1,028.89	7,511.48	22.37	1,853.12	519.44
SCAQMD Operational Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Threshold Exceeded?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = particulate matter with an aerodynamic diameter equal to or less than 10 microns; $PM_{2.5}$ = particulate matter with an aerodynamic diameter equal to or less than 2.5 microns; SCAQMD = South Coast Air Quality Management.
See Appendix D for complete results.

As shown in Table 4.3-8, maximum daily operational emissions from full buildout of the Project would exceed the SCAQMD daily significance thresholds for VOC, NO_x, CO, PM_{10}, and $PM_{2.5}$. In addition, the combined construction and operational emissions would exceed the SCAQMD's operational emissions threshold for all criteria pollutants except for SO_x. Therefore, impacts regarding cumulatively considerable net increases of any criteria pollutant for which the Project region is non-attainment would be potentially significant.

As discussed in Section 4.3.4.1 Methodology, Operational Emissions, the State is currently preempted from enforcing its own vehicle greenhouse gas emission standards and regulations, as such, CARB provided information on how to adjust the mobile source emissions to reflect the emission without the benefit of affected regulations. Table 4.3-9 presents the adjusted emissions for the proposed Project at build-out.

Table 4.3-9. Estimated Combined Construction and Operational Criteria Air Pollutant Emissions (CARB Adjustments)[1]

Estimated Maximum Daily Operational Emissions for Project Implementation						
Emission Source	VOC	NO_x	CO	SO_X	PM_{10}	$PM_{2.5}$
	Pounds per day					
Area	949.14	345.41	1,862.88	2.19	28.06	27.72
Energy	6.89	121.31	76.21	0.75	9.52	9.52
Mobile	796.417	544.791	5,418.44	14.17	1,743.82	446.08
Total	**1,752.45**	**1,011.51**	**7,357.53**	**17.11**	**1,781.40**	**483.32**
SCAQMD Operational Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Threshold Exceeded?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**
Combined Construction and Operational Emissions (Worst-Case)						
Combined Construction and Operation Emissions	1,922.12	1,154.61	7,511.48	22.37	1,853.43	519.82
SCAQMD Operational Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Threshold Exceeded?	**Yes**	**Yes**	**Yes**	**No**	**Yes**	**Yes**

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = particulate matter with an aerodynamic diameter equal to or less than 10 microns; $PM_{2.5}$ = particulate matter with an aerodynamic diameter equal to or less than 2.5 microns; SCAQMD = South Coast Air Quality Management.

1 CARB's EMFAC2021 off-model adjustment factors remove the emissions-reduction benefits of the Advanced Clean Trucks, Zero-Emission Airport Shuttle, Warranty Phase 1, and Heavy-Duty Omnibus regulations by recalculating mobile-source emissions without these regulatory impacts, and for the Rezone Project these factors are applied to ensure the analysis reflects baseline emissions from on-road vehicles as if those regulations were not in place.
See Appendix D for complete results.

As shown in Table 4.3-9, maximum daily operational emissions from full buildout of the Project would exceed the SCAQMD daily significance thresholds for VOC, NO_x, CO, PM_{10}, and $PM_{2.5}$. In addition, the combined construction and operational emissions would exceed the SCAQMD's operational emissions threshold for all criteria pollutants except for SO_x. Therefore, impacts regarding cumulatively considerable net increases of any criteria pollutant for which the Project region is non-attainment would be potentially significant.

By its nature, air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development (such as the cumulative emissions from various sources of air pollutants and their precursors within the SCAB, including motor vehicles, off-road equipment, and commercial and industrial facilities), and the SCAQMD develop and implement plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are used in the determination of whether a project's individual emissions would have a cumulative contribution on air quality. If a project's emissions would exceed the applied significance thresholds, it would have a cumulative contribution. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant (SCAQMD 2003a).

As described in Threshold 4.3-1, the Project consists of a policy document and does not propose any direct development. However, implementation of the Project's proposed land-use changes would allow for more dense development in the Project area than is currently allowed under existing conditions. In considering cumulative impacts from the development allowed for by the Project, the analysis must specifically evaluate a project's contribution to the cumulative increase in pollutants for which the SCAB is designated as nonattainment for the CAAQS and NAAQS. As discussed in Section 4.3.1.2, the SCAB has been designated as a national

nonattainment area for O_3 and $PM_{2.5}$, and a California nonattainment area for O_3, PM_{10}, and $PM_{2.5}$. Due to the speculative nature of construction and since the size of development of each individual project is unknown, development of the Project may result in a cumulatively considerable increase in emissions of criteria air pollutants for which the SCAB is designated as nonattainment under the NAAQS or CAAQS.

Cumulative localized impacts would potentially occur if construction associated with the future development facilitated by the Project were to occur concurrently with another construction project or with another off-site, unrelated project. In addition to the speculative nature of the Project implementation, construction schedules for potential future projects unrelated to the Project are currently unknown; therefore, potential construction impacts associated with two or more simultaneous projects would be considered speculative. Criteria air pollutant emissions associated with construction activity of future projects would be reduced through implementation of control measures required by the SCAQMD, as applicable. For example, cumulative PM_{10} and $PM_{2.5}$ emissions would be reduced because all future projects would be subject to SCAQMD Rule 403, which sets forth general and specific requirements to control fugitive dust at all construction sites in the SCAB. In addition, cumulative VOC emissions would be subject to SCAQMD Rule 1113, which regulates VOC limits in architectural coatings. Additional SCAQMD rules that future cumulative projects would be required to comply with are discussed in Section 4.3.1.1, Local.

MM-4.3-7 through MM-4.3-11 include requirements for new project to reduce pollutant emissions during long-term operations, including requiring a VOC educational program, outdoor electrical outlets, excluding natural gas fireplaces, a trip reduction program, bicycle facilities, and transit-oriented features.

However, due to the programmatic nature of the Project, the accuracy of the reductions that would be realized from MM-4.3-7 through MM-4.3-11 are not able to be accurately quantifiable. Further, MM-4.3-7 through MM4.3-11 does not ensure that all impacts from future development projects would be mitigated to a level of less than significant. Future non-discretionary projects that would be implemented under Neighborhoods Where We All Belong Zoning would be subject to the federal, state and local regulations mentioned above; however, these non-discretionary projects would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. As such, even with implementation of existing regulations, and MM-4.3-7 through MM-4.3-11 as applied to future discretionary projects, potential impacts related to operational emissions would be significant and unavoidable.

Health Effects

Currently, the SCAQMD, CARB, and EPA have not approved a quantitative method to reliably, meaningfully, and consistently translate the mass emission estimates for the criteria air pollutants resulting from the development of the Project to specific health effects. In addition, there are numerous scientific and technological complexities associated with correlating criteria air pollutant emissions from an individual project to specific health effects or potential additional nonattainment days.

In connection with the judicial proceedings culminating in issuance of the Friant Ranch decision, the SCAQMD and the San Joaquin Valley Air Pollution Control District (SJVAPCD) filed amicus briefs attesting to the extreme difficulty of correlating an individual project's criteria air pollutant emissions to specific health impacts. Both SJVAPCD and SCAQMD have among the most sophisticated air quality modeling and health impact evaluation capabilities of the air districts in California. The key, relevant points from the SCAQMD and SJVAPCD briefs are summarized herein.

In requiring a health impact type of analysis for criteria air pollutants, it is important to understand how O_3 and PM are formed, dispersed, and regulated. The formation of O_3 and PM in the atmosphere, as secondary pollutants,[6] involves complex chemical and physical interactions of multiple pollutants from natural and anthropogenic sources. The O_3 reaction is self-perpetuating (or catalytic) in the presence of sunlight because NO_2 is photochemically reformed from nitric oxide. In this way, O_3 is controlled by both NO_x and VOC emissions (NRC 2005). The complexity of these interacting cycles of pollutants means that incremental decreases in one emission may not result in proportional decreases in O_3 (NRC 2005). Although these reactions and interactions are well understood, variability in emission source operations and meteorology creates uncertainty in the modeled O_3 concentrations to which downwind populations may be exposed (NRC 2005). Once formed, O_3 can be transported long distances by wind, and due to atmospheric transport, contributions of precursors from the surrounding region can also be important (EPA 2008). Because of the complexity of O_3 formation, a specific tonnage amount of VOCs or NO_X emitted in a particular area does not equate to a particular concentration of O_3 in that area (SJVAPCD 2015). PM can be divided into two categories: directly emitted PM and secondary PM. Secondary PM, like O_3, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as SO_x and NO_x (SJVAPCD 2015). Because of the complexity of secondary PM formation, including the potential to be transported long distances by wind, the tonnage of PM-forming precursor emissions in an area does not necessarily result in an equivalent concentration of secondary PM in that area (SJVAPCD 2015). This is especially true for individual projects, where project-generated criteria air pollutant emissions are not derived from a single "point source," but from construction equipment and mobile sources (passenger cars and trucks) driving to, from, and around the project sites.

Another important technical nuance is that health effects from air pollutants are related to the concentration of the air pollutant that an individual is exposed to, not necessarily the individual mass quantity of emissions associated with an individual project. For example, health effects from O_3 are correlated with increases in the ambient level of O_3 in the air a person breathes (SCAQMD 2015). However, it takes a large amount of additional precursor emissions to cause a modeled increase in ambient O_3 levels over an entire region (SCAQMD 2015). The lack of link between the tonnage of precursor pollutants and the concentration of O_3 and $PM_{2.5}$ formed is important because it is not necessarily the tonnage of precursor pollutants that causes human health effects; rather, it is the concentration of resulting O_3 that causes these effects (SJVAPCD 2015). Indeed, the ambient air quality standards, which are statutorily required to be set by EPA at levels that are requisite to protect the public health, are established as concentrations of O_3 and $PM_{2.5}$ based on duration of exposure and not as tonnages of their precursor pollutants (SJVAPCD 2015). Because the ambient air quality standards are focused on achieving a particular concentration region-wide, the tools and plans for attaining the ambient air quality standards are regional in nature. For CEQA analyses, project-generated emissions are typically estimated in pounds per day or tons per year and compared to mass daily or annual emission thresholds. While CEQA thresholds are established at levels that the air basin can accommodate without affecting the attainment date for the ambient air quality standards, even if a project exceeds established CEQA significance thresholds, this does not mean that one can easily determine the concentration of O_3 or PM that will be created at or near the project site on a particular day or month of the year, or what specific health impacts will occur (SJVAPCD 2015).

In regard to regional concentrations and air basin attainment, the SJVAPCD emphasized that attempting to identify a change in background pollutant concentrations that can be attributed to a single project, even one as large as the entire Friant Ranch Specific Plan, is a theoretical exercise. The SJVAPCD brief noted that it “would be extremely difficult to model the impact on NAAQS attainment that the emissions from the Friant Ranch project may have” (SJVAPCD 2015). The situation is further complicated by the fact that background concentrations of regional pollutants are not uniform either temporally or geographically throughout an air basin, but are constantly fluctuating

[6] Air pollutants formed through chemical reactions in the atmosphere are referred to as secondary pollutants.

based upon meteorology and other environmental factors. SJVAPCD noted that the currently available modeling tools are equipped to model the impact of all emission sources in the San Joaquin Valley Air Basin on attainment (SJVAPCD 2015). The SJVAPCD brief then indicated that, "[r]unning the photochemical grid model used for predicting O_3 attainment with the emissions solely from the Friant Ranch project (which equate to less than one-tenth of one percent of the total NO_x and VOC in the Valley) is not likely to yield valid information given the relative scale involved" (SJVAPCD 2015).

SCAQMD and SJVAPCD have indicated that it is not feasible to quantify project-level health impacts based on existing modeling (SCAQMD 2015; SJVAPCD 2015). Even if a metric could be calculated, it would not be reliable because the models are equipped to model the impact of all emission sources in an air basin on attainment and would likely not yield valid information or a measurable increase in O_3 concentrations sufficient to accurately quantify O_3-related health impacts for an individual project.

Nonetheless, following the Supreme Court's Friant Ranch decision, some EIRs estimated criteria air pollutant emissions that exceeded applicable air district thresholds and have included a quantitative analysis of potential project-generated health effects using a combination of a regional photochemical grid model[7] and the EPA Benefits Mapping and Analysis Program (BenMAP or BenMAP–Community Edition).[8] The publicly available health impact assessments (HIAs) typically present results in terms of an increase in health incidences and/or the increase in background health incidence for various health outcomes resulting from the project's estimated increase in concentrations of O_3 and $PM_{2.5}$.[9] The five publicly available HIAs reviewed herein have concluded that the evaluated project's health effects associated with the estimated project-generated increase in concentrations of O_3 and $PM_{2.5}$ represent a small increase in incidences and a very small percentage of the number of background incidences, indicating that these health impacts are negligible and potentially within the models' margin of error. It is also important to note that while the results of the five available HIAs conclude that the project emissions do not result in a substantial increase in health incidences, the estimated emissions and assumed toxicity are also conservatively inputted into the HIA and thus, overestimate health incidences, particularly for $PM_{2.5}$.

As explained in the SJVAPCD brief and noted previously, running the photochemical grid model used for predicting O_3 attainment with the emissions solely from an individual project like the Friant Ranch project or the Project is not likely to yield valid information given the relative scale involved. The five examples reviewed support the SJVAPCD's brief contention that consistent, reliable, and meaningful results may not be provided by methods applied at this time. Accordingly, additional work in the industry and, more importantly, air district participation, is needed to develop a more meaningful analysis to correlate project-level mass criteria air pollutant emissions and health effects for decision makers and the public. Furthermore, at the time of writing, no HIA has concluded that health

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7 The first step in the publicly available HIAs includes running a regional photochemical grid model, such as the Community Multiscale Air Quality model or the Comprehensive Air Quality Model with extensions to estimate the increase in concentrations of O_3 and $PM_{2.5}$ as a result of project-generated emissions of criteria and precursor pollutants. Air districts, such as the SCAQMD, use photochemical air quality models for regional air quality planning. These photochemical models are large-scale air quality models that simulate the changes of pollutant concentrations in the atmosphere using a set of mathematical equations characterizing the chemical and physical processes in the atmosphere (EPA 2026b).

8 After estimating the increase in concentrations of O_3 and $PM_{2.5}$, the second step in the five examples includes use of BenMAP or BenMAP-Community Edition to estimate the resulting associated health effects. BenMAP estimates the number of health incidences resulting from changes in air pollution concentrations (EPA 2023). The health impact function in BenMAP-Community Edition incorporates four key sources of data: (i) modeled or monitored air quality changes, (ii) population, (iii) baseline incidence rates, and (iv) an effect estimate. All of the five example HIAs focused on O_3 and $PM_{2.5}$.

9 The following CEQA documents included a quantitative HIA to address Friant Ranch: (1) California State University Dominguez Hills 2018 Campus Master Plan EIR (CSU Dominguez Hills 2019), (2) March Joint Powers Association K4 Warehouse and Cactus Channel Improvements EIR (March JPA 2019), (3) Mineta San Jose Airport Amendment to the Airport Master Plan EIR (City of San Jose 2019), (4) City of Inglewood Basketball and Entertainment Center Project EIR (City of Inglewood 2019), and (5) San Diego State University Mission Valley Campus Master Plan EIR (SDSU 2019).

effects estimated using the photochemical grid model and BenMAP approach are substantial, provided that the estimated project-generated incidences represent a very small percentage of the number of background incidences, potentially within the models' margin of error.

As described in response to Threshold 4.3-1, the Project consists of a policy document, which does not propose any direct development or any goals, policies, or development standards that would violate any air quality standard or contribute substantially to an existing or projected air quality violation. However, the Project's proposed land-use changes would allow for greater densities than are currently allowed within the Project area, and future development projects accommodated as a result of Project implementation would result in physical impacts to the environment. Thus, construction criteria air pollutant emissions from potential development projects allowed for by the Project could potentially exceed the SCAQMD mass daily thresholds for VOC and NO_x.

VOCs and NO_x are precursors to O_3, for which the Project area within the SCAB are designated as nonattainment with respect to the NAAQS and CAAQS. The health effects associated with O_3 are generally associated with reduced lung function. The contribution of reactive organic gases and NO_x to regional ambient O_3 concentrations is the result of complex photochemistry. The increases in O_3 concentrations in the SCAB due to O_3 precursor emissions tend to be found downwind from the source location to allow time for the photochemical reactions to occur. However, the potential for exacerbating excessive O_3 concentrations would also depend on the time of year that the VOC emissions would occur because exceedances of the O_3 CAAQS/NAAQS tend to occur between April and October when solar radiation is highest. The holistic effect of a single project's emissions of O_3 precursors is speculative due to the lack of quantitative methods to assess this impact. Nonetheless, because VOC and NO_x emissions associated with Project construction and/or operation would exceed the SCAQMD thresholds, it could contribute to regional O_3 concentrations and the associated health effects.

Health effects that result from NO_2 and NO_x include respiratory irritation. Although construction of future development allowed for under the Project may generate NO_x emissions that could exceed the SCAQMD mass daily thresholds, itis not anticipated to contribute to exceedances of the NAAQS and CAAQS for NO_2 because the SCAB are designated as in attainment of the NAAQS and CAAQS for NO_2 and the existing NO_2 concentrations in the area are well below the NAAQS and CAAQS standards. As noted above, the Project, would exceed the applicable SCAQMD NO_x thresholds during construction and operation of the Project. In addition, because there is the potential for nearby receptors to be affected by off-road construction equipment, the construction activity on individual parcels could result in potential health effects associated with NO_2 and NO_x during construction.

CO tends to be a localized impact associated with congested intersections. The associated potential for CO hotspots is discussed in response to Threshold 4.3-3, below, and is determined to be a less-than-significant impact. Furthermore, the existing CO concentrations in the area are well below the NAAQS and CAAQS standards. However, operation of the developments allowed for by the Project would generate CO emissions that would exceed the SCAQMD CO thresholds during operation. Therefore, CO emissions from implementation of the Project could potentially contribute to significant health effects associated with this pollutant.

Operation of total future buildout under the Project would exceed the SCAQMD threshold for PM_{10} or $PM_{2.5}$. While construction is temporary, on the whole of the action, construction of the development allowed for by the Project would exceed the SCAQMD thresholds for PM_{10} or $PM_{2.5}$ and could contribute to exceedances of the NAAQS and CAAQS for particulate matter or could obstruct the SCAB from coming into attainment for these pollutants. Nonetheless, SCAQMD Rule 403, Fugitive Dust, would limit the amount of fugitive dust generated during development allowed for by the Project, and implementation of MM-4.3-5 would provide further fugitive dust control measures for applicable projects implemented within the Project area. Nevertheless, the Project has the potential

to contribute a substantial amount of particulate matter during future construction of development projects, which could result in health effects associated with PM_{10} or $PM_{2.5}$.

In summary, because future projects would potentially exceed the SCAQMD thresholds for VOC, NO_x, CO, PM_{10}, and $PM_{2.5}$, the potential health effects associated with criteria air pollutants are considered potentially significant. However, there are numerous scientific and technological complexities associated with correlating criteria air pollutant emissions from an individual project to specific health effects or potential additional nonattainment days, and there are currently no modeling tools that could provide reliable and meaningful additional information regarding health effects from criteria air pollutants generated by individual projects within the SCAQMD jurisdiction. Furthermore, for purposes of this conservative CEQA analysis, it is assumed that the additional development would be developed by 2056, within a 30-year period; however, full buildout may not occur within this time period and the intensity and spatial development within this period is unknown. For these reasons, conducting a HIA may not yield accurate results and would likely overestimate health effects associated with the Project. In summary, even with implementation of existing regulations, and MM-4.3-1 through MM-4.3-11, the Project has the potential to violate air quality standard or contribute substantially to an existing or projected air quality violation and the health effects associated with criteria air pollutants, and impacts would be significant and unavoidable.

Threshold 4.3-3 Would the project expose sensitive receptors to substantial pollutant concentrations?

Significant and Unavoidable Impact. For the reasons discussed below, the Project could expose sensitive receptors to substantial pollutant concentrations, and impacts would be significant and unavoidable.

Localized/Ambient Air Quality

As described in response to Threshold 4.3-1, the Project consists of a policy document and does not propose any direct development. However, the Project's proposed land-use changes would allow for greater densities than are currently allowed within the Project area. Construction activities associated with future development allowed by the Project would result in temporary sources of construction equipment emissions and on-site fugitive dust. As explained in Section 4.3.3, for project-specific development, the SCAQMD recommends an LST analysis to evaluate the potential of localized air quality impacts to sensitive receptors in the immediate vicinity of construction; however, the LSTs are applicable to projects at the project-specific level and are not applicable to regional projects such as the Project, because specific projects are speculative at this time. Specifically, SCAQMD guidance for LST application recommends application of the methodology for project sites that are 5 acres or smaller (SCAQMD 2008). Accordingly, construction LST guidance is not recommended or provided herein.

Air Movement in the Area of the Project

The building height maximums for residential and vertical mixed-use projects allowed per the amended MUOD would fluctuate depending on the maximum allowable residential density. Maximum density from 20 dwelling units per acre to 40 dwelling units per acre would have a maximum allowable building height of 60 feet. Maximum building height would increase to 72 feet for projects with a maximum density of 60 dwelling units per acre and to 108 feet for projects with a maximum density of 90 dwelling units per acre. Parcels with a 108-foot building height maximum would be limited to the North Coast Mesa subarea and other parcels north of I-405.

Taller buildings have the potential to change the building air flow downwash, potentially influencing air flow patterns at the ground level. Scientific literature, as discussed below, demonstrates that increases in height alone are not a reliable predictor of worsened pollutant concentrations and that dispersion outcomes vary depending on building configuration, spacing, orientation, and prevailing winds.

Relevant microclimate and dispersion research demonstrates that increasing vertical massing does not uniformly reduce wind speeds or increase pollutant concentrations. Neighborhood-scale simulations conducted under mean wind speeds on the order of 2.5 meters per second show that scenarios with increased building heights can exhibit equal or higher maximum wind speeds compared to baseline low-rise or "no-building" conditions, depending on configuration (Ragheb et al. 2024). Complementary computational fluid dynamic-based studies evaluating tall buildings and PM dispersion further demonstrate that increased wind speed along the prevailing wind direction is associated with reduced pollutant concentrations (dilution), and that height increments alone produce inconsistent results (Nouri et al. 2024).

In general, the Project would have the potential to increase building heights along two major roadway corridors, Harbor boulevard, and the Costa Mesa Freeway. The prevailing wind direction is from the south and the southwest (SCAQMD 2026). The Harbor boulevard and Costa Mesa Freeway corridor both run roughly parallel to the prevailing wind direction which as previously stated is associated with reduced pollutant concentrations. There would also be changes to allowable building heights including both decreases and increases along the 405 freeway which is roughly perpendicular to the prevailing wind direction and could lead to increased pollutant concentrations. However, predicting dispersion effects for hypothetical buildings that may be constructed as a result of the Project would require speculative assumptions regarding future site layouts and architectural forms. CEQA does not require speculative analysis where impacts cannot be meaningfully assessed absent site-specific proposals. Instead, program-level review appropriately evaluates whether the plan introduces new sources of emissions, increases emissions, or changes traffic conditions—none of which occurs as a function of building height.

Health Effects of Carbon Monoxide

As described in Threshold 4.3-1, while the Project consists of a policy document that is not anticipated to produce environmental impacts, the Project's proposed land-use changes would allow for greater densities than are currently allowed within the Project area. Mobile source impacts occur on two scales. Regionally, Project-related travel would add to regional trip generation and increase the VMT within the local airshed and the SCAB. Locally, traffic generated by the future residential development, and potential commercial space facilitated by the Project would be added to the local roadway system near those areas. If such traffic occurs during periods of poor atmospheric ventilation, is composed of a large number of vehicles cold-started and operating at pollution-inefficient speeds, and is operating on roadways already crowded with non-Project traffic, there is a potential for the formation of microscale CO hotspots in the area immediately around points of congested traffic. However, because of continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the SCAB is steadily decreasing.

At the time that the SCAQMD Handbook (1993) was published, the SCAB was designated nonattainment under the CAAQS and NAAQS for CO. In 2007, the SCAQMD was designated in attainment for CO under both the CAAQS and NAAQS as a result of the steady decline in CO concentrations in the SCAB due to turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities. The SCAQMD conducted CO modeling for the 2003 AQMP[10] (SCAQMD 2003b) for the four worst-case intersections in the SCAB: (1) Wilshire Boulevard and Veteran Avenue, (2) Sunset Boulevard and Highland Avenue, (3) La Cienega Boulevard and Century Boulevard, and (4) Long Beach Boulevard and Imperial Highway. At the time the 2003 AQMP was prepared, the intersection of Wilshire Boulevard and Veteran Avenue was the most congested intersection in the County, with an average daily traffic volume of about 100,000 vehicles per day. Using CO emission factors for 2002, the peak modeled CO 1-hour concentration was estimated to be 4.6 ppm at the intersection of Wilshire Boulevard

[10] SCAQMD's CO hotspot modeling guidance has not changed since 2003.

and Veteran Avenue. When added to the maximum 1-hour CO concentration from 2022 through 2024 within the city (see Table 4.3-3), which was 2.8 ppm in 2024, the 1-hour CO would be7.4 ppm, while the CAAQS is 20 ppm.

The 2003 AQMP also projected 8-hour CO concentrations at these four intersections for 1997 and from 2002 through 2005. From years 2002 through 2005, the maximum 8-hour CO concentration was 3.8 ppm at the Sunset Boulevard and Highland Avenue intersection in 2002; the maximum 8-hour CO concentration was 3.4 ppm at the Wilshire Boulevard and Veteran Avenue in 2002. Adding the 3.8 ppm to the maximum 8-hour CO concentration from 2022 through 2024 within the city (see Table 4.3-3), which was 2.4 ppm in 2024, the 8-hour CO would be 6.2 ppm, while the CAAQS is 9.0 ppm.

Accordingly, CO concentrations at congested intersections would not exceed the 1-hour or 8-hour CO CAAQS unless projected daily traffic would be at least over 100,000 vehicles per day. While intersection volumes are not available for every intersection within the city, as discussed in Section 4.17, Transportation, of this Draft PEIR, implementation the Project would result in a regional decrease in vehicle trips and VMT. Accordingly, it is not anticipated that the Project would result in a new congested intersection or substantially exacerbate conditions at congested intersections, nor it is anticipated that the Project would increase volume at any given intersection to more than 100,000 vehicles per day. Therefore, a CO hotspot is not anticipated to occur based on potential future residential development facilitated by the Project. Impacts associated with CO hotspots would be less than significant.

Toxic Air Contaminants - Construction

The Project could result in TAC exposure to existing or future sensitive land uses during construction. Diesel equipment would be subject to the CARB airborne toxic control measures for in-use off-road diesel fleets, which would minimize DPM emissions, including an airborne toxic control measure to limit idling of diesel-fueled commercial vehicles, which requires diesel-fueled vehicles with gross vehicle weights greater than 10,000 pounds to idle no more than 5 minutes at any location (13 CCR 2485). However, the level of potential emissions in relation to the location of sensitive receptors cannot be estimated with a level of accuracy. As such, the potential health risk of exposing sensitive receptors to construction-generated TAC emissions, primarily DPM, would be potentially significant. Even with implementation of MM-4.3-1 through MM-4.3-6, and existing regulations. the Project impacts at the program level would remain significant and unavoidable because at this level of review, the exact location, orientation, number and timing of individual development projects and/or infrastructure improvements that could occur as a result of implementation of the Neighborhoods Where We All Belong Zoning are unknown. Further, MM-4.3-1 through MM-4.3-6 would not ensure that all impacts from future development projects would be mitigated to a level of less than significant. Future non-discretionary projects that would be implemented under the Neighborhoods Where We All Belong Zoning would be subject to the federal, state and local regulations mentioned above; however, these non-discretionary projects would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. As such, even with implementation of existing regulations, and MM-4.3-1 through MM-4.3-6 as applied to future discretionary projects, potential impacts related to exposure to substantial pollutant concentrations during construction activities associated with future development projects would be significant and unavoidable.

Toxic Air Contaminants - Operation

The Project would facilitate additional housing, neighborhood-commercial uses, and other potential commercial land uses which could include various sources of TACs. As discussed in Section 4.3.2.1, Methodology, potential sources of TAC emissions from the Project include, but are not limited to: emergency generators, boilers, broilers (meat cooking), and ovens.).

MM-4.3-7 through MM-4.3-11, Operational Emissions, includes requirements for new projects to reduce pollutant emissions during long-term operations, including compliance with SCAQMD rules as well as adherence to engine emission standards, electrical infrastructure. However, MM-4.3-7 through MM-4.3-11 does not ensure that all impacts from future development projects would be mitigated to a level of less than significant. Future non-discretionary projects that would be implemented under the Neighborhoods Where We All Belong Zoning would be subject to the federal, state and local regulations mentioned above; however, these non-discretionary projects would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. As such, even with implementation of existing regulations, and MM-4.3-7 through MM-4.3-11 as applied to future discretionary projects, potential impacts related to exposure to substantial pollutant concentrations during long-term operations associated with future development projects would be significant and unavoidable.

Valley Fever

As discussed in Section 4.3.1, under header "Non-Criteria Air Pollutants," valley fever is not highly endemic to Orange County, with an incidence rate of 10.0 cases per 100,000 people in 2022 (CDPH 2023). The California counties considered highly endemic for valley fever include Kern (264.9 per 100,000), Kings (111.0 per 100,000), Tulare (65.7 per 100,000), San Luis Obispo (51.5 per 100,000), Fresno (44.3 per 100,000), Madera (32.4 per 100,000), and Ventura (28.3 per 100,000), which accounted for 50.5 percent of the reported cases in 2022 (CDPH 2023).

Even if present within the Project area, construction activities may not result in increased incidence of valley fever. Propagation of valley fever is dependent on climatic conditions, with the potential for growth and surface exposure highest following early seasonal rains and long dry spells. Valley fever spores can be released when filaments are disturbed by earthmoving activities, although receptors must be exposed to and inhale the spores to be at increased risk of developing valley fever. Moreover, exposure to valley fever does not guarantee that an individual will become ill—approximately 60 percent of people exposed to the fungal spores are asymptomatic and show no signs of an infection (Saubolle et al. 2006).

In order to reduce fugitive dust from the Project and minimize adverse air quality impacts, the Project would employ dust control measures in accordance with SCAQMD Rules 401 and 403, which limit the amount of fugitive dust generated during construction. These requirements are consistent with California Department of Public Health recommendations for the implementation of dust control measures, including regular application of water during soil-disturbing activities, to reduce exposure to valley fever by minimizing the potential that the fungal spores become airborne (CDPH 2013). Further, regulations designed to minimize exposure to valley fever hazards are included in CCR Title 8 and would be complied with during the Project's construction phase (California Department of Industrial Relations 2017).

In summary, the Project would not result in a significant impact attributable to valley fever exposure based on its geographic location and compliance with applicable regulatory standards and dust control measures, which will serve to minimize the release of and exposure to fungal spores.

Threshold 4.3-4 Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less Than Significant Impact. The occurrence and severity of potential odor impacts depends on numerous factors. The nature, frequency, and intensity of the source; the wind speeds and direction; and the sensitivity of

receiving location each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying and cause distress among the public and generate citizen complaints.

As described in Threshold 4.3-1, while the Project consists of a policy document that does not propose any direct development, the land use changes proposed as part of the Project would allow for greater densities than are currently allowed within the Project area, and the Project would result in indirect impacts. Development allowed for by the Project would generate odors from vehicles and/or equipment exhaust emissions. Odors produced would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment, architectural coatings, and asphalt pavement application. As these odors would be short-term (e.g., only emitted during a future development project's demolition/construction phase), intermittent, limited to on-site or site-adjacent areas, and typically emitted in an outdoor setting subject to wind and other dissipating elements, such odors would disperse rapidly and would generally occur at magnitudes that would not affect substantial numbers of people. Therefore, impacts associated with odors during construction of the Project would be less than significant.

All food-service facilities in the Project area are required to meet applicable health and safety code requirements and building code standards, including standards related to odor emissions. For these reasons, impacts related to odors emanating mixed-use/commercial buildings (e.g., food-service facilities) accommodated because of the Project's proposed land use changes would be less than significant.

While the Project identifies the general locations (e.g., parcels) where future development is likely to occur and can make certain assumptions based on the permitted use types, the precise nature (e.g., the particular tenant[s]) and site-specific location(s) of future development projects implemented under the Neighborhoods Where We All Belong Zoning have not yet been identified. Therefore, odor sources associated with Project buildout and their potential to cause a specific impact to nearby sensitive receptors also cannot be completely identified. However, any development within the Project area would be required to comply with SCAQMD Rule 402, Nuisance, which prohibits the discharge of air pollutants from a facility that cause injury, detriment, nuisance, or annoyance to the public or damage to business or property. Therefore, the Project would not result in new or more substantial odor emissions that could adversely affect a substantial number of people, and impacts would be less than significant.

4.3.5 Cumulative Impact Analyses

Where a lead agency concludes that the cumulative effects of a project, taken together with the impacts of other closely related past, present, and reasonably foreseeable future projects are significant, the lead agency then must determine whether the project's incremental contribution to such significant cumulative impact is "cumulatively considerable" (and thus significant in and of itself). The cumulative study area used to assess potential cumulative air quality impacts includes the South Coast Air Basin and considers the future buildout of applicable local and regional plans. The full list of related plans applicable to the Project's cumulative analyses is provided in Section 2.5, Cumulative Impact Analysis, in Chapter 2, Environmental Setting of this Draft PEIR.

Threshold 4.3-1: The cumulative impact of the population increases in South Coast Air Basin would further obstruct implementation of the AQMP, as implementation of the Project would further exceed the demographic growth forecasts in the Project area. Although implementation of MM-4.3-1 and MM-4.3-11 would reduce emissions of future projects under the Neighborhoods Where We All Belong Zoning Updates, these mitigation measures would not reduce impacts to less than significant. As discussed in response to Threshold 4.3-1, implementation of the Neighborhoods Where We All Belong Zoning Update's would result in a significant and unavoidable impact related to the conflict with the applicable AQMP. The impact of the Project, in addition to the additional regional growth, would constitute a significant cumulative impact related to AQMP implementation. Therefore, Neighborhoods Where

We All Belong Zoning Update's incremental contribution to impacts related to conflict with the SCAQMD's AQMP would be cumulatively considerable.

Threshold 4.3-2: As discussed previously, air pollution by nature is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the SCAQMD develops and implements plans for future attainment of ambient air quality standards. The potential for the Project to result in a cumulatively considerable impact, specifically, a cumulatively considerable new increase of any criteria pollutant for which the Project region is nonattainment under an applicable NAAQS and/or CAAQS, is addressed in response to Threshold 4.3-2. Therefore, the Neighborhoods Where We All Belong Zoning Update's incremental contribution to impact related to increases of any criteria pollutant for which the Project region is in nonattainment would be cumulatively considerable.

Threshold 4.3-3: As discussed in response to Threshold 4.3-3 regarding sensitive receptors, projects under the Neighborhoods Where We All Belong Zoning Updates would be required to evaluate existing TAC exposure and incorporate available reduction measures, if necessary. However, due to the uncertainty of future sensitive receptor locations and the effectiveness of MM-4.3-1 through 4.3-11, even with implementation of mitigation, existing regulations, impacts would be significant and unavoidable. The impact of the Project in addition to growth associated with regional plans could further increase the exposure of air quality pollutants to sensitive receptors. Therefore, Neighborhoods Where We All Belong Zoning Update's incremental contribution to impacts related to exposure of sensitive receptors to substantial pollutant concentrations from TACs would be cumulatively considerable.

Threshold 4.3-4: As discussed in response to Threshold 4.3-4 regarding odors or other emissions, projects under the Neighborhoods Where We All Belong Zoning Updates would be subject to SCAQMD Rule 402, Odor impacts are generally limited to the immediate area surrounding the source and the Project area would result in less than significant impacts related to odors. Therefore, the Project's incremental contribution to odors would not be cumulatively considerable.

4.3.6 Mitigation Measures

The following mitigation measures would be implemented to reduce the Project's criteria air pollutant emissions during construction and operation.

Construction

MM-4.3-1 Construction Equipment Emissions Reductions. Prior to the issuance of a building permit for future development projects subject to the MUOD within the Planning Area, the City shall ensure that the applicant's construction contractor's contract specifications, require the use of California Air Resources Board (CARB)-certified Tier 4 Final or better construction equipment for equipment engines greater than 25 horsepower. An exemption from this requirement may be granted under the following condition: The applicant's construction contractor shall demonstrate that at least two construction fleet owners/operators in Orange County were contacted and that those owners/operators confirmed Tier 4 Final equipment could not be located within Orange County during the desired construction schedule.

MM-4.3-2 Additional Construction Equipment Emission Reductions. Prior to the issuance of a demolition/grading permit for future development projects subject to the MUOD within the Planning

Area, the City shall ensure that the applicant requires, through the construction contractor's contract specifications, the following are implemented:

- Use electric or hybrid powered equipment for generators and other small pieces of equipment over 25 horsepower (e.g., forklifts), as commercially available
- Use cleaner fuel equipment, such as replacing diesel fuel with compressed natural gas or renewable diesel, as commercially available

Commercially available equipment is defined as equipment sourced within 50 vehicle miles of the project site and within 10 percent of the cost of the diesel-fueled-equivalent equipment. The individual project applicant must contact at least two contractors or vendors within the County and submit to the City justification if the specified equipment is not commercially available.

MM-4.3-3 Limit Truck and Equipment Idling During Construction. During construction of future development projects subject to the MUOD within the Planning Area, the City shall ensure that the applicant requires, through the construction contractor's contract specifications, that idling time of heavy-duty trucks is reduced either by requiring them to be shut off when not in use or limiting the time of idling to no more than 4 minutes (thereby improving upon the 5-minute idling limit required by the state airborne toxics control measure, 13 CCR 2485). The Project applicant shall post clear signage reminding construction workers to limit idling of construction equipment.

MM-4.3-4 Use of Low-Volatile Organic Compound Paint During Construction. Prior to the commencement of construction activities for future development projects subject to the MUOD within the Planning Area, the applicant shall require, through the construction contractor's contract specifications, that low volatile organic compound (VOC) paint (50 grams per liter VOC or less) is used for all interior and exterior paint applications for residential and nonresidential land uses.

MM-4.3-5 Construction Dust Control. Prior to the issuance of a grading permit for future development projects subject to the MUOD within the Planning Area, the applicant shall require, the construction contractor's contract specifications, that implementation of dust control strategies are implemented to reduce project-generated dust during construction and ensure compliance with South Coast Air Quality Management District (SCAQMD) Rule 403. The dust control measures shall include at a minimum the following control strategies:

a) Water or another SCAQMD-approved non-toxic dust control agent shall be used on the grading areas at least three times daily.
b) A 15 mile-per-hour (mph) speed limit on unpaved surfaces shall be enforced.
c) All main roadways shall be constructed and paved as early as possible in the construction process.
d) Building pads shall be finalized as soon as possible following site preparation and grading activities.
e) Grading areas shall be stabilized as quickly as possible.
f) Wheel washers shall be installed adjacent to the apron for tire inspection and washing prior to vehicle entry on public roads.
g) Visible track-out into traveled public streets shall be removed with the use of sweepers, water trucks, or a similar method within 30 minutes of occurrence.

h) Unpaved construction site egress points shall be graveled to prevent track-out.

i) Construction access points shall be wet-washed at the end of the workday if any vehicle travel on unpaved surfaces has occurred.

j) All soil disturbance and travel on unpaved surfaces shall be suspended if winds (instantaneous gusts) exceed 25 mph.

k) On-site stockpiles of excavated material shall be covered.

MM-4.3-6 Notification of Construction Activities. Prior to the commencement of any construction activities for future development projects subject to the MUOD within the Planning Area, the applicant shall be required to employ a construction relations officer who will address community concerns regarding on-site construction activity. The applicant shall provide public notification in the form of a visible sign containing the contact information of the construction relations officer, who shall document complaints and concerns regarding on-site construction activity. The sign shall be placed in easily accessible locations.

Operation

MM-4.3-7 Low-VOC Cleaning Supplies and Paint Educational Program. Prior to the occupancy of any future development projects subject to the MUOD within the Planning Area, applicants shall develop a green cleaning product and paint education program. The City shall ensure that the applicant implements this program through property management practices, including but not limited to lease materials, tenant information packets, and project websites. The educational program shall include a flyer (hardcopy and/or digital) that includes, at a minimum, an explanation of what volatile organic compounds (VOCs) are, how VOCs affect us, where to find low-VOC alternatives for cleaning supplies and paint, and additional resources for learning more.

MM-4.3-8 Landscape Maintenance Equipment Emission Reduction. Applicants for future development projects subject to the MUOD within the Planning Area shall implement the following landscape maintenance equipment emission reduction measures:

a) **Include Outdoor Electrical Outlets.** Prior to the issuance of building permits, future development project applicants shall provide evidence to the City that the design plans include electrical outlets on the exterior of the structure to facilitate use of electrical lawn and garden equipment. The City shall verify compliance by confirming that this requirement is included in the construction contractor's contract specifications prior to issuance of a building permit.

b) **Encourage Use of Existing Yard Equipment Exchange and Rebate Programs.** Future development project applicants shall provide educational materials to future residents about the SCAQMD Residential Electric Lawn & Garden Equipment Rebate Program with the goal of accelerating transition from conventional gasoline-powered yard equipment (e.g., lawn mowers, leaf blowers and vacuums, shredders, trimmers, and chain saws) to electric and rechargeable battery-powered yard equipment. The City shall verify compliance by reviewing and confirming the inclusion of these materials prior to issuance of a certificate of occupancy.

MM-4.3-9 Trip Reduction Program: Prior to issuance of a grading permit, applicants for future development projects subject to the MUOD within the Planning Area for projects with 50 employees or more shall prepare a Trip Reduction Program aimed at discouraging single-occupancy vehicle trips and encouraging alternative modes of transportation, such as carpooling, and shuttle/transit use, and

where applicable walking, and biking, with the goal of reducing VMT. The Program shall be subject to review and approval by the City. The exact measures to be implemented shall be determined when the Program is prepared, prior to issuance of a final certificate of occupancy for each future development project. The Program should be customized and may include but would not be limited to commute trip reduction program, marketing, carpool/vanpool service with incentives such as monetary assistance with fares or gas costs for carpool/vanpool users, subsidized/discounted daily or monthly public transit passes, employee shuttles, as well as encouraging telecommuting and alternative work schedule, if applicable to the type of employment.

MM-4.3-10 Enhanced End-of-Trip Bicycle Facilities. Prior to the issuance of building permits for future development projects subject to the MUOD within the Planning Area, the City shall ensure that the applicant's design plans include end-of-trip bicycle facilities consistent with the following:

- Non-Residential (Office, Retail, Commercial) development must provide the following facilities:
  - Short-term bike racks for 5 percent of parking spaces
  - Long-term secure bike parking for 5 percent of parking spaces
- For developments with 150 or more employees, showers and changing facilities at a rate of the greater of one shower per 25,000 square feet of building area or one shower per 100 employees
  - Lockers for at least 5 percent of employees
- Multi-family Residential development must provide one secure long-term storage space (i.e., bike storage room or locker) per unit.

MM-4.3-11 Transit Oriented Features: Prior to the issuance of building permits, applicants for future development projects subject to the MUOD within the Planning Area shall consult with the City to determine appropriate and reasonable contribution towards construction or implementation of transit features. Based on phasing and proposed project type, the City may require the future development project applicants to implement a transit feature to either connect to the nearest transit stop or hub and/or enhance the service or provide transit features such as bus shelters.

4.3.7 Level of Significance Conclusion

Threshold 4.3-1: Even with implementation of MM-4.3-1 and MM-4.3-11, the Project could conflict with or obstruct implementation of the applicable air quality plan, and impacts would be **significant and unavoidable** and cumulatively considerable.

Threshold 4.3-2: Even with implementation of MM-4.3-1 and MM-4.3-11, the Project could 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors), and impacts would be **significant and unavoidable** and cumulatively considerable.

Threshold 4.3-3: Even with implementation of MM-4.3-1 and MM-4.3-11, the Project could expose sensitive receptors to substantial pollutant concentrations, and impacts would be **significant and unavoidable** and cumulatively considerable.

Threshold 4.3-4: The Project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people and impacts would be **less than significant** and would not be cumulatively considerable.

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4.4 Biological Resources

This section of the Draft PEIR analyzes the potential impacts from the implementation of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation (Project) on biological resources, including impacts to special status plant and wildlife species, sensitive natural communities, and migratory corridors. A discussion of the existing biological resources in the city and the Planning Area is included in this section to present the environmental baseline conditions. The analysis is based, in part, on review of the City of Costa Mesa's (City) General Plan, the CalFlora Database, California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB), California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants, and U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) data, as included in Appendix E of this Draft PEIR. Please refer to the following appendix:

Appendix E CNDDB, CNPS Inventory, and IPaC Records, prepared by Dudek

Other sources consulted are listed in Section 4.4.8, References.

4.4.1 Existing Conditions

The Planning Area is located within the city, which is highly developed with a mix of residential, commercial, and industrial development. The Planning Area is surrounded by a suburban environment with scattered parcels consisting of established parks and recreational areas. The Planning Area has been developed for at least 50 years, and the development has removed the natural vegetation, soils, and hydrology that most native plant and wildlife species are dependent on (NETR Online 2026). Vegetation throughout the Planning Area is primarily limited to ornamental vegetation associated with development and parks, and ruderal species[1], as well as two parcels of agricultural land consisting of row crops. Undeveloped parcels that provide significant habitat opportunities for sensitive plant and wildlife species that occur within in the city, but outside of the Planning Area boundary, include open space parks such as Fairview Park, Talbert Regional Park, and Orange Coast River Park, natural habitat areas such as the Santa Ana River and riparian areas, and recreational areas such as the Costa Mesa Country Club (City of Costa Mesa 2016). The open space parks include a mix of native vegetation communities including coastal scrub, riparian woodlands, riparian scrub, wetlands and salt marshes that provide suitable habitat for a variety of species.

Additionally, several smaller regional parks are located throughout the city. Stormwater is conveyed through much of the Planning Area via underground stormwater systems and open concrete channels, including the Santa Ana River along the western boundary of the city that is channelized, and the Upper Newport Back Bay to the east of the city boundary (Google Earth 2026). Outside of designated parks and preserves, southern portions of the city also occur within the Coastal Zone as designated by the California Coastal Commission, and are managed by the City's Local Coastal Plan (LCP). The southern portion of Talbert Regional Park and the adjacent Canyon Park to the east, are subject to the regulations of the LCP (City of Costa Mesa 2016).

Resident native wildlife that occurs in the Planning Area are primarily common suburban adapted species, such as western fence lizard (*Sceloporus occidentalis*), red-tailed hawk (*Buteo jamaicensis*), mourning dove (*Zenaida macroura*), Allen's hummingbird (*Selasphorus sasin*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), American crow (*Corvus brachyrhynchos*), house finch (*Haemorhous mexicanus*), Virginia opossum

[1] Ruderal vegetation is vegetation that is often composed of invasive species, whether exotic or native, that have expanded in extent and abundance due to human disturbances (Faber-Langendoen et al. 2014).

(*Didelphis virginiana*), coyote (*Canis latrans*), raccoon (*Procyon lotor*), and striped skunk (*Mephitis mephitis*). Numerous other bird species are expected to pass through during migration and numerous bat species may forage overhead, with there being some potential for bat roosts in manmade structures (e.g., bridges and dilapidated buildings). Non-native wildlife species are more abundant within the communities, and include rock pigeon (*Columba livia*), European starling (*Sturnus vulgaris*), house sparrow (*Passer domesticus*), house mouse (*Mus musculus*), Norway rat (*Rattus norvegicus*), and black rat (*Rattus rattus*) (Appendix E).

Special-status species identified with a potential to occur in the Planning Area include plants such as: southern tarplant (*Centromadia parryi* ssp*. australis*), decumbent goldenbush (*Isocoma menziesii* var*. decumbens*), and Coulter's goldfields (*Lasthenia glabrata* ssp*. coulteri*). Special-status wildlife species with suitable habitat in the Planning Area include but are not limited to: burrowing owl (*Athene cunicularia*), Crotch's bumble bee (*Bombus crotchii*), and western spadefoot (*Spea hammondii*). The complete list of special-status species evaluated for their potential to occur in the Planning Area are included in Table 4.4-1 and Appendix E.

4.4.2 Regulatory Requirements

4.4.2.1 Federal

Federal Endangered Species Act

The federal Endangered Species Act (FESA) of 1973 (16 USC 1531 et seq.), as amended, is administered by USFWS for most plant and animal species, and by the National Oceanic and Atmospheric Administration National Marine Fisheries Service for certain marine species. FESA is intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend, and to provide programs for the conservation of those species, thus preventing extinction of plants and wildlife. FESA defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Under FESA, it is unlawful to take any listed species; "take" is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

FESA allows for the issuance of incidental take permits for listed species under Section 7, which is generally available for projects that also require other federal agency permits or other approvals, and under Section 10, which provides for the approval of habitat conservation plans on private property without any other federal agency involvement. Upon development of a habitat conservation plan, USFWS can issue incidental take permits for listed species.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) was originally passed in 1918 as four bilateral treaties, or conventions, for the protection of a shared migratory bird resource. The primary motivation for the international negotiations was to stop the "indiscriminate slaughter" of migratory birds by market hunters and others (16 USC 703–712). Each of the treaties protects selected species of birds and provides for closed and open seasons for hunting game birds. The MBTA protects more than 800 species. Two species of eagles that are native to the United States—bald eagle (Haliaeetus leucocephalus) and golden eagle (Aquila chrysaetos)—were granted additional protection within the United States under the Bald and Golden Eagle Protection Act (16 USC 668–668d) to prevent these species from becoming extinct.

Clean Water Act

The Clean Water Act (CWA) is the major federal legislation governing water quality, providing guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Section 401 of the CWA requires an applicant for a federal license or permit that may result in a discharge of pollutants into waters of the United States to obtain state certification, thereby ensuring that the discharge will comply with provisions of the CWA. The State Water Resources Control Board and Regional Water Quality Control Boards (RWQCBs) administer the 401 certification program in California. Section 402 of the CWA establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the United States. Section 404 establishes a permit program administered by the U.S. Army Corps of Engineers (USACE) that regulates the discharge of dredged or fill material into waters of the United States, including wetlands. USACE implementing regulations are found in 33 Code of Federal Regulations (CFR) Parts 320 to 332. Guidelines for implementation are referred to as the Section 404(b)(1) Guidelines, which were developed by the U.S. Environmental Protection Agency in conjunction with USACE (40 CFR 230). The guidelines allow the discharge of dredged or fill material into the aquatic ecosystem only if there is no practicable alternative that would have less adverse impacts.

4.4.2.2 State

California Endangered Species Act

CDFW administers the California Endangered Species Act (CESA), which prohibits the take of plant and animal species designated by the Fish and Game Commission as endangered or threatened in California. Under CESA Section 86, "take" is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA Section 2053 stipulates that state agencies may not approve projects that will "jeopardize the continued existence of any endangered species or threatened species, or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy."

CESA defines an endangered species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease." CESA defines a threatened species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the Commission as rare on or before February 1, 1985, is a threatened species." A candidate species is defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the Commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the Commission has published a notice of proposed regulation to add the species to either list." CESA does not list invertebrate species.

California Fish and Game Code Sections 3503, 3511, 3513, 3801, 4700, 5050, and 5515

Section 2081(b) and (c) of the California Fish and Game Code authorizes take of endangered, threatened, or candidate species if take is incidental to otherwise lawful activity and if specific criteria are met. These provisions also require CDFW to coordinate consultations with USFWS for actions involving federally listed species that are also state-listed species. In certain circumstances, Section 2080.1 of CESA allows CDFW to adopt a federal

incidental take statement or a 10(a) permit as its own, based on its findings that the federal permit adequately protects the species and is consistent with state law. A Section 2081(b) permit may not authorize the take of "fully protected" species or "specified birds" (California Fish and Game Code Sections 3505, 3511, 4700, 5050, 5515, and 5517). If a project is planned in an area where a fully protected species or a specified bird occurs, an applicant must design the project to avoid take.

California Fish and Game Code, Sections 1600–1616

California Fish and Game Code, Sections 1600–1616, mandates that "it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds, without first notifying the department of such activity." Under California Fish and Game Code, Sections 1600–1616, the CDFW has the authority to regulate work that will substantially divert or obstruct the natural flow of, or substantially change or use any material from, the bed, channel, or bank of any river, stream, or lake. The CDFW also has the authority to regulate work that will deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. This regulation takes the form of a requirement for a Lake or Streambed Alteration (LSA) Agreement and is applicable to all projects. Applications to the CDFW must include a complete certified document pursuant to the California Environmental Quality Act (CEQA).

California Environmental Quality Act

CEQA requires identification of a project's potentially significant impacts on biological resources and ways that such impacts can be avoided, minimized, or mitigated. CEQA also provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed impacts.

The CEQA Guidelines define endangered animals or plants as species or subspecies whose "survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors" (14 CCR 15380[b][1]). A rare animal or plant is defined in CEQA Guidelines Section 15380(b)(2) as a species that, although not currently threatened with extinction, exists "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or … [t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act." Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing as defined further in CEQA Guidelines Section 15380(c).

Section IV, Appendix G (Environmental Checklist Form) of the CEQA Guidelines (14 CCR 15000 et seq.) requires an evaluation of impacts to "any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or the USFWS."

California Coastal Act of 1976

The California Coastal Act of 1976, administered by the California Coastal Commission (CCC), is the primary legislation guiding coastal development and protection. Pursuant to Section 30240 of the California Coastal Act, Environmentally Sensitive Habitat Areas (ESHAs) "shall be protected against any significant disruption of habitat values and only uses dependent on those resources shall be allowed within those areas." ESHAs are "any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments."

The California Coastal Act states that development adjacent to ESHAs must be located and designed to prevent significant impacts to the functions and values of the ESHA.

The federally approved California Coastal Zone Management Program is administered through a partnership between state and local coastal governments. The CCC and the California Coastal Conservancy manage and perform different roles under the Coastal Zone Management Program. The CCC is primarily responsible for managing and permitting activities within the coastal zone, and the California Coastal Conservancy is responsible for land acquisition and the protection, restoration, and enhancement of wetlands and coastal resources. The CCC advocates for local coastal city governments to establish Local Coastal Programs to protect public access and coastal resources on a local level as well as govern decisions on behalf of the CCC. Development within the coastal zone may not occur until the CCC or a local government with a CCC-certified Local Coastal Program (LCP), such as the City, has issued a Coastal Development Permit (CDP).

No portions of the Planning Area occur within the Coastal Zone; however, the southwestern portion of the city (within portions of Talbert Regional Park) are located within the Coastal Zone, and areas of the City of Newport Beach (within Randall Preserve and Upper Newport Back Bay) that occur immediately adjacent to the City of Costa Mesa are also located within the Coastal Zone. Therefore, future buildout of the Project would not require a CDP for future development.

4.4.2.3 Local

Costa Mesa 2015-2035 General Plan

The General Plan includes guiding principles, which inform the City's goals, policies, and implementation actions. The following goals and policies are relevant to the proposed Project and applicable to biological resources. The Conservation Element (Chapter 6) of the General Plan identifies areas in Costa Mesa with substantial natural resources that the City is committed to manage and protect from waste, destruction, and neglect. The Project would support and/or would not conflict with the implementation of the following goals and policies (City of Costa Mesa 2016):

Objective CON-1.A. Evaluate existing biotic resources and preserve them in ecologically viable and natural conditions, where possible; and/or restore and integrate these resources into the urban environment, where feasible.

Habitat and Biological Resources Protection and Restoration

Policy CON-1.A.1. Natural habitat is essential to ensuring biodiversity and protecting sensitive biological resources. Protect these areas and consult with the California Department of Fish and Wildlife, Orange County Water District, Orange County Parks, and other regional agencies to identify areas for special protection, and establish appropriate protection measures for these areas.

Policy CON-1.A.2. Contribute to regional biodiversity and the preservation of rare, unique, and sensitive biological resources by maintaining functional wildlife corridors and habitat linkages.

Policy CON-1.A.3. Coordinate with the United States Fish and Wildlife service, the California Department of Fish and Wildlife, and other regulatory agencies to mitigate project impacts affecting open and natural spaces.

Policy CON-1.A.5: Ensure that all future development is reviewed with regard to protecting natural topography and bluffs to preserve and enhance Costa Mesa's natural beauty.

Policy CON-1.A.6: Minimize soil depletion and erosion in development projects. Prevent erosion caused by construction activities, and encourage preservation of natural vegetation and topography.

Access to Large-Scale Natural Areas

Policy CON-1.A.7: Improve access to large-scale natural areas in the City. These areas should be open for controlled access to improve public enjoyment. Access should be limited where natural habitat is extremely sensitive. Work with transit agencies to improve connections and access to open space and recreation facilities from all Costa Mesa neighborhoods.

Policy CON-1.A.9: Coordinate the development of plans, policies, and design standards for projects within the Coastal Zone with appropriate local, regional, and federal agencies.

Orange County Natural Community Conservation Plan/Habitat Conservation Plan – Central/Coastal

The Natural Community Conservation Act, codified at Fish and Game Code Sections 2800-2840, authorizes the preparation of Natural Community Conservation Plans (NCCPs) to protect natural communities and species while allowing a reasonable amount of economic development. At the same time, the federal Endangered Species Act, Section 10, provides for the preparation of Habitat Conservation Plans (HCPs) to permit the taking of federally listed threatened and endangered species. Under both state and federal statutes, joint planning processes result in the preparation and adoption of an NCCP/HCP. The study area is within the NCCP/HCP for the County of Orange Central and Coastal Subregion, specifically within the Coastal Subregion of the NCCP/HCP and is therefore analyzed in the context of the NCCP/HCP with regard to the special status species identified in the NCCP/HCP and the mitigation provisions of the NCCP/HCP.

The NCCP/HCP was reviewed and approved by the U.S. Fish and Wildlife Service (USFWS) and CDFW in 1996 to address protection and management of coastal sage scrub (CSS) habitat and CSS-obligate species, and other covered habitats and species, and mitigate anticipated impacts to those habitats and species, on a programmatic, sub-regional level, rather than on a project-by-project, single species basis.

The Central and Coastal Subregion NCCP/HCP (herein referred to as "NCCP/HCP") includes a habitat reserve in excess of 37,000 acres for the protection of CSS, other upland habitats, the coastal California gnatcatcher, and other primarily CSS-dependent species identified in the NCCP/HCP. Specifically, the NCCP/HCP, USFWS, and CDFW authorize "take" under the federal and state endangered species acts of 39 "identified species" of plants and wildlife (including "covered" and "conditionally covered" species). Further, the NCCP/HCP contains requirements for adaptive management, interim management, and funding management for the Reserve, as well as procedures and minimization measures related to the "take" of "identified species" and habitat. Thus, the NCCP/HCP provides for the protection and management of a broad range of plant and wildlife populations, while providing certainty to the public and affected landowners with respect to the location of future development and open space in the subregion.

4.4.3 Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, the applicable thresholds of significance with regard to biological resources are listed below. A project may have a significant impact if it would:

Threshold 4.4-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS)?

Threshold 4.4-2: Have a substantial adverse effect on any sensitive natural communities (e.g., riparian habitat, coastal sage scrub, oak woodlands, non-jurisdictional wetlands) identified in local or regional plans, policies, regulations or by CDFW or USFWS?

Threshold 4.4-3: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The following threshold questions for this topic required in accordance with Appendix G of the CEQA Guidelines were scoped out of this Draft PEIR, having been adequately addressed in the Initial Study, wherein it was determined that the Project would have no impact or a less than significant impact on the environment:

- Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Thus, an analysis of these thresholds is included in Appendix A-1, NOP and Initial Study, of this Draft PEIR.

4.4.4 Impact Analyses

4.4.4.1 Methodology

Approach

As described in Chapter 3, Project Description, the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation (Project) does not include or propose any site-specific development that could directly result in construction or operational impacts to the environment. However, implementation of the Project would facilitate additional future development in the city. Therefore, this Draft PEIR does not assess the site-specific construction and operation details of each future development within the Planning Area. Rather, it assesses the impacts associated with changes to existing land uses and the associated overall effects of buildout of the Project through 2056, where reasonably foreseeable physical changes to the environment could occur. Analysis at a parcel or site-specific level was not conducted because, unless otherwise noted within this assessment, the actual locations of Project development (and its chronologic sequence or concurrence) that may

be implemented in the future are speculative. Measure K identified specific corridors to provide housing in existing industrial, commercial, and mixed-use areas. The key corridors within the city include Newport Boulevard, Harbor Boulevard, Placentia Avenue, 19th Street, 18th Street, 17th Street, Baker Street, Bristol Street, and areas north of Interstate (I) 405 (City of Costa Mesa 2025). Therefore, these specific corridors and parcels were included in this analysis in order to identify potential biological constraints that could occur during future Project build out.

The following data sources were reviewed to assist with the assessment of biological resources:

- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) (CDFW 2026a)
- U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) (USFWS 2026a)
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2026)
- Calflora's What Grows Here database (Calflora 2026)
- CDFW Biogeographic Information and Observation System (CDFW 2026b)
- CDFW California Sensitive Natural Communities list (CDFW 2025)
- USFWS National Wetlands Inventory (NWI) data (USFWS 2026b)
- National Hydrography Dataset and Watershed Boundary Dataset (USGS 2023)
- Google Earth, desktop application (Google Earth 2026)
- Historic Aerials, online viewer (NETR Online 2026)

The database queries included the Planning Area and a 5-mile buffer, including the U.S. Geological Survey (USGS) topographic quadrangle (Newport Beach) and surrounding six quadrangles (Seal Beach, Irvine, Laguna Beach, Orange, Anaheim, and Los Alamitos). Appendix E of this Draft PEIR includes the results of the queries of the CNDDB, CNPS Inventory, and IPaC.

For each special-status plant species known to occur in the vicinity of or within the Project, a determination was made regarding the potential for the species to occur within the Planning Area based on site-specific information gathered during the field reconnaissance, such as the location of the site, vegetation communities and soils present, current site conditions, and each species' known range, habitat associations, preferred soil substrate, life form, elevation, and blooming period. For each special-status wildlife species listed, a determination was made regarding potential use within the study area based on site-specific information gathered during the field reconnaissance, such as the location of the site, vegetation communities and soils present, current site conditions, and each species' known range, habitat preferences, and knowledge of the species' relative distributions in the area.

4.4.4.2 Environmental Analyses

Threshold 4.4-1 **Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS)?**

Significant and Unavoidable Impact. The CEQA Guidelines define endangered animals or plants as species or subspecies whose "survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors" (14

CCR 15380[b][1]). A rare animal or plant is defined in CEQA Guidelines Section 15380(b)(2) as a species that, although not currently threatened with extinction, exists "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or … [t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act." Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing as defined further in CEQA Guidelines Section 15380(c).

Relevant databases that contain information on candidate, sensitive, and/or special status species include: the CNDDB (CDFW 2026a); the CNPS Inventory of Rare and Endangered Plants (CNPS 2026); and the USFWS IPaC Database (USFWS 2026a). The results of these queries included 37 special status plant species and 47 special status wildlife species that have recorded occurrences in the Planning Area, the surrounding areas within the city, and within the surrounding six USGS topographic quadrangle maps. Critical habitat has been designated for coastal California gnatcatcher (*Polioptila californica californica*) to the immediate southwest of the City of Costa Mesa, within the City of Newport Beach within the proposed Randall Preserve property (USFWS 2026a). No mapped Critical Habitat areas occur within the city or within the Planning Area.

The potential for occurrence of plant and wildlife species is summarized according to the following categories. Because not all species are accommodated precisely by a given category (i.e., category definitions may be too restrictive), an expanded rationale for each category assignment is provided.

- **Known to occur**: The species has been documented in the Planning Area (CDFW 2026a, CNPS 2026).
- **High potential to occur**: The species has not been documented in the Planning Area but is known to recently occur in the vicinity and suitable habitat is present.
- **Moderate potential to occur**: The species has not been documented in the vicinity, but the Planning Area is within the known range of the species and suitable habitat for the species is present.
- **Low potential to occur**: The species has not been documented within 50 years in the vicinity of the Planning Area, but the site is within the known range of the species; however, suitable habitat for the species on site is of low quality.
- **Not expected to occur**: The Planning Area is outside the known geographic or elevational range of the species and/or the site does not support suitable habitat for the species.

Special Status Plants

Table 4.4-1 summarizes the regulatory status, natural history, and the results of assessment of occurrence for the 37 special-status plants recorded within the topographic quadrangle in which the Planning Area lies, and the surrounding six quadrangles. The majority of the special-status plant species evaluated in Table 4.4-1 are not expected to occur in the Planning Area due to the removal of natural vegetation communities and suitable soils due to the development within the Planning Area and city.

Table 4.4-1. Assessment of the Potential of Occurrence of Special-Status Plant Species

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Abronia villosa var. *aurita*	chaparral sand-verbena	None/None/1B.1	Chaparral, Coastal scrub, Desert dunes; Sandy/ annual herb/ (Jan)Mar–Sep/ 245–5,250	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Aphanisma blitoides	aphanisma	None/None/1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub; Gravelly (sometimes), Sandy (sometimes)/annual herb/Feb–June/5–1,000	Not expected to occur. No suitable vegetation is present primarily due to the lack of coastal dunes.
Astragalus hornii var. *hornii*	Horn's milk-vetch	None/None/1B.1	Meadows and seeps, Playas; Alkaline, Lake Margins/annual herb/ May–Oct/195–2,790	Not expected to occur. No suitable vegetation present as the conditions on the Planning Area are primarily xeric.
Astragalus pycnostachyus var. *lanosissimus*	Ventura Marsh milk-vetch	FE/SE/1B.1	Coastal dunes, Coastal scrub, Marshes and swamps (edges, coastal salt, brackish)/perennial herb/(June)Aug–Oct/ 5–115	Not expected to occur. No suitable vegetation is present primarily due to the lack of coastal dunes.
Atriplex coulteri	Coulter's saltbush	None/None/1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub, Valley and foothill grassland; Alkaline (sometimes), Clay (sometimes)/perennial herb/Mar–Oct/10–1,510	Not expected to occur. No suitable vegetation is present primarily due to the lack of coastal dunes and clay soils.
Atriplex pacifica	south coast saltscale	None/None/1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub, Playas/annual herb/Mar–Oct/0–460	Not expected to occur. No suitable vegetation is present primarily due to the lack of coastal dunes.
Atriplex parishii	Parish's brittlescale	None/None/1B.1	Chenopod scrub, Playas, Vernal pools; Alkaline/ annual herb/June–Oct/ 80–6,235	Not expected to occur. No suitable vegetation present and the Planning Area lacks playas and vernal pools.
Atriplex serenana var. *davidsonii*	Davidson's saltscale	None/None/1B.2	Coastal bluff scrub, Coastal scrub; Alkaline/ annual herb/Apr–Oct/ 35–655	Not expected to occur. No suitable vegetation is present.

Table 4.4-1. Assessment of the Potential of Occurrence of Special-Status Plant Species

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Calochortus weedii var. *intermedius*	intermediate mariposa-lily	None/None/1B.2	Chaparral, Coastal scrub, Valley and foothill grassland; Rocky/ perennial bulbiferous herb/May–July/ 345–2,805	Not expected to occur. The site is outside of the species' known elevation range.
Calystegia felix	lucky morning-glory	None/None/1B.1	Meadows and seeps (sometimes alkaline), Riparian scrub (alluvial); Alkaline (sometimes), Loam (sometimes)/ annual rhizomatous herb/Mar–Sep/100–705	Not expected to occur. No suitable vegetation is present as no riparian scrub occurs within the Planning Area.
Centromadia parryi ssp. *australis*	southern tarplant	None/None/1B.1	Marshes and swamps (margins), Valley and foothill grassland (vernally mesic), Vernal pools/ annual herb/ May–Nov/0–1,575	**Low potential to occur.** While southern tarplant has been documented within the city, it is restricted to natural areas within open space parks and does not occur within the undeveloped parcels in the Planning Area due to lack of suitable soils.
Chaenactis glabriuscula var. *orcuttiana*	Orcutt's pincushion	None/None/1B.1	Coastal bluff scrub (sandy), Coastal dunes/annual herb/ Jan–Aug/0–330	Not expected to occur. No suitable vegetation is present primarily due to the lack of coastal dunes.
Chloropyron maritimum ssp. *maritimum*	salt marsh bird's-beak	FE/SE/1B.2	Coastal dunes, Marshes and swamps (coastal salt)/annual herb (hemiparasitic)/ May–Oct(Nov)/0–100	Not expected to occur. No suitable vegetation is present primarily due to the lack of coastal dunes.
Comarostaphylis diversifolia ssp. *diversifolia*	summer holly	None/None/1B.2	Chaparral, Cismontane woodland/perennial evergreen shrub/ Apr–June/100–2,590	Not expected to occur. No suitable chaparral vegetation is present.
Dudleya multicaulis	many-stemmed dudleya	None/None/1B.2	Chaparral, Coastal scrub, Valley and foothill grassland; Clay (often)/ perennial herb/Apr–July/ 50–2,590	Not expected to occur. The Planning Area contains grassland habitat, however these areas are highly disturbed.

Table 4.4-1. Assessment of the Potential of Occurrence of Special-Status Plant Species

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Dudleya stolonifera	Laguna Beach dudleya	FT/ST/1B.1	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland; Rocky/ perennial stoloniferous herb/May–July/35–855	Not expected to occur. The Planning Area contains grassland habitat, however these areas are highly disturbed.
Eriastrum densifolium ssp. *sanctorum*	Santa Ana River woollystar	FE/SE/1B.1	Chaparral, Coastal scrub (alluvial fans); Gravelly (sometimes), Sandy (sometimes)/perennial herb/Apr–Sep/ 300–2,000	Not expected to occur. The site is outside of the species' known elevation range and there is no suitable vegetation present.
Eryngium aristulatum var. *parishii*	San Diego button-celery	FE/SE/1B.1	Coastal scrub, Valley and foothill grassland, Vernal pools; Mesic/annual/ perennial herb/ Apr–June/65–2,035	Not expected to occur. No vernal pools occur within the Planning Area.
Euphorbia misera	cliff spurge	None/None/2B.2	Coastal bluff scrub, Coastal scrub, Mojavean desert scrub; Rocky/ perennial shrub/ (Oct)Dec–Aug/35–1,640	Not expected to occur. No suitable vegetation is present.
Helianthus nuttallii ssp. *parishii*	Los Angeles sunflower	None/None/1A	Marshes and swamps (freshwater, coastal salt)/perennial rhizomatous herb/ Aug–Oct/35–5,005	Not expected to occur. The Planning Area does not contain any marshes or swamps.
Horkelia cuneata var. *puberula*	mesa horkelia	None/None/1B.1	Chaparral (maritime), Cismontane woodland, Coastal scrub; Gravelly (sometimes), Sandy (sometimes)/perennial herb/Feb–July(Sep)/ 230–2,660	Not expected to occur. No suitable vegetation is present.
Isocoma menziesii var. *decumbens*	decumbent goldenbush	None/None/1B.2	Chaparral, Coastal scrub (often disturbed areas, sandy)/perennial shrub/ Apr–Nov/35–820	**Low potential to occur.** The Planning Area contains disturbed sites, however, these areas have been used for agricultural purposes and do not provide suitable habitat for this species.

Table 4.4-1. Assessment of the Potential of Occurrence of Special-Status Plant Species

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	None/None/1B.1	Marshes and swamps (coastal salt), Playas, Vernal pools/annual herb/Feb–June/5–4,005	**Low potential to occur.** This species has been documented within Fairview Park and Talbert Regional Park, but no suitable habitat occurs within the Planning Area as it does not contain any marshes or swamps.
Nama stenocarpa	mud nama	None/None/2B.2	Marshes and swamps (lake margins, riverbanks)/annual/ perennial herb/Jan–July/ 15–1,640	Not expected to occur. The Planning Area does not contain any marshes or swamps.
Nasturtium gambelii	Gambel's water cress	FE/ST/1B.1	Marshes and swamps (brackish, freshwater)/ perennial rhizomatous herb/Apr–Oct/15–1,085	Not expected to occur. The Planning Area does not contain any marshes or swamps.
Navarretia prostrata	prostrate vernal pool navarretia	None/None/1B.2	Coastal scrub, Meadows and seeps, Valley and foothill grassland (alkaline), Vernal pools; Mesic/annual herb/ Apr–July/10–3,970	Not expected to occur. No vernal pools occur within the Planning Area.
Nemacaulis denudata var. *denudata*	coast woolly-heads	None/None/1B.2	Coastal dunes/annual herb/Apr–Sep/0–330	Not expected to occur. No suitable vegetation is present primarily due to the lack of coastal dunes.
Orcuttia californica	California Orcutt grass	FE/SE/1B.1	Vernal pools/annual herb/Apr–Aug/50–2,165	Not expected to occur. No vernal pools occur within the Planning Area.
Pentachaeta aurea ssp. *allenii*	Allen's pentachaeta	None/None/1B.1	Coastal scrub (openings), Valley and foothill grassland/annual herb/ Mar–June/245–1,705	Not expected to occur. The site is outside of the species' known elevation range.
Phacelia stellaris	Brand's star phacelia	None/None/1B.1	Coastal dunes, Coastal scrub/annual herb/ Mar–June/5–1,310	Not expected to occur. No suitable vegetation is present primarily due to the lack of coastal dunes.
Quercus dumosa	Nuttall's scrub oak	None/None/1B.1	Chaparral, Closed-cone coniferous forest, Coastal scrub; Clay, Loam, Sandy/ perennial evergreen shrub/Feb–Apr (May–Aug)/50–1,310	Not expected to occur. No suitable vegetation is present.

Table 4.4-1. Assessment of the Potential of Occurrence of Special-Status Plant Species

Scientific Name	Common Name	Status (Federal/State/ CRPR)	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Sagittaria sanfordii	Sanford's arrowhead	None/None/1B.2	Marshes and swamps (shallow freshwater)/ perennial rhizomatous herb (emergent)/ May–Oct(Nov)/0–2,135	Not expected to occur. The Planning Area does not contain any marshes or swamps.
Senecio aphanactis	chaparral ragwort	None/None/2B.2	Chaparral, Cismontane woodland, Coastal scrub; Alkaline (sometimes)/ annual herb/ Jan–Apr(May)/50–2,625	Not expected to occur. No suitable vegetation is present.
Sidalcea neomexicana	salt spring checkerbloom	None/None/2B.2	Chaparral, Coastal scrub, Lower montane coniferous forest, Mojavean desert scrub, Playas; Alkaline, Mesic/ perennial herb/ Mar–June/50–5,020	Not expected to occur. The conditions within the Planning Area are xeric.
Suaeda esteroa	estuary seablite	None/None/1B.2	Marshes and swamps (coastal salt)/perennial herb/(Jan–May)July–Oct/ 0–15	Not expected to occur. The Planning Area does not contain any marshes or swamps.
Symphyotrichum defoliatum	San Bernardino aster	None/None/1B.2	Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Marshes and swamps, Meadows and seeps, Valley and foothill grassland (vernally mesic); Streambanks/ perennial rhizomatous herb/July–Nov/5–6,695	Not expected to occur. The Planning Area does not contain any marshes or swamps.
Verbesina dissita	big-leaved crownbeard	FT/ST/1B.1	Chaparral (maritime), Coastal scrub/perennial herb/(Mar)Apr–July/ 150–675	Not expected to occur. No suitable vegetation is present.

Notes:

[1] Status Abbreviations

Note: Extirpation noted in CNDDB records is only relevant to that particular recorded incidence, not necessarily to all possible occurrences in the region. In other words, extirpation of the recorded incidence is only suggestive rather than conclusive that the species may not be present in the region.

Federal and State Statuses

FE: Federally considered endangered

FT: Federally considered threatened

SE: State considered endangered

ST: State considered threatened

CRPR: California Rare Plant Rank

CRPR 1A: Plants presumed extirpated in California and either rare or extinct elsewhere

CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere

CRPR 2A: Plants presumed extirpated in California but common elsewhere
CRPR 2B: Plants rare, threatened, or endangered in California but more common elsewhere
CRPR 3: Plants about which more information is needed
CRPR 4: Watch List: Plants of limited distribution
.1 – Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)
.2 – Moderately threatened in California (20 percent–80 percent of occurrences threatened/moderate degree and immediacy of threat)
.3 – Not very threatened in California (less than 20 percent of occurrences threatened/low degree and immediacy of threat).
See Appendix E for more details.

None of the 37 special-status plant species evaluated for their potential to occur within Planning Area have more than a Low potential to occur. The three species with a Low potential to occur are southern tarplant (*Centromadia parryi* ssp*. australis*), decumbent goldenbush (*Isocoma menziesii* var*. decumbens*), and Coulter's goldfields (*Lasthenia glabrata* ssp*. coulteri*), which are not listed under FESA or CESA and are restricted to open space parks within the city and do not have any potential to occur within the Planning Area. These three species are listed as California Rare Plant Rank 1B.1 and 1B.2 species and potential impacts would be considered significant. Therefore, despite the low potential for occurrence, if any of these special-status plant species are found within future development areas prior to ground disturbance, these impacts would be considered significant. Project implementation of mitigation measure MM-4.4-1 would reduce potential impacts to a less than significant level through a project-specific habitat assessment. Additionally, implementation of MM-4.4-2 would further reduce impacts through project-specific focused rare plant surveys, and subsequent avoidance/relocation if necessary. Future non-discretionary projects that would be implemented under the Project would be subject to the federal, state and local regulations mentioned above; however, these non-discretionary projects would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. As such, even with implementation of existing regulations and MM-4.4-1 and MM-4.4-2 as applied to future discretionary projects, impacts to protected plant species would be significant and unavoidable.

Special Status Wildlife

Table 4.4-2 summarizes the regulatory status, natural history, and the results of assessment of occurrence for the 47 special-status wildlife species with records in the Planning Area and/or within the surrounding six topographic quadrangles. The majority of the special-status wildlife species evaluated in Table 4.4-2 are not expected to occur in the Planning Area due to the removal of natural vegetation communities and previous and ongoing disturbances due to the development within the Planning Area and city.

Table 4.4-2. Assessment of the Potential of Occurrence of Special-Status Wildlife Species

Scientific Name	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Amphibians				
Spea hammondii	western spadefoot	FPT/SSC	Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley–foothill woodlands, pastures, and other agriculture	**Low potential to occur.** The Planning Area lacks vernal pools and wetlands, however, the agricultural lands could provide opportunity for spadefoot to occur after rains if ponding occurs.
Reptiles				
Anniella stebbinsi	southern California legless lizard	None/SSC	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and moist sandy or loose, loamy soils	Not expected to occur. The Planning Area lacks coastal dune habitat to support this species.
Aspidoscelis hyperythra	orange-throated whiptail	None/WL	Low-elevation coastal scrub, chaparral, and valley–foothill hardwood	Not expected to occur. No suitable vegetation present in the Planning Area despite suitable habitat within the city.
Chelonia mydas	green sea turtle	FT/None	Shallow waters of lagoons, bays, estuaries, mangroves, eelgrass, and seaweed beds	Not expected to occur. The Planning Area lacks perennial tidal waterways.
Crotalus ruber	red diamondback rattlesnake	None/SSC	Coastal scrub, chaparral, oak and pine woodlands, rocky grasslands, cultivated areas, and desert flats	Not expected to occur. No suitable vegetation present.
Phrynosoma blainvillii	coast horned lizard	None/SSC	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, and annual grassland habitats	Not expected to occur. No suitable vegetation present in the Planning Area despite suitable habitat within the city.
Birds				
Accipiter cooperii (nesting)	Cooper's hawk	None/WL	Nests and forages in dense stands of live oak, riparian woodlands, or other woodland habitats often near water	Not expected to occur. No suitable vegetation is present within the Planning Area despite suitable habitat within the city.

Table 4.4-2. Assessment of the Potential of Occurrence of Special-Status Wildlife Species

Scientific Name	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Agelaius tricolor (nesting colony)	tricolored blackbird	BCC/SSC, ST	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberry; forages in grasslands, woodland, and agriculture	Not expected to occur. No suitable vegetation is present within the Planning Area despite suitable habitat within the city.
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	None/WL	Nests and forages in open coastal scrub and chaparral with low cover of scattered scrub interspersed with rocky and grassy patches	Not expected to occur. No suitable vegetation present.
Ammodramus savannarum (nesting)	grasshopper sparrow	None/SSC	Nests and forages in moderately open grassland with tall forbs or scattered shrubs used for perches	Not expected to occur. No suitable vegetation present.
Athene cunicularia (burrow sites & some wintering sites)	burrowing owl	BCC/SSC, SC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	**Low potential to occur.** Burrowing owl has been found in Talbert Regional Park and within the Upper Newport Back Bay, both outside of the Planning Area boundaries. Marginally suitable habitat exists within the agricultural land on the Planning Area however the current land use limits the opportunities for burrowing owl to occur in these areas.
Buteo regalis (wintering)	ferruginous hawk	None/WL	Winters and forages in open, dry country, grasslands, open fields, agriculture	**Low potential to occur.** This species may forage within the agricultural land on the Planning Area but is not expected to nest.
Buteo swainsoni (nesting)	Swainson's hawk	None/ST	Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture	**Low potential to occur.** This species may forage within the agricultural land on the Planning Area but is not expected to nest.
Campylorhynchus brunneicapillus sandiegensis (San Diego & Orange Counties only)	coastal cactus wren	None/SSC	Southern cactus scrub patches	Not expected to occur. No suitable vegetation is present.
Coccyzus americanus	western yellow-billed cuckoo	FT/SE	Nests in dense, wide riparian woodlands and	Not expected to occur. No suitable vegetation is present due to the lack of riparian habitat within the Planning Area. This species has

Table 4.4-2. Assessment of the Potential of Occurrence of Special-Status Wildlife Species

Scientific Name	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
occidentalis (nesting)			forest with well-developed understories	also not been recorded within the city.
Coturnicops noveboracensis	yellow rail	BCC/SSC	Nesting requires wet marsh/sedge meadows or coastal marshes with wet soil and shallow, standing water	Not expected to occur. No suitable vegetation or coastal marshes are present.
Elanus leucurus (nesting)	white-tailed kite	None/FP	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands	**Low potential to occur.** This species may forage within the Planning Area but is not expected to nest.
Eremophila alpestris actia	California horned lark	None/WL	This subspecies of horned lark occurs on the state's southern and central coastal slope and in the San Joaquin Valley. Nests and forages in grasslands, disturbed lands, agriculture, and beaches.	**Moderate potential to occur.** This species may occur within the agricultural parcels on the Planning Area.
Falco peregrinus anatum (nesting)	American peregrine falcon	FD/SD	Nests on cliffs, buildings, and bridges; forages in wetlands, riparian, meadows, croplands, especially where waterfowl are present	**Low potential to occur.** This species may forage within the Planning Area but is not expected to nest.
Icteria virens (nesting)	yellow-breasted chat	None/SSC	Nests and forages in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush	Not expected to occur. No suitable vegetation is present due to the lack of riparian woodlands within the Planning Area.
Laterallus jamaicensis coturniculus	California black rail	None/FP, ST	Tidal marshes, shallow freshwater margins, wet meadows, and flooded grassy vegetation; suitable habitats are often supplied by canal leakage in Sierra Nevada foothill populations	Not expected to occur. No suitable vegetation is present due to the lack of tidal marshes.
Pandion haliaetus (nesting)	osprey	None/WL	Large waters (lakes, reservoirs, rivers) supporting fish; usually near forest habitats, but widely observed along the coast	Not expected to occur. This species may fly over the Planning Area but is not expected to forage or nest on site.

Table 4.4-2. Assessment of the Potential of Occurrence of Special-Status Wildlife Species

Scientific Name	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Passerculus sandwichensis beldingi	Belding's savannah sparrow	BCC/SE	Nests and forages in coastal saltmarsh dominated by pickleweed (Salicornia spp.)	Not expected to occur. No suitable vegetation is present on the Planning Area due to the lack of coastal saltmarsh habitat.
Polioptila californica californica	coastal California gnatcatcher	FT/SSC	Nests and forages in various sage scrub communities, often dominated by California sagebrush and buckwheat; generally avoids nesting in areas with a slope of greater than 40 percent; majority of nesting at less than 1,000 feet above mean sea level	Not expected to occur. No suitable vegetation is present in the Planning Area, however this species has been found within the city and Critical Habitat is mapped to the immediate southwest of the city.
Rallus obsoletus levipes	light-footed Ridgway's rail	FE/FP, SE	Coastal wetlands, brackish areas, coastal saline emergent wetlands	Not expected to occur. No suitable vegetation is present due to the lack of coastal wetlands.
Riparia riparia (nesting)	bank swallow	None/ST	Nests in riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with sandy soils; open country and water during migration	Not expected to occur. No suitable vegetation is present due to the lack of riparian habitat and vertical cliffs within the Planning Area.
Rynchops niger (nesting colony)	black skimmer	BCC/SSC	Nests on barrier beaches, shell banks, spoil islands, and saltmarsh; forages over open water; roosts on sandy beaches and gravel bars	Not expected to occur. The Planning Area occurs in upland areas outside of beaches or tidal areas.
Setophaga petechia (nesting)	yellow warbler	None/SSC	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	Not expected to occur. No suitable vegetation is present due to the lack of riparian habitat and oak woodlands within the Planning Area.
Sternula antillarum browni (nesting colony)	California least tern	FE/FP, SE	Forages in shallow estuaries and lagoons; nests on sandy beaches or exposed tidal flats	Not expected to occur. The Planning Area occurs in upland areas outside of lagoons or tidal areas.
Vireo bellii pusillus (nesting)	least Bell's vireo	FE/SE	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	Not expected to occur. No suitable vegetation is present within the Planning Area despite this species being observed within the city.

Table 4.4-2. Assessment of the Potential of Occurrence of Special-Status Wildlife Species

Scientific Name	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Anarhynchus nivosus nivosus (nesting)	western snowy plover	FT, BCC/SSC	On coasts nests on sandy marine and estuarine shores; in the interior nests on sandy, barren or sparsely vegetated flats near saline or alkaline lakes, reservoirs, and ponds	Not expected to occur. The Planning Area occurs in upland areas outside of beaches or tidal areas.
Fishes				
Catostomus santaanae	Santa Ana sucker	FT/SSC	Small, shallow, cool, clear streams less than 7 meters (23 feet) in width and a few centimeters to more than a meter (1.5 inches to more than 3 feet) in depth; substrates are generally coarse gravel, rubble, and boulder	Not expected to occur. The Planning Area occurs in upland areas outside of any streams or waterways.
Eucyclogobius newberryi	tidewater goby	FE/SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County, to the mouth of the Smith River	Not expected to occur. The Planning Area occurs in upland areas outside of any streams or waterways.
Oncorhynchus mykiss irideus pop. 10	southern steelhead - southern California DPS	FE/SE	Clean, clear, cool, well-oxygenated streams; needs relatively deep pools in migration and gravelly substrate to spawn	Not expected to occur. The Planning Area occurs in upland areas outside of any streams or waterways.
Mammals				
Choeronycteris mexicana	Mexican long-tongued bat	None/SSC	Desert and montane riparian, desert succulent scrub, desert scrub, and pinyon–juniper woodland; roosts in caves, mines, and buildings	Not expected to occur. No suitable vegetation or caves and mines are present.
Dasypterus xanthinus	western yellow bat	None/SSC	Valley–foothill riparian, desert riparian, desert wash, and palm oasis habitats; below 2,000 feet above mean sea level; roosts in riparian and palms	Not expected to occur. The Planning Area lacks palm oases to support this species. Palm trees occur throughout the Planning Area as ornamental vegetation, but are located in urban areas away from fresh water sources.

Table 4.4-2. Assessment of the Potential of Occurrence of Special-Status Wildlife Species

Scientific Name	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Eumops perotis californicus	western mastiff bat	None/SSC	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels	Not expected to occur. The Planning Area lacks rocky canyons and cliffs to support roosting habitat for this species.
Microtus californicus stephensi	south coast marsh vole	None/SSC	Tidal marshes	Not expected to occur. The Planning Area lacks tidal marshes.
Nyctinomops macrotis	big free-tailed bat	None/SSC	Rocky areas; roosts in caves, holes in trees, buildings, and crevices on cliffs and rocky outcrops; forages over water	Not expected to occur. The Planning Area lacks suitable roosting habitat for this species.
Perognathus longimembris pacificus	Pacific pocket mouse	FE/SSC	Fine-grained sandy substrates in open coastal strand, coastal dunes, and river alluvium	Not expected to occur. The Planning Area occurs in upland areas outside of coastal sandy areas and dunes.
Sorex ornatus salicornicus	southern California saltmarsh shrew	None/SSC	Saltmarsh, saltgrass, dense willow, bulrush	Not expected to occur. The Planning Area occurs in upland areas outside of saltmarsh areas.
Taxidea taxus	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	Not expected to occur. The Planning Area occurs in an urbanized area surrounded by development and does not provide suitable habitat for this species.
Invertebrates				
Bombus crotchii	Crotch's bumble bee	None/SCE	Open grassland and scrub communities supporting suitable floral resources.	**Moderate potential to occur.** Portions of the Planning Area, including agricultural areas that contain floristic resources could provide suitable habitat for this species.
Branchinecta sandiegonensis	San Diego fairy shrimp	FE/None	Vernal pools, non-vegetated ephemeral pools	Not expected to occur. The Planning Area lacks vernal pools that could provide suitable habitat for this species.

Table 4.4-2. Assessment of the Potential of Occurrence of Special-Status Wildlife Species

Scientific Name	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Euphydryas editha quino	quino checkerspot butterfly	FE/None	Annual forblands, grassland, open coastal scrub and chaparral; often soils with cryptogamic crusts and fine-textured clay; host plants include *Plantago erecta, P. patagonica*, and *Antirrhinum coulterianum*, among others	Not expected to occur. No suitable host plants or hill topping opportunities occur within the Planning Area.
Streptocephalus woottoni	Riverside fairy shrimp	FE/None	Vernal pools, non-vegetated ephemeral pools	Not expected to occur. The Planning Area lacks vernal pools that could provide suitable habitat for this species.
Danaus plexippus plexippus pop. 1	monarch butterfly - California overwintering population	PFT/None	Wind-protected tree groves with nectar sources and nearby water sources	Not expected to occur. While the monarch butterfly has been found overwintering within the southwestern portion of the city, there have been no counts recorded within the Planning Area per the Xerces Society Western Monarch count. While eucalyptus trees may be present within the Planning Area, this species has not been documented outside of known locations during annual surveys that date back to 1997.

Notes:
[1] Status Abbreviations
Note: Extirpation noted in CNDDB records is only relevant to that particular recorded incidence, not necessarily to all possible occurrences in the region. In other words, extirpation of the recorded incidence is only suggestive rather than conclusive that the species may not be present in the region.
BCC: Bird of Conservation Concern
FE: Federally considered endangered
FDL: Federal De-listed
FP: Fully Protected (by the State of California)
FT: Federally Threatened
PFT: Proposed Federally Threatened
SE: State Endangered
SSC: Species of Special Concern
ST: State Threatened
See Appendix E.

Based on the baseline habitat conditions within the Planning Area and other surrounding areas in the city, Dudek determined that six special-status wildlife species have a low potential to occur and two species have a moderate potential to occur. The remaining 39 special-status wildlife species evaluated in Table 4.4-2 are not expected to occur within or in the immediate vicinity of the Planning Area due to a lack of suitable habitat and existing disturbances from previous and ongoing development.

Species with a Low potential to occur include: western spadefoot (*Spea hammondii*), burrowing owl (*Athene cunicularia*), ferruginous hawk (*Buteo regalis*), Swainson's hawk (*Buteo swainsonii*), white-tailed kite (*Elanus leucurus*), and American peregrine falcon (*Falco peregrinus anatum*). With the exception of western spadefoot, the remaining five species are all raptors that may all forage within the Planning Area, particularly within agricultural lands, but are not expected to nest. Burrowing owl has a low potential to also nest within the agricultural lands but have not been previously documented within the Planning Area. The known locations of burrowing owl within the city occur within open space parks in the southwest portion of the city, outside of the Planning Area. Regardless, if any of these raptors are found nesting within the Planning Area, potential future buildout may result in a significant impact to these nesting raptors. Therefore, Project implementation of MM-4.4-1 would reduce impacts through a project-specific habitat assessment to determine if suitable habitat exists for these species. Additionally, implementation of MM-4.4-3 would further reduce impacts through breeding season avoidance and pre-construction clearance surveys. MM-4.4-3 also includes measures for avoidance and monitoring if any avian species is found on any of the Project parcels prior to future buildout.

Burrowing owl is currently a candidate species for listing under CESA and may be fully listed prior to future Project buildout. In the event burrowing owl is found on any Project parcel prior to project-specific construction potential impacts would be considered significant. Therefore, implementation of MM-4.4-1 and MM-4.4-4 would reduce potential project-specific impacts to a less than significant level through a habitat assessment, focused protocol surveys, breeding season avoidance, and applying for an Incidental Take Permit (ITP) from CDFW if impacts cannot be avoided. The ITP would be prepared and implemented through coordination with CDFW and would involve potential relocation and conservation of habitat to offset potential project-related impacts.

Western spadefoot is proposed for listing as threatened under FESA and is a California Species of Special Concern that may occur in the agricultural fields on the Planning Area if significant ponding occurs after rains (i.e. persisting at least three weeks). If this species is found on a Planning Area parcel prior to future buildout, potentially significant impacts could occur from direct take or loss of occupied habitat. Therefore, Project implementation of MM-4.4-1 and MM-4.4-5 would reduce potential impacts to a less than significant level through a habitat assessment and focused surveys to determine presence/absence. MM-4.4-5 also includes measures to relocate any found western spadefoots through a USGS approved Relocation Plan.

Special-status wildlife species with a moderate potential to occur on the Planning Area include: California horned lark (*Eremophila alpestris actia*), Crotch's bumble bee (*Bombus crotchii*), and monarch butterfly (*Danaus plexippus plexippus*). California horned lark is a Watch List species that may occur within the agricultural land on the Planning Area. Project-specific related impacts to this species may occur if future construction buildout occurs during the avian breeding season of February through August and California horned lark is found on site. Direct or indirect impacts to this species would be considered significant as the species is also protected by the MBTA. Therefore, implementation of MM-4.4-3 would reduce potential project-specific impacts to a less than significant level through breeding season avoidance, pre-construction surveys, and monitoring, if needed.

Crotch's bumble bee is a state candidate for listing as endangered under CESA and has the potential to occur within the agricultural fields and areas with floristic resources that occur throughout the Planning Area. As this species uses a variety of habitats for nesting and foraging, there is a moderate potential for this species to occur and impacts to this species would be considered significant. Therefore, implementation of MM-4.4-6 would reduce potential impacts to a less than significant level through focused protocol surveys, avoidance measures, and applying for an ITP from CDFW if impacts cannot be avoided.

Lastly, coastal California gnatcatcher has known extant occurrences within the city and designated critical habitat to the immediate southwest of the city (CDFW 2026a, USFWS 2026a). However, coastal California gnatcatcher habitat does not occur within the Planning Area due to the lack of coastal sage scrub vegetation within the identified parcels and therefore, this species is not expected to occur in the Planning Area and future buildout would have no impact on this species.

Future non-discretionary projects in the Planning Area that would be implemented under the Project would be subject to the federal, state and local regulations mentioned above. However, future non-discretionary projects, such as by-right residential or mixed-use development, would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. As such, even with implementation of existing regulations and MM-4.4-1, MM-4.4-3, MM-4.4-4, MM-4.4-5, and MM-4.4-6 as applied to future discretionary projects, impacts to protected wildlife species would be significant and unavoidable.

Threshold 4.4-2 Would the project have a substantial adverse effect on any sensitive natural communities (e.g., riparian habitat, coastal sage scrub, oak woodlands, non-jurisdictional wetlands) identified in local or regional plans, policies, regulations or by CDFW or USFWS?

Less Than Significant Impact. Sensitive natural communities are those that are vulnerable, at high risk, or very high risk of extinction or elimination due to restricted range, few populations or occurrences, steep declines, severe threats, or other factor (NatureServe 2026). CDFW has compiled a list of vegetation communities that the agency has deemed as sensitive in California (CDFW 2026b). The CNDDB identifies nine sensitive natural communities that have been recorded within the Planning Area's topographic quadrangle and surrounding six quadrangles (CDFW 2026b): California walnut woodland, Southern California arroyo chub/Santa Ana sucker stream, southern coastal salt marsh, southern cottonwood willow riparian forest, southern dune scrub, southern foredunes, southern sycamore alder riparian woodland, and valley needlegrass grassland. These communities are associated with native woodlands, riparian areas, and coastal dune habitat that do not occur within the Planning Area, which is characterized as upland areas primarily developed outside of two agricultural parcels. The open space parks and channelized portions of the Santa Ana River and its tributaries within the city provide opportunities for these sensitive natural communities to occur. However, these areas occur outside of the Planning Area and would not be impacted by future buildout of the Project. Therefore, the Project would have no impact on sensitive natural communities and no mitigation is required.

Threshold 4.4-3 Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less than Significant. The Planning Area is developed and surrounded by developed areas, and does not reside within any designated wildlife corridors and/or habitat linkages identified in the South Coast Missing Linkages Analysis Project (South Coast Wildlands 2008) or California Essential Habitat Connectivity project (Spencer et al. 2010). Potential movement corridors do not exist within the Planning Area, however, there are opportunities for wildlife movement within the open space parks and channelized waterways within the city, outside of the Planning Area. These potential corridors would not be impacted by future buildout of the Project and wildlife would be allowed to continue to use these areas during future project-specific construction activities. Additionally, undeveloped parcels in the Planning Area (particularly agricultural lands) are surrounded by development and do not function as a corridor or linkage between larger habitat blocks in the vicinity (e.g. Santa Ana River and Newport Back Bay). Future development of identified parcels would also not create a barrier for wildlife movement.

The Planning Area is near an Important Bird Areas, Orange Coast Wetlands (Audubon 2026). The area includes Upper Newport Bay and the Santa Ana River Mouth (Audubon 2026). Shorebirds and water fowl use these areas during migration (Audubon 2026). The Project is not expected to have an impact on these areas and migrating birds since the Planning Area is approximately 0.80 miles from the Upper Newport Bay, at its closest, and approximately 0.30 miles from the Santa Ana River mouth. Additionally, the Planning Area is currently developed and located within a highly urbanized area of the City, surrounded by a mix of commercial and residential uses, including the 287-foot tall Center Tower and 283-foot Plaza Tower (SKYDB 2026). Bird-window collision mortality has been shown to be strongly associated with an interaction effect between building size and regional urbanization, with the positive effect of building size on mortality strongest in areas with low levels of regional urbanization and weak to nonexistent in regions with high levels of urbanization (Loss et al. 2019; Hager et al. 2013). As such, an increase in the height of buildings within the Planning Area would not be expected to increase bird-window collisions and would have a less than significant impact on migrating bird movement.

Additionally, Project buildout would have the potential to remove landscaping trees, which could occur during nesting bird season. All development activities within the Planning Area are subject to the requirement to protect nesting birds, in compliance with the MBTA and sections 3503, 3503.5, and 3513 of the California Fish and Game Code, which prohibits the accidental or "incidental" taking or killing of migratory birds. Any future development projects that would be implemented in accordance with the Planning Area would be required to comply with the MBTA and sections 3503, 3503.5, and 3513 of the California Fish and Game Code by preventing the disturbance of nesting birds during construction activities. This would generally involve clearing a project site of all vegetation outside the nesting season (from September 1 through January 31) or if construction would commence within the nesting season (which generally occurs from February 1 through August 31), conducting a pre-construction nesting bird survey to determine the presence of nesting birds or active nests at a construction site. Per the requirements of the MBTA, active nests and nesting birds must be protected from disturbance by construction activities, usually accomplished through buffers between nest sites and construction activities during nesting. Compliance with the MBTA would ensure that the implementation of future projects would not interfere with the nesting of any native bird species. Therefore, the Project would not interfere substantially with established native or migratory wildlife movement, wildlife corridors, or impede the use of native wildlife nursery and there would be no impact on wildlife movement corridors or linkages.

4.4.5 Cumulative Impact Analyses

Where a lead agency concludes that the cumulative effects of a project, taken together with the impacts of other closely related past, present, and reasonably foreseeable future projects are significant, the lead agency then must determine whether the project's incremental contribution to such significant cumulative impact is "cumulatively considerable" (and thus significant in and of itself). The cumulative study area used to assess potential cumulative biological resources impacts includes the entirety of the city and considers the future buildout of applicable local and regional plans. The full list of related plans applicable to the Project's cumulative analyses is provided in Section 2.5, Cumulative Impact Analysis, in Chapter 2, Environmental Setting of this Draft PEIR.

Threshold 4.4-1. As shown in Tables 4.4-1 and 4.4-2, three sensitive or special status plant species and six wildlife species have the potential to occur on the Planning Area, and none are known to occur on the Planning Area. Implementation of the Project would not lead to adverse modifications to habitat that could support the species that could occur in the Planning Area. Since the Project does not propose conversion of areas currently zoned as open space to expand development, these potential impacts are limited to a few currently undeveloped or partially undeveloped parcels where existing special-status plant and wildlife species, if present, do not represent a substantial occurrence in the context of the overall species range and are not likely to have long-term viability under

current urbanized conditions. Nevertheless, impacts to special status species in the Planning Area could occur, which would result in a significant impact. As with the Project, all cumulative projects would be required to comply with all applicable regulations, including the Federal Endangered Species Act, California Endangered Species Act, California Fish and Game Code, and City's Municipal Code. Although non-discretionary projects throughout the cumulative area would be subject to these regulations, their compliance would be difficult to enforce since they would not be subject to CEQA, and no site-specific environmental assessments would be required. Further, planned future development within the city is anticipated to result in significant impacts to special status species. However, with implementation of the mitigation measures prescribed in Section 4.4.6 to reduce potential impacts from future discretionary projects, there is a potential for the Project to result in non-discretionary projects that would not be subject to additional environmental assessment, which could contribute to cumulative impacts to protected plant species identified as candidate, sensitive or special status species, and the Project's contribution is anticipated to be cumulatively considerable.

Threshold 4.4-2. As stated above, the Planning Area does not have the potential to support sensitive natural communities. Therefore, cumulative development in areas within and surrounding the Planning Area does not have the potential to cause significant cumulative impacts. Additionally, the Project does not propose conversion of areas currently zoned/designated as open space to expand development, as all development is proposed for existing disturbed or developed areas. Therefore, the Project would not have a substantial adverse effect, either directly or indirectly, and the Project's incremental contribution to impacts would not be cumulatively considerable.

Threshold 4.4-3. Since there are no natural rivers or streams that may serve as habitat for native fish species in the Planning Area, the Project would not interfere with fish movement. Most of the Planning Area is developed and surrounded by developed areas, and it does not reside within any designated wildlife corridors and/or habitat linkages. The open space areas within the city occur outside of the Planning Area and provide local movement for resident wildlife. Therefore, the Project's incremental contribution to impacts to established native or migratory wildlife movement, wildlife corridors, or impedance to the use of native wildlife nursery sites would not be cumulatively considerable.

4.4.6 Mitigation Measures

MM-4.4-1 Habitat Assessment. Prior to the issuance of any building permits for future development projects subject to the MUOD within the Planning Area, the City shall require project applicants to submit a Habitat Assessment Report to the City's Planning Division for review and approval unless the site is fully developed with impervious surfaces and/or irrigated landscaping. The Habitat Assessment Report shall be prepared by a qualified biologist and must evaluate the potential for impacts to sensitive wildlife and vegetation communities, including but not limited to rare plants, nesting birds, burrowing owl, western spadefoot, and Crotch's bumble bee, and shall include all other required information specified by City's Planning Division at the time of the request. If the survey determines that sensitive biological resources will be impacted by proposed activities, the City shall require implementation of the appropriate mitigation as set forth in MM-4.4-2 through MM-4.4-6, as appropriate.

MM-4.4-2 Rare Plants. If the habitat assessment described in MM-4.4-1 determines suitable habitat exists for southern tarplant, decumbent goldenbush, or Coulter's goldfields, particularly within the undeveloped parcels in the Planning Area, the project applicant shall conduct rare plant surveys within the appropriate blooming period for all three species to determine their presence/absence on a project site. If any of these three species are observed, they will be flagged for avoidance.

However, in the event individual plants cannot be avoided, they will be relocated offsite to a conserved property, or replanted on site at an approved ratio determined through consultation with California Department of Fish and Wildlife (CDFW). Any relocation effort will be described in a Relocation Plan and relocation areas shall be conserved in perpetuity through a conservation easement or deed restriction.

MM-4.4-3 Nesting Birds. If the habitat assessment described in MM-4.4-1 identifies suitable habitat for nesting birds and raptors, initiation of construction activities shall avoid the avian nesting season (February through August) to the extent feasible to reduce potential impacts to nesting birds protected by the Migratory Bird Treaty Act and California Fish and Game Code. If construction activities must be initiated during the migratory bird nesting season, the applicant shall have an avian nesting survey conducted to identify protected migratory birds, raptors, and active nests. The avian nesting survey shall be performed by a qualified wildlife biologist within 72 hours prior to the start of construction in accordance with the Migratory Bird Treaty Act and California Fish and Game Code. The results of the survey shall be provided to the City of Costa Mesa prior to the start of construction.

If an active bird nest is found, the nest shall be flagged and mapped on the construction plans along with an appropriate "no disturbance" buffer, which will be determined by the applicant's qualified biologist based on the species' sensitivity to disturbance (typically 50 feet for common, urban-adapted species, 300 feet for other passerine species, and 500 feet for raptors and special-status species). The nest area shall be demarcated in the field with flagging and stakes or construction fencing. The buffer area shall be avoided until the nest is vacated and the juveniles have fledged, as determined by the qualified biologist. The Project Applicant shall execute an agreement for a qualified biologist to provide periodic construction monitoring to determine when the nest is inactive and when construction activities can resume within the buffer area. The project applicant shall provide a copy of the agreement to the City prior to the start of construction.

MM-4.4-4 Burrowing Owl. If suitable habitat for this species is found during the habitat assessment for individual projects described in MM-4.4-1, focused burrowing owl surveys shall be conducted. Focused surveys shall follow protocol set forth in the CDFG Staff Report on Burrowing Owl Mitigation (2012), consisting of four survey visits with at least one visit between February 15 and April 15, and three visits at least three weeks apart between April 15 and July 15, with at least one of those visits occurring after June 15. If burrowing owl is found on site, the applicant shall avoid impacts to owls and their habitat. However, if individual burrowing owls and their occupied habitat cannot be avoided the applicant shall consult with CDFW to determine the appropriate strategies to minimize impacts to the species. Since burrowing owl is a candidate for listing under CESA, and may be fully listed by the time future buildout of the Project is completed, an ITP from CDFW shall be required offset impacts to the species and its habitat. The ITP will guide the mitigation process which may include habitat conservation and/or passive relocation. Mitigation and conservation land shall be in place prior to project-level construction.

MM-4.4-5 Western Spadefoot. If the habitat assessment described in MM-4.4-1 determines suitable habitat for western spadefoot exists within the Planning Area, particularly within agricultural lands that experience prolonged ponding, presence/absence surveys for the species shall be required. Prior to the start of construction, the applicant shall provide focused surveys for western spadefoot conducted by a qualified biologist(s) (biologists familiar with amphibian eye-shine and all life stages

of the local amphibian cohort) to determine if western spadefoot is present. Surveys will include spotlight surveys at night during or immediately following the first three major rain events of the wet season, defined as 0.20 inches or greater during a 24-hour period. Survey methodology shall be submitted to the USFWS for review.

If surveys are negative, western spadefoot shall be considered absent from the site, and no further action shall be necessary. If surveys are positive, prior to the start of construction, a qualified biologist(s) shall conduct pre-construction surveys for western spadefoot and relocate spadefoot individuals of all life stages to suitable habitat outside of the project work area. Surveys and relocation shall include, at a minimum, the following elements:

a. During the wet season prior to construction, exclusion fencing shall be installed by, or under the supervision of, a qualified biologist around the limits of upland grading (i.e., berm removal) outside of the dense riparian vegetation in the river channel bottom (i.e., suitable aestivation habitat). During at least the first four large rain events of the season, defined as 0.20 inches or greater during a 24-hour period, a qualified biologist(s) shall conduct spotlight surveys at night during or immediately following the rain event. Adult spadefoot shall be collected and shall either be held by a Wildlife Agency-approved biologist to be released back into the site after construction activities or relocated to an area of suitable habitat outside of the project work area that provides suitable breeding and aestivation habitat.
b. To the extent feasible, construction shall begin when the project site does not contain ponded water that may support breeding by western spadefoot. If construction is scheduled to begin during a time when portions of the site could support western spadefoot breeding, a qualified biologist(s) shall conduct pre-construction surveys of pool habitat and relocate any larvae and tadpoles present on site to suitable pool habitat outside of the project work area. To the extent feasible, pre-construction surveys shall include a minimum of three passes separated by 2 weeks, with the final pass occurring no more than 7 days prior to the start of construction. More frequent surveys may be conducted, if necessary, to complete three surveys prior to construction.
c. The location of receiving sites and the location of exclusion fence to be placed on Project parcels shall be subject to City of Costa Mesa approval.
d. During construction, the biological monitor(s) present on site, shall relocate any western spadefoot individuals found within the project work area to an area of suitable habitat outside of the project work area. The biological monitor(s) shall maintain a complete record of any western spadefoot encountered during the project and coordinate with USFWS regarding additional data to be collected. Information shall include, at a minimum, location, date, and time of observation; details of the observed behavior; relocation site; estimated number of toads seen or heard; and photographs (when feasible).

MM-4.4-6 Crotch's Bumble Bee. If the habitat assessment described in MM-4.4-1 determines suitable habitat exists for Crotch's bumble bee, a pre-construction survey shall be conducted to determine presence/absence of the species.

The applicant shall provide a pre-construction survey for Crotch's bumble bee, conducted by a qualified biologist and within the construction footprint prior to the start of ground-disturbing construction activities occurring during the Colony Active Period (April 1 through August 31 for Crotch's bumble bee). If ground-disturbing activities occur outside the period, no further mitigation

would be required. The survey shall ensure that no nests for Crotch's bumble bee are located within the construction area.

The focused survey shall be performed by a biologist with expertise in surveying for bumble bees. Surveys may occur between 1 hour after sunrise and 2 hours before sunset. Surveys shall not be conducted during wet conditions (e.g., foggy, raining, or drizzling) and surveyors shall wait at least 1 hour following rain. Optimal surveys are when there are sunny to partly sunny skies and a temperature greater than 60°F. Surveys may be conducted earlier if other bees or butterflies are flying. Surveys shall not be conducted when it is windy (i.e., sustained winds greater than 8 mph). Within non-developed habitats, the biologist shall look for nest resources suitable for bumble bee use. Ensuring that all nest resources receive 100 percent visual coverage, the biologist shall watch the potential nest resources for up to 5 minutes, looking for exiting or entering worker bumble bees. It is up to the discretion of the biologist regarding the actual survey viewshed limits from the chosen vantage point, but this limit shall not exceed 50 feet. The biologist will reduce the 50-foot limit as necessary to ensure 100 percent visual coverage of potential burrow resources depending on topography, vegetation height and cover, and other factors. This approach should allow the biologist to assess multiple burrows at one time to sufficiently determine if bees are entering/exiting them. If a nest is suspected, the surveyor can block the entrance of the possible nest with a sterile vial or jar until nest activity is confirmed (no longer than 30 minutes). A photo voucher of the bee species shall be collected, and the location mapped. If required, any capture of bumble bees will be conducted by a biologist with a valid CESA Memorandum of Understanding (MOU) and Scientific Collecting Permit (SCP) for Crotch's bumble bee. If a bumble bee worker is detected, then a representative shall be identified to species.

If Crotch's bumble bee nests are not detected, no further mitigation would be required.

If a Crotch's bumble bee nest is detected, the project biologist shall establish, monitor, and maintain a no-work buffer around the nest. The size and configuration of the no-work buffer will be based on best professional judgement of the project biologist in consultation with CDFW. The buffer will provide at least 50 feet of clearance around the nest entrance(s). Construction activities will not occur within the no-work buffer until the colony is no longer active. To determine that a nest is no longer active, the nest will be observed for a minimum of 60 minutes each day across a minimum of 3 days during suitable flight weather (i.e., ambient air temperature between 60- and 90-degrees Fahrenheit, winds under 10 mph, and no precipitation more than a drizzling rain). If no bees are seen flying in or out of the nest by the end of the observation period, it will be determined that the nest is no longer active. If project activities occur outside of the Colony Active Period, then pre-construction surveys for active bee nests and avoidance measures are not required.

A written survey report shall be submitted to the City within 30 days of the pre-construction survey. The report shall include survey methods, weather conditions, and survey results, including a list of insect species observed and a figure showing the locations of any Crotch's bumble bee nest sites or individuals observed. The survey report shall include the qualifications/resumes of the surveyor(s) and approved biologist(s) for identification of photo vouchers and a detailed habitat assessment. If Crotch bumble bee nests are observed, the survey report shall also include recommendations for avoidance, and the location information shall be submitted to the California Natural Diversity Database at the time of, or prior to, submittal of the survey report.

If the above measures are followed, it is assumed that the Project shall not need to obtain authorization from CDFW through the CESA ITP process. If the nest resources cannot be avoided, as outlined in this measure, the project applicant shall consult with CDFW regarding the need to obtain an ITP. Any measures determined to be necessary through the ITP process to offset impacts to Crotch's bumble bee may supersede measures provided in this CEQA document and shall be incorporated into the habitat mitigation and monitoring plan.

In the event an ITP is needed, mitigation for direct impacts to Crotch's bumble bee shall be fulfilled through compensatory mitigation at a minimum 1:1 nesting habitat replacement of equal or better functions and values to those impacted by the Project, or as otherwise determined through the Incidental Take Permit process. Mitigation shall be accomplished either through off-site conservation or through a CDFW-approved mitigation bank. If mitigation is not purchased through a mitigation bank, and lands are conserved separately, a cost estimate shall be prepared to estimate the initial start-up costs and ongoing annual costs of management activities for the management of the conservation easement area(s) in perpetuity. The funding source shall be in the form of an endowment to help the qualified natural lands management entity that is ultimately selected to hold the conservation easement(s). The endowment amount shall be established following the completion of a Project-specific Property Analysis Record to calculate the costs of in-perpetuity land management. The Property Analysis Record shall take into account all management activities required in the Incidental Take Permit to fulfill the requirements of the conservation easement(s), which are currently in review and development.

4.4.7 Level of Significance Conclusion

Threshold 4.4-1. Even with implementation of MM-4.4-1 through MM-4.4-6, the Project would result in a **significant and unavoidable impact** related to substantial adverse effect on plant and wildlife species identified as a sensitive or special status species and a cumulatively considerable impact.

Threshold 4.4-2 The Project would have a **less than significant impact** on sensitive natural communities and would not be cumulatively considerable.

Threshold 4.4-3 The Project would have **no impact** related to substantial interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors and would not be cumulatively considerable.

4.4.8 References

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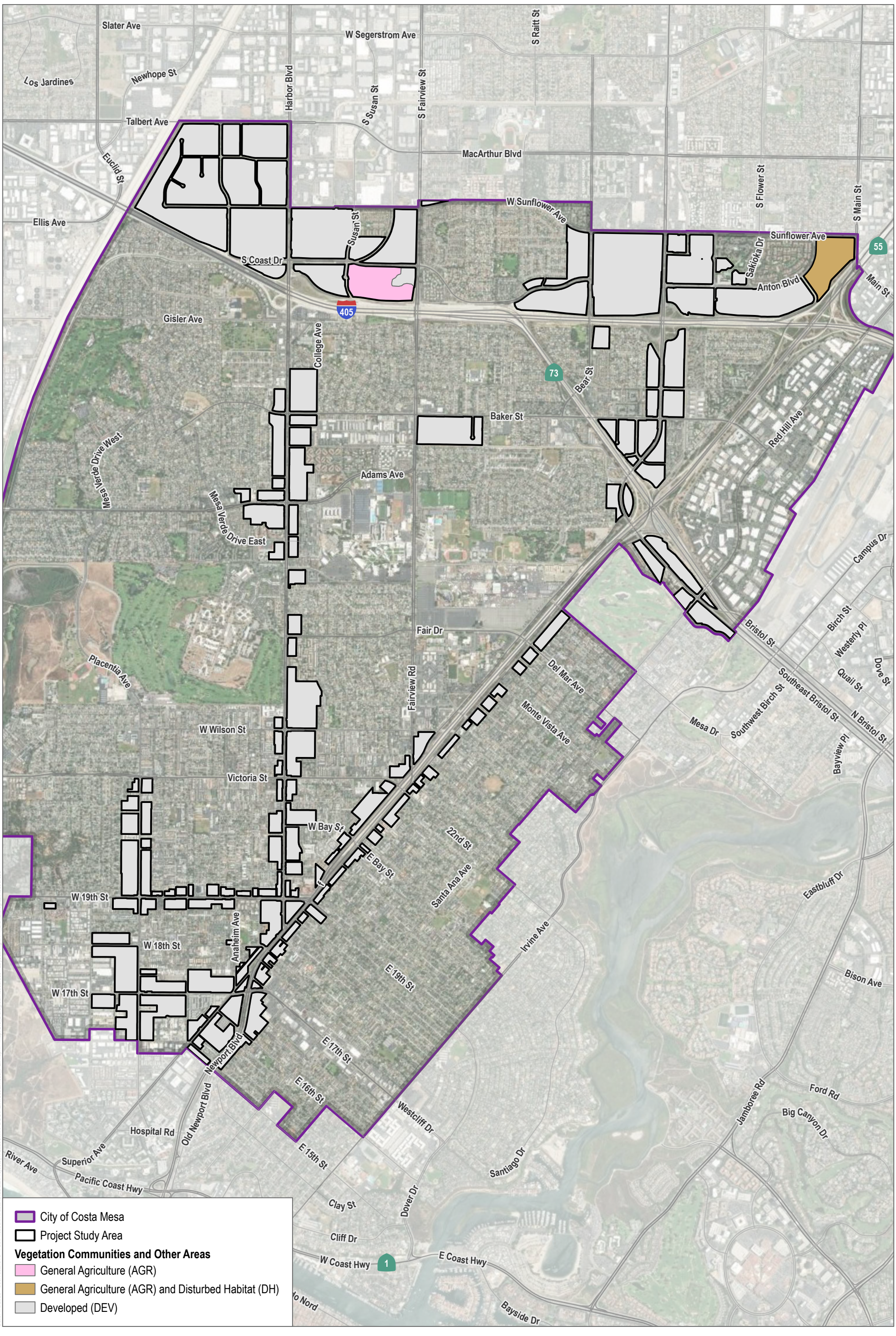

SOURCE: Esri, Open Street Map

DUDEK

0 1,200 2,400 Feet

Figure 4.4-1

Biological Resources

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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4.5 Cultural Resources

This section of the Draft PEIR analyzes the potential impacts from the implementation of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation (Project) on cultural resources, including archaeological and historic built environment resources in the City. Cultural resources are archaeological, Native American, traditional, and built environment resources, including but not necessarily limited to buildings, structures, objects, districts, and sites. A discussion of the existing cultural resources in the Planning Area is included in this section to present the environmental baseline conditions. The analysis in this section is based, in part, upon cultural resource records search results, background and desktop research, and information provided in the Costa Mesa General Plan's Historical and Cultural Resources Element (City of Costa Mesa 2016). More detailed information is provided in the following appendices:

Appendix F-1 *Confidential* SCCIC Database Records Search Results (on file with the City and available for review by eligible individuals)

Appendix F-2 NAHC SLF Search Results

Appendix F-3 Archaeological Resources Sensitivity Map

Appendix F-4 Historic-Age Properties within the Preferred Alternative

Other sources consulted are listed in Section 4.5.8, References.

4.5.1 Existing Conditions

4.5.1.1 Environmental Setting

The following historic context is taken from the Costa Mesa General Plan, Chapter 11: Historical and Cultural Resources Element (City of Costa Mesa 2016):

Historical Context: Costa Mesa's Past

Costa Mesa's cultural resources are physical reminders of a history dating back thousands of years, from Native American settlement, to periods when the region was under the flags of Spain and Mexico, to the World War II era. Native Americans inhabited the region for thousands of years. The location along the Santa Ana River and near the Pacific Ocean provided abundant food and other resources for Native Americans for millennia. During California's colonial era, the region became one of Southern California's great ranchos and agricultural producing areas for growing sweet potatoes, corn, tomatoes, strawberries, and apples. The convergence of water and rail transportation at the end of the nineteenth century led to an industrial boom in the early twentieth century. During World War II, Costa Mesa became the site of the Santa Ana Army Air Base. The following summarizes significant periods in Costa Mesa's social, physical, cultural, and economic evolution. The summary also describes some of the historical sites, structures, and landmarks associated with each period.

Native Americans and Early Spanish Settlers

Located on the "coastal tableland" above Newport Beach, Costa Mesa's first inhabitants were Native Americans who settled on the mesa near the banks of the Santa Ana River. Discovered artifacts, including discarded shells

and ceremonial and household artifacts, indicate that the riverbanks were a part of the village once known as Lukup. In 1776, Spanish explorers established Mission San Juan Capistrano approximately 22 miles southeast of present-day Costa Mesa. Occasionally, the padres from the mission would visit Lukup.

In the early 1800s, when the Capistrano cattle grazed in the Costa Mesa area, provisions had to be made to shelter the herdsmen. Three adobes were built along the bluffs of Costa Mesa overlooking the Santa Ana River. The first adobe, known as the Polloreno (or Banning Adobe), was located approximately one-third of a mile south along the bluffs near Adams Avenue. The adobe fell to ruin between 1903 and 1906 after treasure hunters dug around the building looking for hidden gold. Between 1820 and 1823, the second adobe, known as the Gabe Allen Adobe (or the Estancia), was constructed. This structure still stands today. It was restored by the City and now serves as a museum at 1900 Adams Avenue in Estancia Park. The third adobe, called the Rice Adobe, was located just north of Gisler Avenue. In 1919, this adobe was torn down by the owner of the property of the time, Edward Pomeroy, to keep treasure hunters off of the property.

Early City Settlements

The history of Costa Mesa is the story of three communities: an old boomtown called Fairview, the small farming village of Paularino, and the town of Harper, which would later be renamed Costa Mesa.

Town of Fairview

Between the fall of 1887 and summer of 1888, the town of Fairview was established. The town was centered near the present-day intersection of Adams Avenue and Harbor Boulevard. In October 1887, a syndicate of local businessmen formed to purchase and develop various tracts within the Newport District. Over the next few years, development of Fairview grew at a rapid pace. It was during this time that the Fairview Post Office was established, and the Santa Ana, Fairview, and Pacific (SF&P) Railroad was founded. In addition, the discovery of hot mineral water springs in the area led to the construction of the three-story Hotel Fairview.

By the spring of 1889 the town began to collapse as rapidly as it had appeared, despite attempts to promote the continuing development of Fairview. During that same year, the land boom of Southern California also declined, with many of the land transactions throughout the region falling through. In March of 1889, a severe rainstorm washed out a section of the SF&P Railroad tracks and the roadbed midway between Fairview and Santa Ana, next to the Santa Ana River. As a result, many residents began to leave the town, including the editor and owner of the local paper, town physician, butcher, and local sign painter.

By 1911, all that remained of Fairview was the schoolhouse, the hotel, and a few houses. The schoolhouse closed in 1915, and the hotel was demolished in 1920. The few remaining houses located in Fairview eventually were destroyed by fire or removed to make way for new development beginning in the 1930s.

Paularino

Paularino was a typical farming community that consisted of approximately 800 acres generally bounded by the present-day location of Fairview Road to the west, Newport Boulevard to the east, I-405 to the north, and Baker Street to the south. The Paularino community did not amount to more than a name with a few scattered farmhouses, a schoolhouse, and a railroad siding. The lack of growth of Paularino eventually led to its abandonment.

Harper

Harper was named after a rancher who came to the area after the Fairview land boom. The area experienced its first oil boom, with three oil wells installed in 1906 just south of the present-day location of Newport Harbor High School. In 1907, several more wells were installed on the northern end of the Newport Heights Tract. The oil boom was short lived; within three years, the wells were abandoned.

In 1920, the farming community of Harper was renamed Costa Mesa, which means coastal tableland in Spanish. In the summer of that same year, the Wayside Market (located on Newport Boulevard) opened. During 1921, several more store buildings were constructed along Newport Boulevard, including a garage shop, blacksmith shop, barber shop, and soda fountain.

Development continued to increase throughout Costa Mesa until January 21, 1932, when the Costa Mesa Branch of the Bank of Balboa closed. A year later, the Southern Pacific Railroad's branch line that ran along Newport Boulevard was abandoned, and the 1933 Long Beach Earthquake damaged businesses and other structures.

After the Great Depression of the 1930s, the town began to grow again with the opening of several commercial stores, including Sprouse-Reitz Variety (located at 1830 Newport Boulevard), Myers and Myers Department Store (located at 1816 Newport Boulevard), and the post office (located at 1809 Newport Boulevard). Costa Mesa continued to be recognized as a small town until World War II.

Costa Mesa and the Santa Ana Army Airbase

In response to increasing world conflicts in the 1930s and 1940s, military installations were planned throughout the country. One of these installations was the United States Air Corps Replacement Training Center, which was redesignated the Santa Ana Army Air Base (SAAAB) in 1942. The base encompassed 1,337 acres between Newport Boulevard and Harbor Boulevard and consisted of three schools: the Air Force Classification Center, the Air Force Pre-Flight School for pilots, and the Air Force Pre-Flight School for bombardiers and navigators.

In 1946, the War Department announced that the SAAAB was for sale to any educational institution for the price of one dollar. That same year, the War Assets Administration sold a portion of the base to the Orange Coast Junior College District, which would later become the campus for Orange Coast College. Two years later, the Southern California Assemblies of God Churches purchased 126 acres of the base for a future campus, the Southern California Bible College. This would eventually be renamed Vanguard University. The remaining portions of the base would later be occupied by Costa Mesa High School, Davis Elementary School, the City of Costa Mesa Civic Center, Air National Guard 222nd Combat Communications Squadron, the Orange County Fairgrounds, TeWinkle Park, and several commercial and residential areas. Today, all that remains of the base are a few buildings preserved within the Orange County Fairgrounds, including the 1.4-acre Memorial Garden and Bird Sanctuary.

Modern Costa Mesa

On June 29, 1953, the City of Costa Mesa was incorporated. At the time, the new city encompassed approximately 3.5 square miles and had a population of 16,840. By 2010, Costa Mesa had expanded to cover approximately 17 square miles, and the population had grown to 109,960. Today, Costa Mesa is a major commercial and industrial center of Orange County. The City formally adopted the slogan "The City of the Arts" in 1999, reflecting the concentration of major regional arts venues and the presence of the Pacific Symphony and South Coast Repertory Theater. The 3,000-seat Segerstrom Center for the Arts (previously known as Orange County Performing Arts Center)

was completed in 1986. In 2006, the 2,000-seat Renee and Henry Segerstrom Concert Hall and the 500-seat Samueli Theater opened (City of Costa Mesa 2016).

4.5.1.2 South Central Coastal Information Center Database Records Search

On January 13 and 14, 2026, Dudek archaeologist Brenda Rogers conducted a records search of the California Historical Resources Information System (CHRIS) at the South Central Coastal Information Center (SCCIC), located on the campus of the California State University, Fullerton. The records search encompassed the entire Planning Area and a 500-foot radius. The purpose of the records search was to identify any previously recorded cultural resources that may be located within or adjacent to the Planning Area and to identify previous studies in the Planning Area vicinity. In addition to a review of previously prepared site records and reports, the records search also included a review of historical maps, ethnographies, the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California Historic Property Data File, California Historical Landmarks, California Points of Historical Interest, and Archaeological Determinations of Eligibility. See *Confidential* Appendix F-1 for the complete SCCIC database records search results and associated documentation.

Previously Conducted Cultural Resources Studies

The SCCIC database records search identified 79 previous cultural resources studies that were conducted within a 500-foot radius of the Planning Area. Of the 79 previous studies, 54 studies intersect the Planning Area (Table 4.5-1). Approximately 25 percent of the Planning Area has been subject to past cultural resources investigations. Summaries of selected overlapping studies are provided below Table 4.5-1. Records searches, negative surveys, and negative inventories were not summarized; these constitute the majority of overlapping investigations and do not provide substantive information relevant to the currently proposed Project.

Table 4.5-1. Previous Cultural Resources Studies Intersecting Planning Area

Report Number	Year	Authors	Title
OR-00044	1977	Desautels, Roger J.	Archaeological Survey Report on the Bristol Street Associates Proposed Development on Bristol Street in the Newport Beach Area of the County of Orange
OR-00190	1977	Desautels, Roger J.	Archaeological Field Test Report on the Bristol Street Associates Proposed Development on Bristol Street in the Newport Beach Area of the County of Orange, California.
OR-00289	1978	Van Horn, David M.	Sakioka Property Archaeological Survey Report
OR-00299	1978	Van Horn, David M.	A Compilation of Archaeological, Historical and Paleontological Data for the City of Costa Mesa
OR-00305	1979	Schroth, Adella	The History of Archaeological Research on Irvine Ranch Property: the Evolution of a Company Tradition
OR-00406	1978	Cottrell, Marie and David Jacobs	Archaeological Excavations Conducted at the Bristol Street Site, CA-ORA-687, Locus I and Ii
OR-00518	1980	Brock, James P.	Archaeological Test Excavation Report: the Sakioka Site, Near South Coast Plaza, Costa Mesa, Orange County, California
OR-00563	1977	Cottrell, Marie G.	EIR on Redevelopment Area in Downtown Costa Mesa

Table 4.5-1. Previous Cultural Resources Studies Intersecting Planning Area

Report Number	Year	Authors	Title
OR-00643	1982	Romani, John F.	Archaeological Survey Report for the ORA-55 Corridor (PM 0.0/T4.22) 07207-492201
OR-00661	1981	Brock, James P.	Archaeological Survey Report: 2777 Bristol Street, Costa Mesa, California
OR-01010	1990	Padon, Beth	An Archaeological Study of an 11.2 Acre Parcel Within the Town Center Area of Costa Mesa
OR-01016	1975	Leonard, Nelson N. III	Environmental Impact Evaluation: Route Alternates Between the Michelson Treatment Plant and Plants on the Santa Ana River, Orange County, California
OR-01161	1991	Mason, Roger D. and Brechbiel, Brant	Cultural Resource Survey Report for the Santa Ana - Delhi Channel Improvements Project Facility No. F01
OR-01197	1992	Brown, Joan C.	Cultural Resources Reconnaissance of Ten Miles of the Santa Ana-delhi Channel Complex, Orange County, California
OR-01279	1993	Mason, Roger D. and Brant A. Brechbiel	Cultural Resource Monitoring Report: Archaeology for the Santa Ana - Delhi Channel Improvements Project Facility No. F01
OR-01279 A	1991	Mason, Roger D. and Brant Brechbiel	Cultural Resource Survey Report for the Santa Ana - Delhi Channel Improvements Project, Facility No. F01
OR-01672	1997	Brechbiel, Brant A. and Roger D. Mason	Cultural Resources Records Search and Literature Review Report for a Pacific Bell Mobile Services Telecommunications Facity: CM 245-11, in the City of Costa Mesa, California
OR-01769	1998	Brechbiel, Brant A.	Cultural Resources Records Search and Literature Review Report for a Pacific Bell Mobile Services Telecommunications Facility: Cm 335-01, in the City of Costa Mesa, California
OR-01836	1998	Padon, Beth	Cultural Resource Review for Groundwater Replenishment System Program EIR/Tier I/EIS, Orange County Water District and County Sanitation Districts of Orange County
OR-01890	1978	Cottrell, Marie G.	Preliminary Report of Test Level Investigations Conducted at Archaeological Site CA-ORA-687, Bristol Street, Orange County, California
OR-01951	1982	Steele, K.D.	Historic Property Survey 07-ORA-55, Pm 0.0/t4.22, Costa Mesa and Newport Beach, Orange County, California
OR-02038	1999	Duke, Curt	Cultural Resource Assessment for Pacific Bell Mobile Services Facility Cm 295-02, County of Orange, California
OR-02057	2000	Ferraro, David and Joan Brown	Archaeological and Paleontological Monitoring for Romano's Macaroni Grill, South Coast Metro Center, Costa Mesa, California

Table 4.5-1. Previous Cultural Resources Studies Intersecting Planning Area

Report Number	Year	Authors	Title
OR-02066	2000	Ferraro, David and Maxon, Patrick	Recovery of CA-ORA-1538, Discovered During Grading for the South Metro Center, 24-hour Fitness Center, Costa Mesa, California
OR-02127	1999	Demcak, Carol R.	Final Report on Archaeological and Paleontological Monitoring for Robinson-May Expansion Project, City of Costa Mesa
OR-02128	2000	Ferraro, David D.	Archaeological and Paleontological Monitoring for Retail Building Site Preparation at 545 Anton Boulevard, South Coast Metro Center, Costa Mesa, California
OR-02225	1978	Strozier, Hardy	The Irvine Company Planning Process and California Archaeology- A Review and Critique
OR-02232	2000	Bissell, Ronald, M.	Archaeological Monitoring and Reconnaissance for Mesa Verde Project Area, Standard Pacific Homes 1339 Adams Avenue, Costa Mesa, California
OR-02266	1999	Demcak, Carol R.	Report of Archaeological Survey of 21-Acre Parcel (tract 10950), Costa Mesa, Orange County, California
OR-02283	2000	Duke, Curt	Cultural Resource Assessment for Modifications to Pacific Bell Wireless Facility CM 004-23, County of Orange, California
OR-02283 A	1997	Brechbiel, Brant A.	Cultural Resources Survey Report for a Pacific Bell Mobile Services Telecommunications Facility: CM 004-23 in the City of Costa Mesa, California
OR-02534	1976	Unknown	Annual Report to The Irvine Company from Archaeological Research, Inc.
OR-02553	2002	Duke, Curt	Cultural Resource Assessment AT&T Wireless Services Facility No. 13369a Orange County, California
OR-02603	1976	Unknown	Draft Environmental Impact Report Bear Street Project Arnel Development Company
OR-02623	2003	Sikes, Nancy E. and McCormick, Steven	Cultural Resources Monitoring for the Ikea Costa Mesa Project, Orange County, California -Revised
OR-02624	2003	Sikes, Nancy E. and Steven McCormick	Cultural Resources Monitoring for the Ikea Costa Mesa Project, Orange County, California
OR-03002	2005	Thal, Sean	Cultural Resource Assessment for the Cahill (CA-7072I) Cellular Facility Near 1700 Macarthur Blvd., Costa Mesa, Orange County, California
OR-03006	2002	Demcak, Carol R.	Report of Archaeological Resources Assessment for Paularino Avenue Reconstruction Project, City of Costa Mesa, Orange County, California
OR-03013	2002	Demcak, Carol R.	Report of Archaeological Resources Assessment for 19th Street Reconstruction Project, City of Costa Mesa, Orange County, California
OR-03087	2006	Fulton, Terri and Deborah McLean	Cultural Resources Assessment for the Villa Park Dam Stables Project Orange County, California

Table 4.5-1. Previous Cultural Resources Studies Intersecting Planning Area

Report Number	Year	Authors	Title
OR-03617	2002	Duke, Curt and Judith Marvin	Cultural Resource Assessment, AT&T Wireless Services, Facility No. D074d, Orange County, California
OR-03718	2008	Bonner, Wayne H.	Cultural Resources Records Search Results and Site Visit for Global Tower, LLC, Candidate CA-5174 (Placentia), 2065 Placentia Avenue, Costa Mesa, Orange County, California
OR-03776	2000	Padon, Beth	Historic Property Survey Report for Harbor Boulevard Smart Street Improvements, City of Garden Grove, Orange County, California
OR-03776 A	2000	Mc Elory, Sheila	Historic Architectural Survey Report for Harbor Boulevard Smart Street Project For the City of Garden Grove, California
OR-03807	2009	Bonner, Wayne and Arabesque Said	Cultural Resource Records Search and Site Visit Results for T-Mobile USA Candidate LA33508A (Sunflour Bakery), 2950 Grace Lane, Costa Mesa, Orange County, California
OR-04072	2010	Johnson, Brent	Cultural Resources Records Search and Site Visit for T-Mobile USA Inc. LA33506A / Baker Professional 1551 Baker Street, Costa Mesa, Orange County, California 92626
OR-04103	2009	Fulton, Phil	Finding of Effect for the Route 73 Basin Sedimentation Project, Orange County, California, EA 0H4400
OR-04149	2003	Fulton, Terri	Cultural Resource Assessment, Pacific Medical Plaza, City of Costa Mesa, Orange County, California
OR-04150	2004	Unknown	Draft Environmental Impact Report No. 1051 Pacific Medical Plaza Sch. No. 2003071089
OR-04172	2011	Chasteen, Carrie	Historic Property Survey Report San Diego Freeway (I-405) Improvement Project SR-73 to I-605, Orange and Los Angeles Counties
OR-04439	2014	Bonner, Diane, Carrie Wills, and Kathleen Crawford	Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate LA02111A (SC111 Senior Center), 695 West 19th Street, Costa Mesa, Orange County, California
OR-04439 A	2014	Bonner, Wayne H. and Kathleen A. Crawford	Direct APE Historic Architectural Assessment for T-Mobile West, LLC Candidate LA02111A (SC111 Senior Center) 695 West 19th Street, Costa Mesa, Orange County, California
OR-04538	2014	Mason, Roger D.	Initial Study/Mitigated Negative Declaration, Ganahl Lumber Hardware Store and Lumber Yard, 1100 South Bristol Street
OR-04538 A	2014	Mason, Roger D.	Cultural Resources Survey for the Ganahl Lumber Relocation Project, Costa Mesa, Orange County, California

OR-00044

Archaeological Survey Report on the Bristol Street Associates Proposed Development on Bristol Street in the Newport Beach Area of the County of Orange (Desautels 1977a) documents the results of an archaeological resources pedestrian survey. During the pedestrian survey, the prehistoric archaeological resource CA-ORA-687 (P-30-000687) was identified within what is now the currently proposed Planning Area. CA-ORA-687 is characterized as a prehistoric shell midden deposit. It was noted that the resource appeared to have a subsurface component and avoidance or capping with sterile material was recommended. If avoidance was not possible, subsurface testing was recommended.

OR-00190

Archaeological Field Test Report on the Bristol Street Associates Proposed Development on Bristol Street in the Newport Beach Area of the County of Orange, California (Desautels 1977b) documents the results of subsurface archaeological testing of CA-ORA-687. A total of 14 backhoe trenches were excavated and all excavated materials were spot screened. Overall, trenching uncovered two discrete archaeological deposits consisting of shellfish remains, chert debitage, groundstone fragments, and a hammerstone. One trench encountered a human burial. A portion of the burial was removed by the backhoe, though the remainder was left *in situ*. The remains were described as "poorly preserved and heavily mineralized", indicative of "extreme age" (Desautels 1977b: 4). Recommended mitigation measures included avoidance of the resource through project redesign, capping with sterile fill, or the implementation of a comprehensive data recovery program (Desautels 1977b).

OR-00289

Sakioka Property Archaeological Survey Report (Van Horn 1978) documents the results of an archaeological resources pedestrian survey. During the pedestrian survey, the prehistoric archaeological resource CA-ORA-1538 (P-30-001538) was identified within what is now the currently proposed Planning Area. CA-ORA-1538 is characterized as a prehistoric shell midden deposit. Recommended mitigation measures included the implementation of a Phase II subsurface testing program to evaluate the potential for buried components, as well as potential Phase III data recovery excavations, should the testing results indicate the presence of significant cultural materials (Van Horn 1978).

OR-00406

Archaeological Excavations Conducted at the Bristol Street Site, CA-ORA-687, Locus I and II (Cottrell and Jacobs 1978) documents the results of salvage archaeological excavations at CA-ORA-687 (P-30-000687), following the earlier work by Desautels. Fieldwork consisted of the hand excavation of 27 test units measuring 1.5 meters by 1.5 meters. Two human burials were recovered, one of which was originally encountered during prior work. The recovered assemblage included debitage, flaked stone tools, groundstone, shellfish and other faunal remains. Cottrell and Jacobs concluded that the resource comprises two discrete occupational deposits. Cottrell and Jacobs noted that both loci appeared to have been destroyed and recommended that no additional excavation be conducted at CA-ORA-687 (Cottrell and Jacobs 1978).

OR-00518

Archaeological Test Excavation Report: the Sakioka Site, Near South Coast Plaza, Costa Mesa, Orange County, California (Brock 1980) documents the results of an archaeological testing program conducted at CA-ORA-1538 (P-30-001538). Fieldwork consisted of the hand excavation of two 1-meter by 1-meter test units within the deposit.

No associated cultural materials were identified, and the deposit was posited as potentially non-cultural in origin. The resource was recommended as not significant, and no further mitigation was recommended (Brock 1980).

OR-02066

Recovery of CA-ORA-1538, Discovered During Grading for the South Metro Center, 24-hour Fitness Center, Costa Mesa, California (Ferraro and Maxon 2000) documents the results of archaeological monitoring conducted in 1999 at CA-ORA-1538 (P-30-001538). During grading activities, CA-ORA-1538, characterized as a prehistoric shell midden deposit, was inadvertently encountered. Two subsurface features were identified and recorded. Ferraro and Maxon interpreted these features as the remains of a pit house and an associated hearth feature. Ferraro and Maxon noted that the majority of the resource had been disturbed by construction activities associated with a residential development project. Despite these disturbances, Ferraro and Maxon concluded that intact subsurface deposits may remain and that the site retains the potential to produce significance-conveying deposits. The report recommended that a qualified archaeologist be present during any additional grading activities in the vicinity of CA-ORA-1538 (Ferraro and Maxon 2000).

OR-03617

Cultural Resource Assessment, AT&T Wireless Services, Facility No. D074d, Orange County, California (Duke and Marvin 2002) documents the results of a cultural resources inventory consisting of archival research, a literature review, and a pedestrian survey. As part of the study, built environment resource P-30-177723 (First United Methodist Church), located within the currently proposed Planning Area, was recorded and evaluated, and Duke and Marvin recommended the resource eligible for listing in the NRHP under Criterion C and CRHR under Criterion 3. The proposed wireless services facility was ultimately determined to result in no adverse effect to the resource. Standard inadvertent discovery protocols were recommended for implementation during construction activities, including procedures for the discovery of archaeological resources and human remains (Duke and Marvin 2002).

OR-03776

Historic Property Survey Report for Harbor Boulevard Smart Street Improvements, City of Garden Grove, Orange County, California (Padon 2000) documents the results of a historic property survey consisting of the inventory and evaluation of numerous built environment resources in support of the Harbor Boulevard Street Improvement Project. As part of the study, built environment resource P-30-176943 (hotel), located within the currently proposed Planning Area, was inventoried and evaluated and ultimately recommended ineligible for listing in the NRHP and CRHR (Padon 2000).

OR-04149

Cultural Resource Assessment, Pacific Medical Plaza, City of Costa Mesa, Orange County, California (Fulton 2003a) documents the results of a cultural resources assessment consisting of archival research, a literature review, and a pedestrian survey. As part of the study, built environment resources P-30-176759 (Snug Harbor Trailer Park) and P-30-176760 (El Nido Trailer Park), located within the currently proposed Planning Area, were inventoried and evaluated and were ultimately recommended ineligible for listing in the NRHP and CRHR. Survey efforts also identified prehistoric archaeological resource P-30-100359, characterized as two sparse shell scatters, located in what is now the currently proposed Planning Area. Due to the developed nature of the Planning Area, subsurface testing of P-30-100359 could not be conducted. Recommended mitigation measures included archaeological

monitoring and the avoidance of P-30-100359, where feasible. If avoidance was determined to be infeasible, controlled archaeological excavation was recommended prior to project implementation (Fulton 2003a).

Previously Recorded Cultural Resources

The SCCIC database records search identified 25 previously recorded cultural resources within a 500-foot radius of the Planning Area. Of the 25 previously recorded resources, 15 intersect with the Planning Area (Table 4.5-2). These include nine historic-era built environment resources, five prehistoric archaeological resources, and one prehistoric isolate. Summaries of all resources that intersect with the Planning Area are provided below Table 4.5 2.

Table 4.5-2. Previously Recorded Cultural Resources within Planning Area

P-Number	Trinomial	Age	Description	Eligibility for NRHP/CRHR
P-30-000297	CA-ORA-297	Prehistoric	Shell midden deposit	Unknown
P-30-000687	CA-ORA-687	Prehistoric	Habitation complex with human burials	Not formally evaluated
P-30-001538	CA-ORA-1538	Prehistoric	Shell midden deposit	Recommended not significant
P-30-001617	CA-ORA-1617	Prehistoric	Sparse shell scatter	Not formally evaluated
P-30-100337	—	Prehistoric	Isolate: Flaked stone core	Categorically ineligible for CRHR/NRHP
P-30-100359	—	Prehistoric	Sparce shell scatters	Unknown
P-30-176759	—	Historic-era	Snug Harbor Trailer Park	Recommended ineligible for listing in the CRHR
P-30-176760	—	Historic-era	El Nido Trailer Park	Recommended ineligible for listing in the CRHR
P-30-176764	—	Historic-era	Single family residence	Unknown
P-30-176765	—	Historic-era	Segerstrom Barn	Recommended eligible for listing in the NRHP and Local Register under Criteria A and C
P-30-176943	—	Historic-era	Hotel	Recommended ineligible for listing in the CRHR
P-30-177411	—	Historic-era	Segerstrom Ranch Complex	Recommended eligible for listing in the NRHP and Local Register under Criteria A and C
P-30-177525	—	Historic-era	Costa Mesa Senior Center	Recommended ineligible for listing in the NRHP
P-30-177723	—	Historic-era	First United Methodist Church	Recommended eligible for NRHP under Criterion C
P-30-177735	—	Historic-era	Alano Club of Costa Mesa	Recommend ineligible for listing in the NRHP

CA-ORA-297 (P-30-000297)

CA-ORA-297 (P-30-000297), first recorded in 1971 by M. Ahlering, is characterized as a prehistoric shell midden deposit encompassing approximately 1,000 square meters and situated at an elevation of approximately 90 feet above mean sea level (amsl). At the time of recordation, Ahlering noted that the resource was located within an active construction zone (Ahlering 1971). It does not appear that CA-ORA-297 has been formally evaluated for listing in the NRHP or the CRHR. CA-ORA-297 is also documented in the archaeological resources inventory included in the Historical and Cultural Resources Element of the City of Costa Mesa General Plan 2015-2035 (City of Costa Mesa 2016).

CA-ORA-687 (P-30-000687)

CA-ORA-687 (P-30-000687), first recorded in 1965 by H. McKinney, is characterized as a shallow prehistoric shell midden deposit located on a bluff and encompassing approximately 8,000 square meters. McKinney noted that, by 1965, the majority of the resource had already been destroyed by grading activities associated with a housing development (McKinney 1965). A subsurface testing program and associated site record update for CA-ORA-687 were conducted by Cottrell in 1977. Testing identified two loci and an assemblage consisting of faunal bone, shell, flaked stone, and groundstone. During testing, an intact human burial was also identified, and subsequent fieldwork revealed a second human burial (Cottrell and Jacob 1978). It does not appear that CA-ORA-687 has been formally evaluated for listing in the NRHP or the CRHR. CA-ORA-687 is also documented in the archaeological resources inventory included in the Historical and Cultural Resources Element of the City of Costa Mesa 2015-2035 General Plan (City of Costa Mesa 2016).

CA-ORA-1538 (P-30-001538)

CA-ORA-1538 (P-30-001538), first recorded in 1978 by V. Carbajal, is characterized as a prehistoric shell midden deposit. CA-ORA-1538 measures approximately 60 meters by 60 meters and is situated at an elevation of 50 feet amsl. In 1978, Carbajal noted that the resource had been disturbed by agricultural activities. An update to the site record prepared by D. Ferraro in 1999 documented two subsurface features identified during construction monitoring and expanded the site boundaries to approximately 350 meters by 100 meters. The update described the features as “the remains of a small pit and a pit house or living floor with an internal hearth” (Carbajal 1978). Recovered artifacts included faunal remains, a bifacially worked flaked stone tool, and debitage. Ferraro noted that the majority of the resource had been disturbed by construction activities associated with a residential development project. Despite these disturbances, Ferraro concluded that intact subsurface deposits may remain and that the site retains the potential to produce significance-conveying deposits. Accordingly, archaeological monitoring was recommended for all ground-disturbing activities within and immediately adjacent to the recorded site boundaries (Ferraro and Maxon 2000). It does not appear that CA-ORA-1538 has been formally evaluated for listing in the NRHP or the CRHR.

CA-ORA-1617 (P-30-001617)

CA-ORA-1617 (P-30-001617), first recorded by S. McCormick and N. Sikes in 2003, is characterized as a sparse prehistoric shell scatter measuring approximately 4 meters by 4 meters and situated at an elevation of 35 feet amsl. CA-ORA-1617 was identified at approximately 1 meter below ground surface during grading activities for a residential development project. Subsequent testing did not identify any cultural materials beyond shellfish remains associated with the deposit. Additionally, CA-ORA-1617 is described as having been destroyed during continued

construction activities (McCormick and Sikes 2003). It does not appear that CA-ORA-1617 has been formally evaluated for listing in the NRHP or the CRHR.

P-30-100337

P-30-100337, first recorded by N. Sikes in 2003, is characterized as an isolated unifacially flaked gray limestone core identified during grading activities for a residential development project. The isolate was collected at the time of discovery (Sikes 2003). Isolates are categorically ineligible for listing on the NRHP and CRHR and are not considered unique archaeological resources under CEQA.

P-30-100359

P-30-100359, first recorded by T. Fulton in 2003, is characterized as a sparse prehistoric scatter consisting of approximately 100 pieces of marine shell. No cultural materials were identified in association with the shellfish remains (Fulton 2003b). It does not appear that P-30-100359 has been formally evaluated for listing in the NRHP or the CRHR.

P-30-176759

P-30-176759 is characterized as a 2-acre trailer park (Snug Harbor Trailer Park) consisting of three buildings constructed circa (ca.) 1940, first recorded by T. Fulton and J. Marvin in 2003 (Fulton and Marvin 2003a). Building A is a one-story frame residence with a cross-gabled roof, Building B is a two-car garage, and Building C is a one-story ancillary building that houses restroom facilities (Fulton and Marvin 2003a). P-30-176759 was inventoried and evaluated by Fulton in 2003 and ultimately recommended ineligible for listing in the CRHR (Fulton 2003a). The property is no longer extant.

P-30-176760

P-30-176760 is characterized as a 2.4-acre trailer park (El Nido Trailer Park) consisting of four buildings constructed ca. 1940, first recorded by T. Fulton and J. Marvin in 2003 (Fulton and Marvin 2003b). Building A is a simple, one-story frame residence with a front-gabled roof and a square mass, Building B is a single-story ancillary building that houses restrooms and laundry facilities, Building C is a one-story triplex residence with a rectangular mass and walls clad in stucco, and Building D is a one-story residence with a rectangular mass and walls clad is stucco (Marvin and Fulton 2003b). P-30-176760 was inventoried and evaluated by Fulton in 2003 and ultimately recommended ineligible for listing in the CRHR (Fulton 2003a). The property is no longer extant.

P-30-176764

P-30-176764 is characterized as a one and one-half story craftsman-style single family residence of wood frame construction with a cross gable roof and clad in clap board, first recorded by J. Ostashay in 1999 (Ostashay 1999a). P-30-176764 was constructed in 1915. It does not appear that P-30-176764 has been formally evaluated for eligibility for listing in the NRHP or CRHR (Ostashay 1999a).

P-30-176765

P-30-176765 is characterized as an A-frame barn situated at the rear of the Segerstrom residence constructed in 1926, first recorded by J. Ostashay in 1999 and revisited by J. Hansen in 2006 (Ostashay 1999b). The barn is primarily square in plan and is of wood frame construction of the Western Bam style. P-30-176765 has been

recommended eligible for listing in the NRHP and at the local level by the City of Costa Mesa under Criteria A and C, for its association with the Segerstrom family and its excellent example of the Western Bam style, respectively (Ostashay 1999b).

P-30-176943

P-30-176943 is characterized as a hotel designed with three rectilinear three-story ells joined by an intersecting, rectilinear front with a third-story archway, stair tower, and flat roof all clad in stucco. P-30-176943 was first recorded by S. McElroy in 2000 (McElroy 2000). It is noted that the building was significantly altered from its original form and lacks historic integrity. P-30-176943 was evaluated by Padon in 2000 and ultimately recommended ineligible for listing in the CRHR (McElroy 2000; Padon 2000).

P-30-177411

P-30-177411 is characterized as a single-family residence consisting of a one and one-half story craftsman bungalow and an associated barn (P-30-176765), constructed in 1915 and 1928, respectively. P-30-177411 was first recorded in 2006 by J. Hansen and revisited in 2010 by C. Chasteen (Hansen 2006). P-30-177411 has been recommended eligible for listing in the NRHP and at the local level by the City of Costa Mesa under Criteria A and C, for its association with the Segerstrom family and its good example of Craftsman residential architecture, respectively (Hansen 2006).

P-30-177525

P-30-177525 is characterized as a multiple-level, irregular shaped, asymmetrical, modern style, community senior citizen center constructed in 1967 and first recorded by K.A. Crawford in 2014 (Crawford 2014). P-30-177525 was inventoried and evaluated by Crawford and ultimately recommended ineligible for listing in the NRHP (Crawford 2014).

P-30-177723

P-30-177723 is characterized as a large asymmetrical Spanish Eclectic-style church building with an associated administration building and Sunday school constructed in 1928. P-30-177723 was first recorded in 2002 by J. Marvin and S. Younger and inventoried and evaluated in 2002 by C. Duke and J. Marvin. P-30-177723 was ultimately recommended eligible for listing in the NRHP under Criterion C as a rare example of Spanish Eclectic architecture within its period of significance (Marvin and Younger 2002; Duke and Marvin 2002).

P-30-177735

P-30-177735 is characterized as a modern one-story building with an asymmetrical façade and irregular plan. P-30-177735 was originally built as a residence but at time of recordation in 2004, was serving as a social club. P-30-177735 was inventoried and evaluated by D. Rodrigues in 2004 and ultimately recommended ineligible for listing in the NRHP (Rodrigues 2004).

4.5.1.3 Archaeological Resources

Archival Review

Historical topographic maps and aerial photographs were consulted through the Nationwide Environmental Title Research, LLC (NETR) to better understand any natural or human-made changes to the alternative site locations and surrounding properties over time. A review of all available historic aerial photographs was conducted and included the following years: 1938, 1952, 1953, 1963, 1972, 1980, 1985, 1987, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2002, 2003, 2004, 2005, 2009, 2010, 2012, 2014, 2016, 2018, 2020, and 2022 (NETR 2026). Through careful comparative review of historic aerials, changes to the landscape of a study area may be revealed. Disturbance to the Planning Area is specifically important as it helps determine if soils within the Planning Area are capable of sustaining intact archaeological deposits. Additionally, historic aerials have the potential to reveal whether a Planning Area was subjected to alluvial deposits by way of flooding, debris flows or mudslides, as well as placement of artificial or foreign fill soils that may have buried intact archaeological deposits. A review of available topographic maps was conducted and included the following years: 1896, 1899, 1901, 1907, 1915, 1925, 1932, 1934, 1935,1939, 1943, 1945, 1951, 1958, 1968, 1975, 1977, 1981, 1982, 2012, 2015, 2018, and 2022 (NETR 2026). Topographic maps depict not only elevation of the Planning Area as well as the areas surrounding it, but they also illustrate the location of roads and some buildings. Although topographic maps are not comprehensive, they are another tool in determining whether a study area has been disturbed and sometimes to what approximate depth.

Dudek archaeologists also reviewed pertinent academic and ethnographic literature for information pertaining to historic use of the proposed Planning Area and vicinity, including sources commonly identified though Tribal consultation, notably the 1938 Kirkman-Harriman Historical Map (Kirkman and Harriman 1938). It should be noted that this map is highly generalized due to scale and age and may be somewhat inaccurate with regards to distance and location of mapped features. Additionally, this map was prepared based on review of historic documents and notes more than 100 years following secularization of the missions (in 1833). Although the map contains no specific primary references, it matches with the details documented by the Gaspar de Portolá expedition (circa 1769–1770). The map is a valuable representation of post-colonization mission history; however, it is limited to a specific period of Native American history and substantiation of the specific location and uses of the represented individual features should be verified by archaeological records and/or other primary documentation (Kirkman and Harriman 1938).

Native American Coordination

A search of the Native American Heritage Commission (NAHC) Sacred Land Files (SLF) was requested on December 29, 2025, and conducted by NAHC Cultural Services Analyst Andrew Green on January 14, 2026 to determine the presence of any reported Native American cultural resources within the proposed Planning Area as listed in the NAHC maintained SLF (see Appendix F-2). The NAHC SLF search result was positive. The NAHC suggested contacting the Gabrieleno/Tongva San Gabriel Band of Mission Indians, the Juaneno Band of Mission Indians, and the Juaneno Band of Mission Indians Acjachemen Nation – Belardes. Additionally, the NAHC suggested contacting twenty-three (23) Native American individuals who would potentially have specific knowledge as to whether or not Native American cultural resources are identified within or near the Planning Area that could be at-risk.

Sacred Land Files maintained by the NAHC represent a curation of “ancient places of special religious or social significance to Native Americans and known ancient graves and cemeteries of Native Americans on private and public lands in California” (NAHC 2026) provided by Tribal entities and Native American representatives. For various

reasons, Tribal entities and Native American representatives do no not always report sacred lands or TCRs to the NAHC; as such, the NAHC's SLF is not necessarily a comprehensive list of known TCRs and searches of the SLF must be considered in concert with other research and not used as a sole source of information regarding the presence of TCRs. Additionally, results of the SLF provided relate to the general regional area within and surrounding the proposed Planning Area and don't necessarily equate to the existence of resources within the specific area occupied by the proposed Planning Area. The proposed Project is subject to compliance with AB 52 (PRC 21074) and SB 18 (Government Code Section 65352.3). Additional and more detailed information regarding tribal notification and consultation efforts can be found in Section 4.18 Tribal Cultural Resources.

Geological Setting

The Planning Area is located within the Southern Coastline Sub Province that overlaps the features of the Peninsular Ranges Geomorphic Province. The Peninsular Ranges Geomorphic Province is bounded the Pacific Ocean on the west, the Transverse Ranges Geomorphic Province to the north, and the Colorado Desert Geomorphic Province to the east (Norris and Webb 1990). The Peninsular Ranges Province consists of a series of northwest-trending mountain ranges separated by long valleys, formed from subparallel faults stemming from the San Andreas Fault. The topography resembles that of the Coast Ranges, but compositionally it is more similar to that of the Sierra Nevada Province (CGS 2002; Koordinates 2026). Because the coastline is such a dominating feature of California it qualifies as its own subprovince that is split between north and south. The Southern Coastline Sub Province covers the area from San Diego north-northwest to Point Conception. These southern shores are generally sheltered from storms due to the broad continental shelf along this section and beaches are usually well developed and sandy with sand deposition that started approximately 10,000 years ago (Koordinates 2026).

Field Survey

Due to the large extent and developed nature of the Planning Area, as well as associated logistical constraints, archaeological resources pedestrian surveys were not conducted in support of the proposed Project. Instead, Dudek archaeologists completed a desktop review of the Planning Area consistent with the methodology outlined above. This review included an evaluation of data obtained through the SCCIC database records search, results from a SLF search, an archival review of historic aerial photographs and historic topographic maps (including the Kirkman–Harriman historical map), and an assessment of the regional geological setting.

Archaeological Resource Sensitivity

The potential for future development within the Planning Area to impact archaeological resources is influenced by both the location of future ground-disturbing activities and the underlying archaeological sensitivity of the area. Archaeological sensitivity varies throughout the Planning Area and is based primarily on the distribution of previously recorded archaeological resources, the extent of past development and ground disturbance, and proximity to environmental features that historically supported prehistoric human settlement and activity, such as the Santa Ana River. An Archaeological Resources Sensitivity Map depicting areas of low, moderate, and high sensitivity within the Planning Area is provided in Appendix F-3.

Dudek conducted a desktop review of the Planning Area to assess the relative archaeological sensitivity of the area and the potential for encountering archaeological resources during future project implementation. This review included an evaluation of data obtained through the SCCIC database records search, results from a SLF search, an archival review of historic aerial photographs and historic maps (including the 1938 Kirkman–Harriman Historical

Map), a review of current Google Earth imagery, and an assessment of the regional geological setting. Based on this information, the Planning Area was categorized into areas of low, moderate, and high archaeological sensitivity.

Areas of low archaeological sensitivity are locations where the likelihood of encountering intact archaeological resources is considered low. These areas are typically characterized by intensive urban development and substantial prior ground disturbance, which may have removed or disturbed any archaeological deposits that may have once been present. In addition, these locations are generally situated away from previously recorded archaeological resources and major environmental features, such as the Santa Ana River, that supported prehistoric human settlement and activity. As a result, future development within areas of low archaeological sensitivity would have a low potential to impact archaeological resources.

Areas of moderate archaeological sensitivity include locations where the likelihood of encountering intact archaeological resources is considered moderate. These areas typically include parcels with limited or no prior ground disturbance, such as open land, agricultural fields, or lightly developed properties where intact subsurface deposits may still be present. Moderate sensitivity areas may also include locations where archaeological resources were previously recorded but documented as destroyed or heavily disturbed, as well as areas containing previously recorded archaeological isolates. In addition, areas near environmental features such as the Santa Ana River that supported prehistoric human settlement and activity may be considered moderately sensitive because past populations were more likely to use these areas. Future development within areas of moderate archaeological sensitivity has a moderate potential to encounter previously unidentified archaeological resources.

Areas of high archaeological sensitivity include locations where the likelihood of encountering intact archaeological resources is considered high. These include areas where previously recorded archaeological resources with documented human remains have been identified. High sensitivity areas may also include locations where archaeological deposits are known or suspected to remain intact, even if partially buried or obscured by later land uses. Future development within areas of high archaeological sensitivity has the high potential to result in impacts to archaeological resources.

4.5.1.4 Historic Built Environment Resources

Known Historic Built Environment Resources

The following repositories and documents were consulted to identify previously recorded historic built environment resources.

Costa Mesa Local Register of Historic Places

In 1997, the City conducted a historic survey of all structures within city limits and in 1999 the survey list was adopted as the Local Register of Historic Places (local register), which includes 28 properties. Dudek architectural historians reviewed the local register list and identified six historic resources located in the Planning Area (Table 4.5-3).

Table 4.5-3. Costa Mesa Local Register of Historic Places

APN(s)	Address	Name	Build Date	Eligibility for CRHR/NRHP	P-Number	CHR Status Code
139-304-22	1534 Adams Avenue	N/A	Unknown	Eligible for Local Register	N/A	Not Evaluated
415-061-02	3315 Fairview Road	Segerstrom House and Barn	1915	Eligible for NRHP	P-30-176764 P-30-176765 P-30-177411	2S2
419-205-05	420 W. 19th Street	Costa Mesa First United Methodist Church	1928	Eligible for NRHP	P-30-177723	2S2
424-271-29	565-567 W. 18th Street	N/A	Unknown	Eligible for Local Register	N/A	Not Evaluated
426-121-13	2150 Newport Boulevard.	Station Master's House	1891	Eligible for NRHP	N/A	2S
426-121-42	2180 Newport Boulevard	N/A	Unknown	Eligible for Local Register	N/A	Not Evaluated

Built Environment Resource Directory

The Built Environment Resource Directory (BERD) is a database maintained by the California Office of Historic Preservation (OHP) that provides information, organized by county, regarding non-archaeological resources in the OHP's inventory. The BERD contains information only for built environment resources that have been processed through OHP through federal and state regulatory processes, and resources nominated under federal and state registration programs. The BERD replaces the former Historic Properties Directory that previously provided evaluation status information for those resources processed through the OHP.

On December 18, 2025, Dudek reviewed the BERD for all applicable portions of Costa Mesa, which included 36 built environment resources. Of the 36 resources, two properties (Segerstrom House and Barn at 3315 Fairview Road and Costa Mesa First United Methodist Church at 420 West 19th Street) have a California Historical Resource (CHR) Status Code 2S2, indicating they were individually determined eligible for the NRHP by consensus through the Section 106 of the National Historic Preservation Act (Section 106) process, and listed in the CRHR; one property (Station Master's House at 2150 Newport Boulevard) has a California Historical Resource (CHR) Status Code 2S, indicating it was individually determined eligible for NRHP by the Keeper of the NRHP and listed in the CRHR; and the remaining 33 resources have a CHR Status Code 6Y, indicating they were determined ineligible for NRHP by consensus through the Section 106 process and not evaluated for CRHR or local listing. See Appendix F-4 for the complete list of applicable BERD resources. Figure 4.5-1A-G Historic-Age and Unknown-Age Properties within the Planning Area also identifies all applicable BERD resource properties.

South Central Coastal Information Center Database Records Search

Dudek architectural historians reviewed information on previously recorded properties provided by SCCIC database records search. The records search identified eight primary numbers associated with built environment resources in the Planning Area, three of which are associated with the Segerstrom Farm Complex property. The eight primary number records and associated properties are as follows: 1) P-30-176764, P-30-176765, and P-30-177411 for 3315 Fairview Road (Segerstrom Farm Complex/Barn/Ranch), 2) P-30-177723 for 420 W 19th Street (First United Methodist Church), 3) P-30-177525 for 695 West 19th Street (Costa Mesa Senior Center), 4) P-30-176759 for 1626 Newport Boulevard (Snug Harbor Trailer Park) (no longer extant), 5) P-30-176760 for 1640 Newport Boulevard (El Nido Trailer Park) (no longer extant), and 6) P-30-177735 for 2040 Placentia Avenue (OG60XC664F – 2040 Placentia Avenue; Alano Club of Costa Mesa).

Other Repositories

In addition to conducting the above-mentioned research, Dudek reviewed the following databases for previously recorded historical resources in Costa Mesa:

- NRHP NPGallery Database
- California Historic Landmark Registry and California Points of Historical Interest

These repositories or databases did not include any historical resources that are located within the Planning Area.

Historic-Age Properties Within the Planning Area

Dudek reviewed historical aerial photographs via NETR for properties within the Planning Area that were constructed in or before 1981 and therefore over 45 years of age. Generally, properties eligible for listing in the NRHP and CRHR are at least 50 years old. The 45-year criteria recognizes that there is commonly a five-year lag between resource identification and the date that planning decisions are made. Dudek's review identified 757 historic-age properties within the Planning Area, which includes the six forementioned historical resources identified in Table 4.5-3, above. Appendix F-4 lists all 757 historic properties (over 45 years of age) within the Planning Area. Figure 4.5-1A-G Historic-Age and Unknown-Age Properties within the Planning Area also identifies all 757 historic-age properties.

Unknown Build Date Properties Within the Planning Area

Dudek reviewed County Assessor data for properties located in the Planning Area and noted 51 properties that have unknown build dates. See Table 4.5-4 for a complete list of properties in the Planning Area with unknown build dates. Figure 4.5-1A-G Historic-Age and Unknown-Age Properties within the Planning Area also identifies all 51 properties with unknown build dates.

Table 4.5-4. Unknown Build Date Properties

APN	Address
000-000-06	1100 Bristol Street
439-321-11	1120 Bristol Street
439-321-12	1122 Bristol Street
439-321-16	1202 Bristol Street
140-041-57	1301 Sunflower Avenue
425-423-39	131 17th Street

Table 4.5-4. Unknown Build Date Properties

APN	Address
140-041-24	1375 Sunflower Avenue
140-041-40	1376 S Coast Drive
139-304-21	1500 Adams Avenue
139-031-76	1515 S Coast Drive
139-313-21	1590 Adams Avenue
415-112-16	1665 Scenic Avenue
424-101-16	1685 Babcock Street
424-101-10	1694 Monrovia Avenue
424-271-21	1764 Anaheim Avenue
425-443-18	1780 Newport Boulevard
425-453-18	1890 Newport Boulevard
422-103-39	1901 Harbor Boulevard
426-181-28	2040 Newport Boulevard
422-282-21	2060 Placentia Avenue
426-182-18	2070 Newport Boulevard
419-121-18	2300 Harbor Boulevard
419-121-21	2300 Harbor Boulevard
419-121-24	2300 Harbor Boulevard
139-302-27	2845 Harbor Boulevard
439-312-11	2851 Santa Ana Avenue
427-165-06	300 Bristol Street
418-071-09	3070 Bristol Street
427-165-07	320 Bristol Street
410-051-40	3310 Bristol Street
140-041-48	3330 Harbor Boulevard
139-032-11	3333 Hyland Avenue
140-041-54	3333 Susan Street
140-041-81	3333 Susan Street
140-041-47	3350 Harbor Boulevard
140-041-62	3370 Harbor Boulevard
140-041-63	3370 Harbor Boulevard
140-041-38	3390 Harbor Boulevard
119-401-06	345 Bristol Street
139-662-21	3505 Cadillac Avenue
415-081-21	3530 Hyland Avenue (Parking Lot)
139-651-24	3596 Cadillac Avenue
419-041-16	452 Victoria Street
141-732-08	464 Princeton Drive
410-501-39	575 Anton Boulevard
410-471-10	601 Town Center Drive
410-471-11	615 Town Center Drive
410-471-12	615 Town Center Drive

Table 4.5-4. Unknown Build Date Properties

APN	Address
422-142-22	628 W 19th Street
410-471-08	655 Town Center Drive
422-261-21	700 19th Street

Summary for Findings for Historic Built Environment Resources

Research identified six historical resources within the Planning Area: 1) the Segerstrom Farm Complex at 3315 Fairview Road (P-30-177411, 30-176764, P-30-176765), built in 1915, with a CHR status code of 2S2; 2) Costa Mesa First United Methodist Church at 420 West 19th Street, built in 1928, with a CHR status code of 2S2; 3) Station Master's House at 2150 Newport Boulevard, built in 1891, with a CHR status code of 2S; 4) 1534 Adams Avenue (listed on Costa Mesa's local register); 5) 565-567 W. 18th Street (listed on Costa Mesa's local register); and 6) 2180 Newport Boulevard (listed on Costa Mesa's local register). Figure 4.5-1A-G, Historic-Age and Unknown-Age Properties within the Planning Area, shows the location of the 757 historic-age (aged 45 years or older) properties, which includes the six historical resources, located within the Planning Area as well as the 51 properties with unknown build dates in the Planning Area. The 757 age-eligible properties would require inventory and evaluation to determine if they are historical resources under CEQA. The 51 properties with unknown build dates would need to be dated to determine if they are 45 years or older. If they are determined to be 45 years or older, they would require inventory and evaluation to determine if they are historical resources under CEQA.

4.5.2 Regulatory Requirements

4.5.2.1 Federal Regulations

Secretary of Interior Standards

The Secretary of Interior Standards are guidelines for the treatment of historic properties, and although compliance is not mandatory, they are intended to promote responsible preservation practices intended to protect cultural resources. There are four treatment approaches, which include Preservation, Rehabilitation, Restoration, and Reconstruction.

National Historic Preservation Act

The National Historic Preservation Act established the NRHP and the President's Advisory Council on Historic Preservation, and provided that states may establish State Historic Preservation Officers to carry out some of the functions of the National Historic Preservation Act.

The President's Advisory Council on Historic Preservation provides methodological and conceptual guidance for identifying historic properties.

National Register of Historic Places

The NRHP is the nation's master inventory of known historic resources 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. Properties are nominated to the NRHP by the State Historic Preservation Officer of the state in which the property is located, by the Federal Historic Preservation Officer for properties under federal

ownership or control, or by the Tribal Historic Preservation Officer if on tribal lands. Listing in the NRHP provides formal recognition of a property's historic, architectural, or archaeological significance based on national standards used by every state. Documentation of a property's historic significance helps encourage preservation of the resource.

A property must one or more of the following criteria:

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

In addition to meeting one of the criteria above, a property must retain integrity. Integrity is defined as "the ability of a property to convey its significance" (NPS 1997). Integrity is measured by seven aspects: location, design, setting, materials, workmanship, feeling, and association.

Certain properties are not typically considered for listing in the NRHP: religious properties, moved properties, birthplaces and graves, cemeteries, reconstructed properties, commemorative properties, and properties achieving significance within the past 50 years. These properties may be eligible for listing in the NRHP if the property meets one of the four criteria listed above and if the property also meets the appropriate Criteria Consideration for the property.

4.5.2.2 State Regulations

California Register of Historical Resources

In California, the term historical resource, as defined by California Public Resources Code (PRC) Section 5020.1(j), 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." In 1992, the California Legislature established the CRHR "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Section 5024.1(a)). The criteria for listing resources in the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the NRHP and are enumerated below. According to PRC Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains "substantial integrity," and (ii) meets at least one of the following criteria:

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

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. Per the California Code of Regulations (CCR) A resource less than 50 years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (see 14 CCR 4852(d)(2)).

The CRHR provides limited protection of 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 some state landmarks and points of historical interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98

CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. As described below, these procedures are detailed in California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98.

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. Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the County coroner has examined the remains (California Health and Safety Code Section 7050.5(b)). If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the Native American Heritage Commission (NAHC) within 24 hours (California Health and Safety Code Section 7050.5(c)). In accordance with California Public Resources Code Section 5097.98(a), the NAHC will notify the Most Likely Descendant (MLD). With the permission of the landowner, the MLD may inspect the site of discovery. Within 48 hours of being granted access to the site, the MLD may recommend means of treatment or disposition, with appropriate dignity, of the human remains and associated grave goods.

California Public Resources Code

PRC Section 5097.94 establishes the powers and duties bestowed on the NAHC. As they relate to those powers and duties that apply to human remains, this code states that the NAHC has the responsibility to: identify and catalog places of special religious or social significance to Native Americans, and known graves and cemeteries of Native Americans on private lands; make recommendations relative to Native American sacred places that are located on private lands; mediate disputes arising between landowners and known descendants relating to the treatment and disposition of Native American human burials, skeletal remains, and items associated with Native American burials; provide protection to Native American human burials and skeletal remains from vandalism and inadvertent destruction; and assist interested landowners in developing agreements with appropriate Native American groups for treating or disposing, with appropriate dignity, of the human remains and any items associated with Native American burials.

PRC Section 5097.98 outlines the protocols to be followed in the case of a discovery of Native American human remains including the roles and responsibilities of the coroner, NAHC, the individual identified by the NAHC as the most likely descended from the deceased Native American, and the landowner of whose land the discovery was made. The code defines the manner of “conferral” or “discuss and confer” as “the meaningful and timely discussion

and careful consideration of the views of each party, in a manner that is cognizant of all parties' cultural values, and where feasible, seeking agreement" and states that all parties involved "shall recognize the other's needs and concerns for confidentiality of information provided to the other."

PRC Section 5097.99 is intended to protect by prohibiting obtaining or possessing Native American artifacts or human remains taken from grave or cairn on or after January 1, 1984, and states that "any person who removes, without authority of law, any Native American artifacts or human remains from a Native American grave or cairn with an intent to sell or dissect or with malice or wantonness is guilty of a felony which is punishable by imprisonment in the state prison."

PRC Section 5097.991 establishes the policy of the state that Native American remains and associated grave artifacts shall be repatriated.

California Environmental Quality Act

Archaeological Resources. As described further below, the following CEQA statutes and CEQA Guidelines 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), define "historical resources." In addition, CEQA Guidelines, Section 15064.5(b), defines the phrase "substantial adverse change in the significance of an historical resource." It also defines the circumstances when a project would materially impair the significance of a historical resource.
- PRC Section 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 cemetery.
- PRC Sections 21083.2(b) and (c), and CEQA Guidelines, Section 15126.4, provide information regarding the mitigation framework for archaeological and historic resources, including examples of preservation-in-place mitigation measures. Preservation in place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context and may also help avoid conflict with religious or cultural values of groups associated with the archaeological site(s).
- CEQA Section 15064.5 – This Section outlines the protocols to be followed in the case of a discovery of Native American human remains including the roles and responsibilities of the coroner, NAHC, the individual identified by the NAHC as the most likely descended from the deceased Native American, and the landowner of whose land the discovery was made.

Historical Resources. 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)). If a site is either listed or eligible for listing in the CRHR, or if it is included in a local register of historic resources or identified as significant in a historical resources survey (meeting the requirements of PRC Section 5024.1(q)), it is a "historical resource" and is presumed to be historically or culturally significant for purposes of CEQA (PRC Section 21084.1; 14 CCR 15064.5(a)). The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption (PRC Section 21084.1; 14 CCR 15064.5(a)).

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

1. Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the CRHR; 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 CRHR 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 the project would cause a substantial adverse change in the significance of a historical resource such that the resource's historical significance would be materially impaired.

Secretary of the Interior's Standards for the Treatment of Historic Properties. Where a project has been determined to conform with the Secretary of the Interior's for the Treatment of Historic Properties (Standards), the project's impact on historical resources would be considered mitigated below a level of significance and, thus, not significant (14 CCR 15126.4(b)(1)). In most cases, a project that demonstrates conformance with the Standards is categorically exempt from CEQA (14 CCR 15331), as described in the CEQA Guidelines (14 CCR 15126.4(b)(1)):

> *Where maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation or reconstruction of the historical resource will be conducted in a manner consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings (Guidelines) (Weeks and Grimmer 1995), the project's impact on the historical resource shall generally be considered mitigated below a level of significance and thus is not significant.*

The Standards are a series of concepts focused on maintaining, repairing, and replacing historic materials, as well as designing new additions or making alterations. They function as common-sense historic preservation principles that promote historic preservation best practices. There are four distinct approaches that may be applied to the treatment of historical resources:

- Preservation focuses on the maintenance and repair of existing historic materials and retention of a property's form as it has evolved over time.
- Rehabilitation acknowledges the need to alter or add to a historic property to meet continuing or changing uses while retaining the property's historic character.
- Restoration depicts a property at a particular period of time in its history, while removing evidence of other periods.

- Reconstruction recreates vanished or non-surviving portions of a property for interpretive purposes.

The choice of treatment depends on a variety of factors, including the property's historical significance, physical condition, proposed use, and intended interpretation. The Guidelines provide general design and technical recommendations to assist in applying the Standards to a specific property. Together, the Standards and Guidelines provide a framework that guides important decisions concerning proposed changes to a historic property.

The following 10 Standards for Rehabilitation are used to determine if a project is in conformance with the Standards for Rehabilitation. To be in conformance, a project must be consistent with the historic character of the structure(s) and, where applicable, the district in which it is located. The following Standards are to be applied to specific rehabilitation projects in a reasonable manner, taking into consideration economic and technical feasibility:

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Government Code Sections 7927.00 and 7927.005

These sections of the California Public Records Act were enacted to protect archaeological sites from unauthorized excavation, looting, or vandalism. Section 7927.00 explicitly authorizes public agencies to withhold information from the public relating to "Native American graves, cemeteries, and sacred places maintained by the NAHC." Section 7927.005 specifically exempts from disclosure requests for "records that relate to archaeological site

information and reports, maintained by, or in the possession of the California Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, the NAHC, another state agency, or a local agency, including the records that the agency obtains through a consultation process between a Native American Tribe and a state or local agency.

Unique Archaeological Resources

If it can be demonstrated that a project would cause damage to a unique archaeological resource, the lead agency may require that 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. See PRC Sections 21083.2(a), (b), and (c).

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

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

Impacts to 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 Tribal cultural resource (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.

4.5.2.3 Local Regulations

City of Costa Mesa Historic Preservation Ordinance

The City of Costa Mesa's Historic Preservation Program ("Program") is composed of the City's Historic Preservation Ordinance (Ordinance) that establishes criteria and procedures for designation, preservation and maintenance of cultural resources, landmarks, and historic districts. The Historic Preservation Ordinance is codified in the Costa Mesa Municipal Code at Title 13, Chapter IX, Article 14, Historic Preservation, Sections 13-200.6 through 13-200.12. The Ordinance also establishes preservation incentives including the City's Mills Act Program which provides property tax relief to owners of historic properties who are willing to restore and maintain their properties; and preservation easements for the facades of designated landmarks. The Ordinance is generally summarized below.

Article 14 Historic Preservation

§ 13-200.6 Purpose.

Article 14's purpose is to promote public health, safety, and general welfare by establishing a framework for identifying, protecting, enhancing, and sustaining buildings, sites, neighborhoods, natural features, and landscapes

of historical, archaeological, cultural, architectural, and community significance. It seeks to safeguard the city's heritage, increase public understanding and appreciation of the city's history, and foster civic and neighborhood pride and identity. The article further aims to preserve a diversity of architectural styles reflective of the city's historical development while encouraging compatible contemporary design, enhance property values and economic benefits, and strengthen the city's appeal to tourists and visitors in support of local business and industry.

§ 13-200.8 Definitions.

This section establishes definitions used to identify, evaluate, and regulate historic and cultural resources. Cultural resources include buildings, sites, landscapes, and features with historical, architectural, archaeological, or cultural significance, which may be nominated, listed, or formally designated at the local, state, or federal level. Individually designated resources are classified as landmarks, while historic districts contain a concentration of related resources, categorized as contributing or non-contributing based on significance and integrity. Properties less than 50 years old are generally eligible only if they demonstrate exceptional importance.

The section defines alterations as changes affecting character-defining features and emphasizes the role of integrity in determining significance and the impacts of proposed actions, including demolition or relocation. Most work on designated resources requires a certificate of appropriateness to ensure compatibility with preservation standards. The article distinguishes among preservation, rehabilitation, restoration, and reconstruction, clarifies what constitutes ordinary maintenance, and adopts the Secretary of the Interior's Standards as the guiding framework, with certified local governments recognized as partners in state and federal preservation programs.

§ 13-200.9 Historic preservation procedures.

The city maintains a list of sites eligible for placement on the National Register and Local Register (referred to as the City of Costa Mesa Historic Resources Survey). Based on planning commission recommendations, the City Council may designate qualifying resources, generally 50 years or older, or younger resources in special circumstances, as local landmarks if they meet established national or local significance criteria. Eligible resources include a wide range of property types and features that reflect important aspects of the City's history, are associated with significant persons or events, demonstrate distinctive design or construction, contribute to historic districts, possess unique characteristics or views, represent historic development patterns or rare property types, or have the potential to yield important historical or prehistoric information, provided they retain sufficient integrity.

Landmark or historic district designation may be initiated by the Planning Commission, City Council, property owners, or any individual or organization. The City also conducts an ongoing survey and documentation program to identify and evaluate historic and cultural resources, with findings recorded on official state inventory forms. Property owners are notified when their properties are surveyed, evaluated, and identified as potential cultural resources.

§ 13-200.10 Maintenance, restoration, rehabilitation, relocation, alteration, development and demolition of cultural resources through the certificate of appropriateness process.

Owners and persons in control of cultural resources listed on the Local Register of Historic Places are required to maintain these properties in good repair, including regulated interior areas and any interior elements necessary to prevent deterioration of exterior architectural features, with enforcement by the Development Services Department. To support preservation efforts, the development services director may apply the State Historical Building Code when permitting repairs, alterations, additions, relocation, or continued use of designated historic buildings. In addition, no restoration, rehabilitation, alteration, construction, demolition, or change in appearance of a

designated cultural resource may occur without first obtaining a certificate of appropriateness from the planning commission or designated review body, and these requirements apply in addition to all other city permits; however, applications consistent with adopted preservation plans or design guidelines may be approved administratively by the Planning Division.

City of Costa Mesa 2015 - 2035 General Plan

Chapter 11, the Historical and Cultural Resources Element of the Costa Mesa 2015 - 2035 General Plan, provides the following goals and policies potentially relevant to the Project (City of Costa Mesa 2016). The following summarizes goals and policies specific to cultural and historical resources.

Goal HCR-1: **Historical, Archaeological, and Paleontological Resource Preservation.** The City of Costa Mesa supports focused efforts to provide residents with a sense of community and history through the protection and preservation of historical and cultural resources.

Objective HCR-1A: *Encourage preservation and protection of the City's archaeological, paleontological, and historical resources.*

Preserving Historical Resources

Policy HCR-1.1: Encourage protection and enhancement of the diverse range of historical sites and resources in the City for the benefit of current and future residents and visitors.

Policy HCR-1.2: Encourage the preservation of significant historical resources (as identified in Table HCR-1) by developing and implementing incentives such as building and planning application permit fee waivers, Mills Act contracts, grants and loans, and implementing other incentives identified in the Historical Preservation Ordinance.

Policy HCR-1.3: Promote context-sensitive design that respects and celebrates the history and historical character of sites and resources while meeting contemporary needs of the community.

Policy HCR-1.4: Require, as part of the environmental review procedure, an evaluation of the significance of paleontological, archaeological, and historical resources, and the impact of proposed development on those resources.

Policy HCR-1.5: Continue to identify local landmarks with markers and way-finding signage. Include informational signage about local history, utilizing maps to highlight locations of other historical resources at popular historical sites.

Policy HCR-1.6: Encourage development of an interpretive center for paleontological, archaeological, and historical resources at Fairview Park. The center may contain resources found in the park area as well as resources found throughout the City.

Preserving Archaeological Resources

Policy HCR-1.7: Require cultural resources studies (i.e., archaeological and historical investigations) for all applicable discretionary projects, in accordance with CEQA regulations. The studies should identify cultural resources (i.e., prehistorical sites, historical sites, and isolated artifacts

and features) in the project area, determine their eligibility for inclusion in the California Register of Historical Resources, and provide mitigation measures for any resources in the project area that cannot be avoided. Cultural resources studies shall be completed by a professional archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards in prehistorical or historical archaeology.

Policy HCR-1.8: Comply with requirements of the California Environmental Quality Act regarding protection and recovery of archaeological resources discovered during development activities.

4.5.3 Thresholds of Significance

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

Threshold 4.5-1: Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.

Threshold 4.5-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.

Threshold 4.5-3: Disturb any human remains, including those interred outside of dedicated cemeteries.

4.5.4 Impact Analyses

4.5.4.1 Methodology

As described in Chapter 3, Project Description, the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation Project is a policy document that does not include or propose any site-specific development that could directly result in construction or operational impacts to the environment. However, implementation of the Project would facilitate additional future development in the city. Therefore, this Draft PEIR does not assess the site-specific construction and operation details of each future development within the Planning Area. Rather, it assesses the impacts associated with changes to existing land uses and the associated overall effects of buildout of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation Project through 2056, where reasonably foreseeable physical changes to the environment could occur. Analysis at a parcel or site-specific level was not conducted because, unless otherwise noted within this assessment, the actual locations of project development (and its chronologic sequence or concurrence) that may be implemented in the future are speculative.

The following analysis considers the existing environmental setting and regulatory environment applicable to the Planning Area. This analysis considers the CEQA Guidelines in determining whether implementation of the Project, including the additional housing and commercial spaces, could adversely affect cultural resources the Planning Area.

The Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation does not propose any land use or zoning changes to parcels currently zoned or designated as open space. Instead, the Project would facilitate changes to development type/intensity (e.g., from commercial/industrial to mixed-use and residential to

more dense residential) on parcels that already support and/or are zoned for development. Potential future development would predominantly consist of infill development within previously disturbed and/or developed parcels.

Threshold 4.5-1 ***Would the project cause a substantial adverse change in the significance of an historical resource pursuant to Section 15064.5?***

Significant and Unavoidable Impact. The identified historic built environment resources that were identified through the records search and background research for historical resources described in Section 4.5.1.4, Historic Built Environment Resources, are analyzed below.

Zoning Updates and Housing Element Implementation

There are six previously documented properties that qualify as historical resources under CEQA within the proposed Planning Area: 1) the Segerstrom Farm Complex at 3315 Fairview Road (P-30-177411, 30-176764, P-30-176765), built in 1915, with a CHR status code of 2S2; 2) Costa Mesa First United Methodist Church at 420 West 19th Street, built in 1928, with a CHR status code of 2S2; 3) Station Master's House at 2150 Newport Boulevard, built in 1891, with a CHR status code of 2S; 4) 1534 Adams Avenue (listed on Costa Mesa's local register); 5) 565-567 W. 18th Street (listed on Costa Mesa's local register); and 6) 2180 Newport Boulevard (listed on Costa Mesa's local register). The proposed Planning Area will include proposed rezoning of Measure K sites (both Housing Element and non-Housing Element properties) with the updated Mixed-Use Overlay District (MUOD), which would include specific provisions regarding allowed uses, maximum residential densities, and other provisions. The rezoning would satisfy the requirements of Housing Element Programs. Application and utilization of the amended MUOD assumes that residential-only or mixed-use (residential and commercial) would be developed on Measure K sites. Upon adoption, the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation Project will guide development in the city over a 30-year planning period, through 2056. Although no analysis at a parcel or site-specific level was conducted due to the speculative nature of the proposed Planning Area, the Project would facilitate changes to development type/intensity (e.g. from commercial/industrial to mixed-use and residential to more dense residential). These changes could directly impact historical resources through the redevelopment of these properties. As such, the impact to historical resources resulting from the Zoning Updates and Housing Element Implementation Project would be a significant and unavoidable impact.

Potential Future Development

As stated above, there are six previously documented properties that would qualify as historical resources under CEQA within the proposed Planning Area. Additionally, there are 757 historic-age (aged 45 years or older) properties (including the six properties already identified as historical resources) and 51 properties that have unknown build dates, as well as numerous properties within the proposed Planning Area, that will become 45 years of age in the future, that have not been identified or evaluated under applicable historic significance criteria. As such, their status as CEQA historical resources is currently unknown. These potential resources require consideration in future planning. Implementation of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation would result in changes to land use designations, and it is reasonably foreseeable to assume that these changes would result in facilitating future development and construction within Costa Mesa. Consequently, there is a potential to impact currently unknown historical resources through future subsequent projects that may result in property demolition, alteration, and/or expansion that may occur on existing buildings and properties in the Zoning Updates and Housing Element Implementation. Any future activities that would substantially adversely change the significance of a historical resource would be considered a significant impact under CEQA. However, as

detailed in Section 4.5.2, Regulatory Requirements, there are existing federal, state, and local policies and regulations in place to identify, assess impacts to, and protect historical resources.

The City's various urban plans, overlays, and specific plans are the focus of the proposed Project's rezoning effort. The MUOD (inclusive of the urban plans and the Harbor Mixed-Use Overlay), as well as the City's North Costa Mesa Specific Plan, One Metro West, and Newport Boulevard Specific Plan, would be amended in order to rezone the City's Measure K sites. The Measure K sites are located along major thoroughfares within the city, including Newport Boulevard, Harbor Boulevard, Placentia Avenue, 19th Street, 18th Street, 17th Street, Baker Street, Bristol Street, and areas north of Interstate 405 (City of Costa Mesa 2025). The Planning Area is comprised of 1,079 parcels totaling approximately 1,353 acres. Within the Planning Area there are 757 age-eligible properties (including six known historical resources) and 51 properties with unknown build dates. Because of the lack of information regarding the nature, location and project-level impacts associated with potential future development that could move forward under the Project, it cannot be assumed that the City's General Plan's Goals and Policies, as well as implementation of the City's 2021-2029 Housing Element, would reduce impacts to a level that is less than significant, as there is a potential to cause a substantial adverse change in the significance of unknown historical resources through the reasonably foreseeable future property development.

Mitigation Measure (MM) 4.5-1 would require future project-specific developments that involve demolition or alterations to existing building(s)/structure(s) over 45 years old to assess the historical significance of those resources to see if it qualifies as a CEQA historical resource and requires an assessment of potential project-level impacts. A parcel search on the City's GIS system and/or records search with SCCIC would then be conducted to determine if any identified resource is listed in the NRHP or CRHR as an historical resource. If the identified resource is not listed on the state or local register, the environmental assessment would examine the age, architectural style and integrity of the resource and conduct additional investigation if it is unclear whether the identified resource is an historical resource. This would generally require the identified resource to be evaluated by a professionally qualified architectural historian and/or preparation of a Phase I and/or Phase II Historic Resources Assessment (HRA) report to evaluate the properties in accordance with professional standards and in conformance with CEQA Guidelines Section 15064.5 to determine if it is an historical resource. If a future project involves alterations or modifications to historical resources, and the proposed work conforms to the Secretary of the Interior's (SOI's) Standards for the Treatment of Historic Properties, specifically the Standards for Rehabilitation (Standards), impacts to historical resources would be considered less than significant, and no additional review would be required.

If a future project involves material impairment or demolition of historical resource(s) that cannot be avoided or mitigated through project design review and Standards compliance, that project applicant must incorporate design changes or other measures to reduce or avoid impacts, even though it may not reduce impacts below a level of significance. Although documentation, interpretive displays, and salvage are common mitigation measures for projects in which there are impacts to historical resources, these measures do not ensure that all impacts from future development projects would be mitigated to a level of less than significant. Future non-discretionary projects would be subject to the federal, state and local regulations mentioned above; however, these non-discretionary projects would not necessarily be subject to CEQA review, additional environmental assessments, or mitigations measures.

Implementation of MM-4.5-1 would be applicable for future discretionary development projects subject to the MUOD within the Planning Area and would ensure that potential CEQA historical resources will be identified, project-specific impacts will be evaluated, and feasible mitigation measures will be implemented, as appropriate, to mitigate impacts to historical resources. However, compliance with MM-4.1-1 may not be feasible for certain

projects implemented under the MUOD (e.g., non-discretionary projects or projects on Housing Element sites) and mitigation may not always reduce impacts to below a level of significance, due to the nature of historic resources. Therefore, the impact would remain significant and unavoidable.

Threshold 4.5-2 *Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?*

Significant and Unavoidable Impact. The following summarizes the archaeological resources identified through the SCCIC database records search, results from the SLF search, as well as the results of archival research, including a review of historic topographic maps, aerial photographs, and the Kirkman–Harriman historical map, and assesses the archaeological sensitivity of the Planning Area. These results have informed the analysis with respect to where known archaeological resources are located as well as determining areas within which unknown archaeological resources are more likely to exist.

SCCIC Database Records Search. As a result of the SCCIC database records search, five prehistoric archaeological resources and one prehistoric isolate have been recorded within the Planning Area. The prehistoric resources consist of CA-ORA-297, a shell midden deposit; CA-ORA-687, a habitation complex with human burials; CA-OR-1538, a shell midden deposit; CA-ORA-1617, a sparse shell scatter; P-30-100359, sparse shell scatters; and P-30-100337, an isolated core. Fifty-four cultural resources studies have been conducted within the Planning Area between 1975 and 2014, collectively addressing approximately 25 percent of the Planning Area.

Review of Historical Topographic Maps and Aerial Photographs. Based on topographic map and historic photographic aerial analysis, the Planning Area has been subject to development at least as early as 1896. The Santa Ana River borders the western section of the Planning Area, and the Santa Ana and Newport Railroad/Southern Pacific Railroad borders the eastern section of the Planning Area, and to the east and south of the Planning area is Newport Bay. By the 1935 topographic map, the Santa Ana River appears to be channelized. Development has increased throughout the Planning Area by the 1951 topographic map. Interstate 405 is now shown on the 1968 topographic map, and development has increased as tract residential housing, colleges, schools, and hospitals are observed within and adjacent to the Planning Area. At the time of the earliest available photographic aerial, 1938, the community area was mostly occupied by agricultural fields with some increase in scattered development. On the 1946 aerial, the John Wayne Airport is observed. The 1953 photographic aerial image demonstrates that development within the Planning Area vicinity has increased, especially to the west of the Planning Area. By the 1963 photographic aerial, the majority of the southern section of the Planning Area has been developed with residential uses while the northern section was mainly occupied by agricultural use. By the 1972 photographic aerial, approximately 80 percent of the Planning Area has been developed. Steady development is seen throughout the subsequent decades to an extent similar to today.

Review of 1938 Kirkman-Harriman Historical Map. Review of the 1938 Kirkman-Harriman Historical Map revealed that two Native American villages, *Lukup* and *Genga* are shown to have existed to the west and to the southeast of the Planning area, with the Santa Ana River located between the two villages. Based on archival research, the villages of *Lukup* and *Genga*, were located within proximity to the Planning Area. Additionally, while not located within the Planning Area, site CA-ORA-58, also known as the Fairview Site, is located to the west from the Planning Area. Site CA-ORA-58 has undergone many excavation efforts, contains numerous burials and many unique and/or diagnostic artifacts, and is listed on the NRHP and the CRHR.

While the Planning Area has been largely urbanized by past development over the last 90+ years, given the rich history of past human settlement, especially near water sources, there is still potential to encounter unknown intact subsurface deposits within soils not previously disturbed by existing or past development.

Archaeological Resource Sensitivity. The majority of the Planning Area has undergone substantial grading, construction, or other ground-disturbing activities that have reduced the likelihood that intact archaeological deposits remain. These areas are generally considered to have low archaeological sensitivity. However, areas of moderate and high archaeological sensitivity remain within the Planning Area.

Areas of low archaeological sensitivity are generally characterized by extensive prior ground disturbance and urban development, where intact archaeological deposits are unlikely to remain. Moderate sensitivity areas include locations with limited prior ground disturbance, areas where archaeological resources were previously recorded but documented as destroyed or heavily disturbed, or areas in proximity to the Santa Ana River. High sensitivity areas include locations where previously recorded archaeological resources with documented human remains have been identified, or where intact archaeological deposits may still be present underlying existing development.

The Project is intended to guide growth and development within the Planning Area. No specific development is proposed as part of the Project that could directly destroy or adversely change the significance of an archaeological resource pursuant to Section 15064.5. However, implementation of the Project would result in changes to land use designations and zones, which would facilitate additional future development. Some of the future projects that would be facilitated by the Project would involve earthwork to demolish, renovate, and construct on properties within the Planning Area. Such activities could require grading and/or construction in native soils, such as earthwork for ground preparation, construction of foundations and driveways and installation of trenching for utilities and landscaping. It is not expected that all of these activities would occur in engineered fill and/or previously disturbed soils, and this analysis anticipates that native/undisturbed soils would be impacted by future development activities.

As detailed in Section 4.5.2, Regulatory Requirements, there are existing federal and state regulations in place to identify, assess impacts to, and protect archaeological resources. Additionally, the City of Costa Mesa's Historic Preservation Ordinance and the City's 2015-2035 General Plan include guidelines, goals and policies that promote the identification and preservation of archaeological resources as described in Section 4.5.2.3, Local Regulations. However, even with compliance with applicable regulations, there is a potential to cause a substantial adverse change in the significance of both known and unknown archaeological resources through the reasonably foreseeable future property development that may occur on existing properties in the Planning Area.

MM-4.5-2 would require that impacts to archaeological resources are appropriately considered prior to implementation of any future project-specific activities. If necessary, the City would require applicants for new projects to submit a Phase I Archaeological Resources Inventory Report to identify and evaluate archaeological resources within the subject property. If project impacts to archaeological resources are determined to be potentially significant, or if known archaeological resources are identified or unknown archaeological resources are inadvertently discovered during ground-disturbing activities, MM-4.5-2 would require that the archaeological resources are appropriately considered, evaluated, and treated. If necessary, the City shall require the project to incorporate appropriate measures to avoid or minimize impacts on archaeological resources. Such measures may include preparation of an Archaeological Resources Work Plan (ARWP), implementation of construction worker archaeological resources sensitivity training, archaeological monitoring conducted in accordance with the ARWP, and if avoidance is not feasible, the development of a Phase III Archaeological Resources Data Recovery and Treatment Plan. While background research, pedestrian surveys, archaeological assessments, evaluations, and avoidance of known resources are common mitigation measures for projects in which there are impacts to known

archaeological resources, these measures do not ensure that all impacts from future development projects would be mitigated to a level of less than significant. Future non-discretionary projects that would be implemented under the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation Project would be subject to the federal, state and local regulations mentioned above; however, these non-discretionary projects would not necessarily be subject to CEQA review, additional environmental assessments, or mitigation measures. As such, even with the implementation of existing regulations, applicable guidelines, goals and policies, and MM 4.5-2, potential impacts relative to archaeological resources would be significant and unavoidable because it is not possible to ensure the successful preservation of all archaeological resources where new development may occur.

Threshold 4.5-3 *Would the project disturb any human remains, including those interred outside of formal cemeteries?*

Less Than Significant Impact. The Project is intended to guide regional-level growth and development within the Planning Area. No direct development is proposed; therefore, the Project would not directly disturb any human remains. No formal cemeteries were identified within the Planning Area. However, the SCCIC database records search identified two Native American burials associated with site CA-ORA-687 within the Planning Area that were previously recovered during data recovery efforts in 1978. Cottrell and Jacobs (1978) reported that the majority of the archaeological deposit had been destroyed by prior ground disturbance and excavation and concluded that no additional excavation was warranted.

The Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation Project would result in changes to land use designations, which would facilitate additional future development. Some of the future projects that would be facilitated by the Project would involve the earthwork to demolish, renovate, and construct on properties within the Planning Area. Such activities could require grading and/or construction in native soils, such as earthwork for ground preparation, construction of foundations and driveways and installation of trenching for utilities and landscaping. It is not expected that all of these activities would occur in engineered fill and/or previously disturbed soils, and this analysis anticipates that native/undisturbed soils would be impacted by future development activities. Therefore, there is a potential to unexpectedly encounter human remains or disturb human burial grounds, including Native American burials and those interred outside of formal cemeteries, through the reasonably foreseeable future property development involving ground-disturbing activities.

As detailed in Section 4.5.2, Regulatory Requirements, there are existing state regulations in place to identify, assess impacts to, and protect burials/human remains. All future development projects would be subject to these state and local regulations related to the discovery of human remains during ground-disturbance activities, such as the California Health and Safety Code Section 7050.5, PRC Section 5097.98, and 14 CCR Section 15064.5(e), which outline the procedures that must be followed when human remains are discovered. Human burials have specific provisions for treatment in accordance with PRC Section 5097, which authorizes the NAHC to resolve any disputes related to the disposition of Native American Burials. PRC Section 5097.98 mandates the process to be followed in the event of a discovery of any human remains. California Health and Safety Code Section 7050.5 requires that if human remains are discovered, disturbance of the site must halt and remain halted until the Orange County Coroner (County Coroner) has investigated and made recommendations to the person responsible for the excavation, or to his or her authorized representative.

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, who will, in turn, notify the person the NAHC identifies as the MLD of the human remains Within 48 hours of being granted access to the site, the MLD may make recommendations regarding the disposition, with appropriate dignity, of the human remains and associated grave goods. Therefore,

compliance with these regulations would ensure that potential impacts related to the discovery of previously unidentified human remains would be less than significant.

4.5.5 Cumulative Impact Analyses

Where a lead agency concludes that the cumulative effects of a project, as defined by CEQA, taken together with the impacts of other closely related past, present, and reasonably foreseeable future projects are significant, the lead agency then must determine whether the project's incremental contribution to such significant cumulative impact is "cumulatively considerable" (and thus significant in and of itself). The cumulative impacts of the Project would consider growth projected by the City of Costa Mesa. The full list of related plans applicable to the Project's cumulative analyses is provided in Section 2.5, Cumulative Impact Analysis, in Chapter 2 Environmental Setting of this Draft PEIR.

Threshold 4.5-1. A cumulative impact to cultural resources refers to the mounting aggregate effect on cultural resources due to modern or recent historic land use, such as residential development, and natural processes, such as erosion, that result from human acts. The issue that must be explored in a cumulative impact analysis is the aggregate loss of information and the loss of recognized cultural landmarks and vestiges of a community's cultural history.

The geographic scope considered for the cumulative historic resource analysis is the proposed Planning Area. The Project includes specific land use changes within the Planning Area which would be focused on specific opportunity areas where Measure K sites could be rezoned, with the updated MUOD. The rezoning and updated MUOD would allow increased land use intensity and mixed-use development that are not allowed by the base zones. Relevant cumulative projects would be land use planning documents that would guide development and growth within the Planning Area, such as the City's General Plan. Densification of development through increasing maximum density allowances in the urban environment could result in the demolition of a historic (or potentially historic) buildings or alterations that materially impair the physical characteristics that contribute to the significance of an existing or potential historic resource. The cumulative effect of this future development is the continued loss of historic resources. Although adherence to existing regulations in place designed to protect historical resources would likely reduce demolition of historical resources, they would not prevent the demolition of all potential historical resources and individual historical resources would still have the potential to be impacted as a result of new development or redevelopment allowed under cumulative projects and the Project. Therefore, even with implementation of MM-4.5-1, the Project's incremental contribution to cumulative historical resource impacts would be cumulatively considerable.

Threshold 4.5-2. The development of cumulative projects has the potential to cumulatively affect known and unknown archaeological resources. Because all archaeological resources are unique and nonrenewable resources, projects that demolish or alter certain archaeological resources have the potential to erode a general cultural landscape to which the archaeological resources belong. Over time, population growth and its accompanying development throughout the City of Costa Mesa has resulted in the destruction of archaeological resources during the early settlement days of the region and continues to this day. Therefore, implementation of potential projects under the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation Project could result in a cumulatively significant effect on archaeological resources. Cumulative projects located throughout the city would have the potential to result in a cumulative impact associated with the loss of archaeological resources through the physical demolition, destruction, relocation, or alteration of a resource or its immediate surroundings such that the significance of a resource would be materially impaired. Even with existing state regulations in place designed to protect archaeological resources, individual archaeological resources would still have the potential to be impacted as a result of new development or redevelopment allowable under cumulative projects and the Project.

Therefore, even with implementation of MM-4.5-2, the Project's incremental contribution to cumulative archaeological resource impacts would be cumulatively considerable.

Threshold 4.5-3. With existing state and local regulations in place designed to address discovery of human remains, the Project's incremental contribution to cumulative impacts to human remains would not be cumulatively considerable.

4.5.6 Mitigation Measures

MM-4.5-1 Historic Architectural Resources. Prior to the issuance of any building permits for future development projects subject to the MUOD within the Planning Area, the applicant shall determine if any potential historical building, structure, or district is present that could be affected by the development proposal. The applicant shall engage with a qualified architectural historian to conduct records search from applicable data repositories; check City of Costa Mesa Historic Resources Survey to identify properties listed in/eligible for listing in the NRHP, CRHR and/or City Register; conduct site inspections, as appropriate; and consider all relevant information available for the property to determine its potential for historical significance.

If a future project includes a property greater than 50 years of age that has not been listed in or found eligible for listing in the NRHP, CRHR and/or City Register, the City shall require applicants to submit a Phase I and/or Phase II Historic Resources Assessment (HRA) report to evaluate the significance of resources greater than 50 years of age. The report shall be prepared by an SOI qualified architectural historian, in accordance with SOI standards and guidelines. The HRA shall include background, archival and historic research; site surveys; detailed physical description of identified resources; photographs; a historical significance evaluation in consideration of City, CRHR, and NRHP designation criteria and integrity requirements; an assessment of project impacts to historical resources; recommendations of mitigative treatment; and the preparation/recordation of the appropriate California Department of Parks and Recreation (DPR) 523 forms, as applicable.

If project impacts to historic architectural resources are potentially significant, the applicant shall incorporate appropriate measures to avoid or minimize those impacts. Additional measures may include, but are not limited to, the following:

- If a future project involves alterations or modifications to historic architectural resources, the project design and proposed work shall conform to SOI Standards for the Treatment of Historic Properties to reduce or avoid impacts to historical resources. The project applicant shall retain a qualified architectural historian to advise on the final project design, recommend mitigative actions, specify performance standards, and oversee the construction activities related to the historical resources to ensure the project is constructed in compliance with specified mitigation performance standards and SOI Standards.
- If a future project involves the demolition or material impairment of an historical resource that cannot be mitigated through SOI Standards compliance, the project applicant shall submit an archival Historic American Building Survey (HABS), Historic American Engineering Record (HAER), or Historic American Landscape Survey (HALS) documentation, as appropriate, to the City for review and approval prior to the issuance of any grading or demolition permit. The HABS/HAER/HALS documentation shall be prepared

by a SOI qualified architectural historian and may include an architectural and historical narrative; archival drawings and/or measured drawings; and large-format photography. All reports resulting from implementation of this mitigation measure shall be submitted to the City's Planning Division and filed with the SCCIC.

MM-4.5-2 Archaeological Resources. Prior to the issuance of any building permits for future development projects subject to the MUOD within the Planning Area, the City's Planning Division shall review the archaeological sensitivity of the Planning Area as identified in Appendix F-3, Archaeological Resources Sensitivity Map of the Final EIR to determine whether the property is located in an area with moderate or high sensitivity.

If the qualified archaeologist determines there is moderate or high sensitivity, applicants shall submit a Phase I Archaeological Resources Inventory Report to identify and evaluate archaeological resources that may be impacted by the subject project. The report must be prepared by a qualified archaeologist meeting Secretary of the Interior (SOI) Professional Qualifications Standards for Archaeology (Qualified Archaeologist). The report shall include archival search of historic records; records search of applicable data repositories, including the SCCIC database; pedestrian surveys; identification of archaeological resources within or near the subject property; assessment of potential project impacts to archaeological resources; recommendations for archaeological monitoring, if appropriate; and completion/recordation of the California Department of Parks and Recreation (DPR) 523 forms for all identified archaeological resources, as applicable. A Phase II Archaeological Resources Evaluation Report for testing and evaluation may be required based on the results and recommendations of the Phase I Report.

If project impacts to archaeological resources are determined to be potentially significant, the applicant shall implement appropriate measures to avoid or minimize impacts to archaeological resources. Additional measures may include, but are not limited to, the following:

Archaeological Resources Work Plan. Prior to issuance of a grading permit, the project applicant shall retain a qualified archaeologist to prepare and submit an Archaeological Resources Work Plan (ARWP). The purpose of this plan is to document the actions and procedures to be followed by the project to avoid or minimize impacts to archaeological resources. If potential impacts to tribal cultural resources are identified during project level review (e.g. records search, archaeological reports, AB 52 consultation, if applicable), the ARWP shall also address tribal cultural resources, in consultation with interested local Native American Tribes (interested consulting Tribes). The ARWP shall include, but may not be limited to, the following elements:

- A description of the roles and responsibilities of the archaeologist, the reporting relationships between construction managers and the archaeologist, and the notification procedures.
- Maps identifying locations where archaeological and/or Native American monitoring is required; duration of monitoring; and documentation of monitoring activities, including daily log of monitoring activities, location and results.
- Detailed procedures to follow if archaeological resources are inadvertently discovered during construction, including stop-work requirement within no less than a 50-foot radius of the find; documentation of all recovered resources on California Department of Parks and Recreation 523 forms; and inspection and evaluation of the resource for listing in the national, state, and local register.

- Detailed plan for the collection of archaeological data, including sampling techniques and data management protocols.
- Methodology for testing and evaluation of archaeological resources encountered.
- Detailed treatment plan to avoid or minimize impacts to significant archaeological resources, including preservation and/or data recovery to the satisfaction of the City.
- Detailed plan for reporting recovered resources and treatment results, including submission of reports to applicable agencies.

Construction Worker Archaeological Resources Sensitivity Training. Prior to the commencement of project ground-disturbing activities, a qualified archaeological monitor, as defined in the ARWP, shall present an archaeological resources sensitivity training to project construction personnel. If the project was subject to tribal notification/consultation, the Qualified Archaeologist shall invite interested consulting Tribes, a minimum of two weeks before the training session, to participate in and present Native American perspectives during the training sessions. The archaeological monitor shall inform construction personnel about the types of cultural resources that could be encountered; the proper procedures to follow in the event of an archaeological discovery; potential penalties for failing to adhere to applicable laws and regulations; and confidentiality of discoveries. The project applicant shall provide the training agenda, materials and attendance records to the City within five business days of request.

Archaeological Resources Monitoring. If required by the AWRP, during grading and excavation activities, a qualified archaeological monitor, as defined in the ARWP, shall be present to monitor ground-disturbing activities. Should archaeological resources be encountered, the archaeological monitor shall have the authority to halt ground-disturbing activities and immediately notify the Qualified Archaeologist of the find. The Qualified Archaeologist shall implement the evaluation and mitigation protocols described in the ARWP.

In the event Native American archaeological resources are encountered during construction, Native American monitoring shall be provided thereafter for any ground-disturbing activities. However, if impacts to tribal cultural resources are determined potentially significant during project level review, a Native American monitor shall be required at the outset to monitor all ground-disturbing activities. The Qualified Archaeologist shall prepare a final report documenting all recovered archaeological resources, the significance of the resources, and the treatment of the recovered resources to the City, the SCCIC, and the NAHC (as applicable).

Archaeological Resources Discoveries. If archaeological resources are encountered during construction, all ground-disturbing activities shall cease within no less than 50 feet of the find. The Qualified Archaeologist can determine, based on the initial assessment of the discovery, whether the 50-foot buffer shall be reduced or increased. The Qualified Archaeologist shall evaluate the recovered archaeological resources for significance. If the resource is found significant pursuant to CEQA, avoidance and preservation in place shall be the preferred manner of mitigating impacts. If avoidance is infeasible, the Archaeologist shall develop and oversee the execution of a Phase III Archaeological Resources Data Recovery and Treatment Plan. The plan shall include: a detailed research design; justification for data recovery or other treatment methods depending on the nature of the resource's eligibility; excavation methodology; and, reporting and curation requirements. The archaeologist shall prepare a final report that includes documentation of all recovered resources, a full evaluation of their significance, and treatment of the recovered resources.

When assessing significance and developing treatment for recovered resources that are Native American in origin, the City shall consult and coordinate with interested consulting Tribes. The City shall consider tribal preferences when making a determination on the disposition of Native American archaeological resources, which may include but is not limited to curation at an accredited or nonaccredited repository; onsite or offsite reburial; and/or donation to a local Tribe.

The project applicant shall curate all significant non-Native American, historic-period archaeological material, or portions thereof at the recommendation of the Qualified Archaeologist and approval by the City, at a repository accredited by the American Association of Museums that meets the standards outlined in 36 CFR Section 79.9. If no accredited repository accepts the collection, then the project applicant may curate it at a nonaccredited repository as long as it meets the minimum standards set forth in 36 CFR Section 79.9. If neither an accredited nor a nonaccredited repository accepts the collection, then the project applicant may offer the collection to a public, nonprofit institution with a research interest in the materials, or to a local school or historical society in the area for educational purposes.

To the extent feasible, these measures are also inclusive of tribal cultural resources considerations. All reports resulting from implementation of this measure shall be completed and submitted to the City for review and approval. Once approved by the City, the report shall be submitted to the SCCIC and interested consulting Tribes.

4.5.7 Level of Significance Conclusion

Threshold 4.5-1. Even with implementation of MM-4.5-1, the project could indirectly cause a substantial adverse change in the significance of an historical resource pursuant to Section 15064.5, and even with mitigation, impacts would be **significant and unavoidable** and cumulatively considerable.

Threshold 4.5-2. Even with implementation of MM-4.5-2, the project could indirectly cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5, and even with mitigation, impacts would be **significant and unavoidable** and cumulatively considerable.

Threshold 4.5-3. Impacts relative to human remains would be **less than significant** due to regulations currently in place. Impacts would not be cumulatively considerable.

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SOURCE: Esri Imagery, OpenStreeMap

FIGURE 4.5-1A

Historic-Age and Unknown-Age Properties within the Planning Area

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

DUDEK

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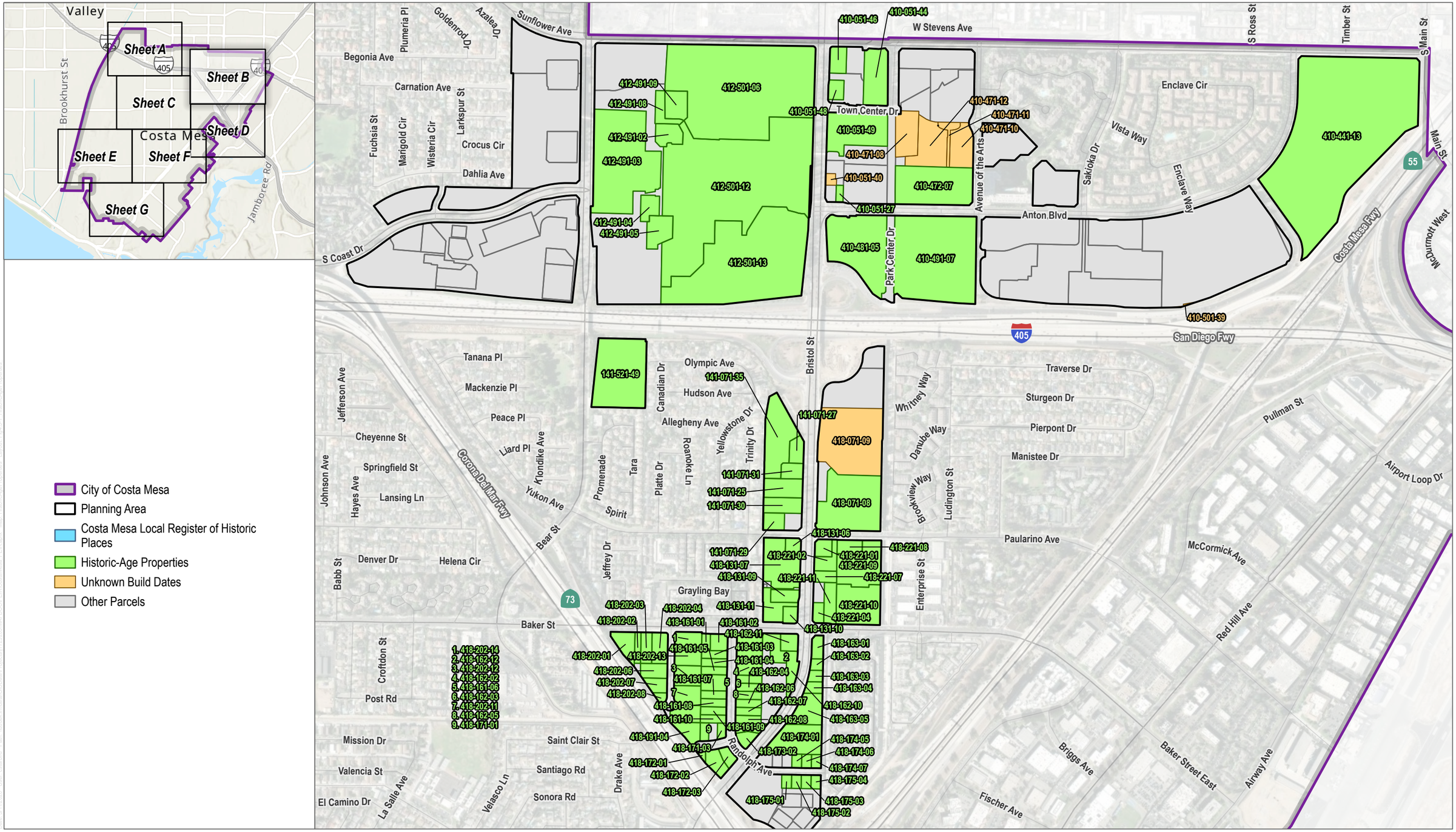

SOURCE: Esri Imagery, OpenStreeMap

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FIGURE 4.5-1B

Historic-Age and Unknown-Age Properties within the Planning Area

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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SOURCE: Esri Imagery, OpenStreeMap

DUDEK

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FIGURE 4.5-1C

Historic-Age and Unknown-Age Properties within the Planning Area

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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SOURCE: Esri Imagery, OpenStreeMap

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FIGURE 4.5-1D

Historic-Age and Unknown-Age Properties within the Planning Area

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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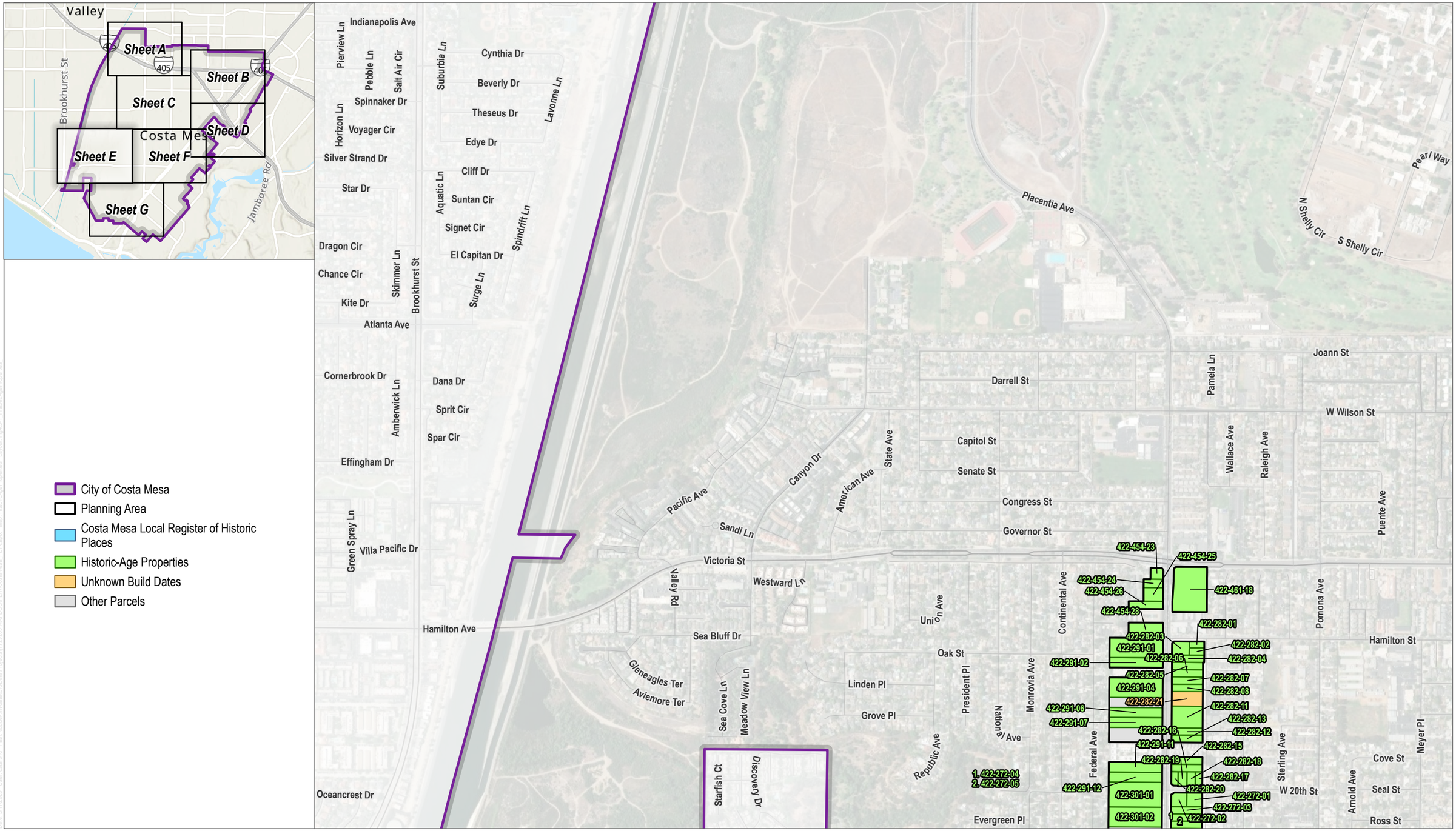

SOURCE: Esri Imagery, OpenStreeMap

DUDEK

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FIGURE 4.5-1E

Historic-Age and Unknown-Age Properties within the Planning Area

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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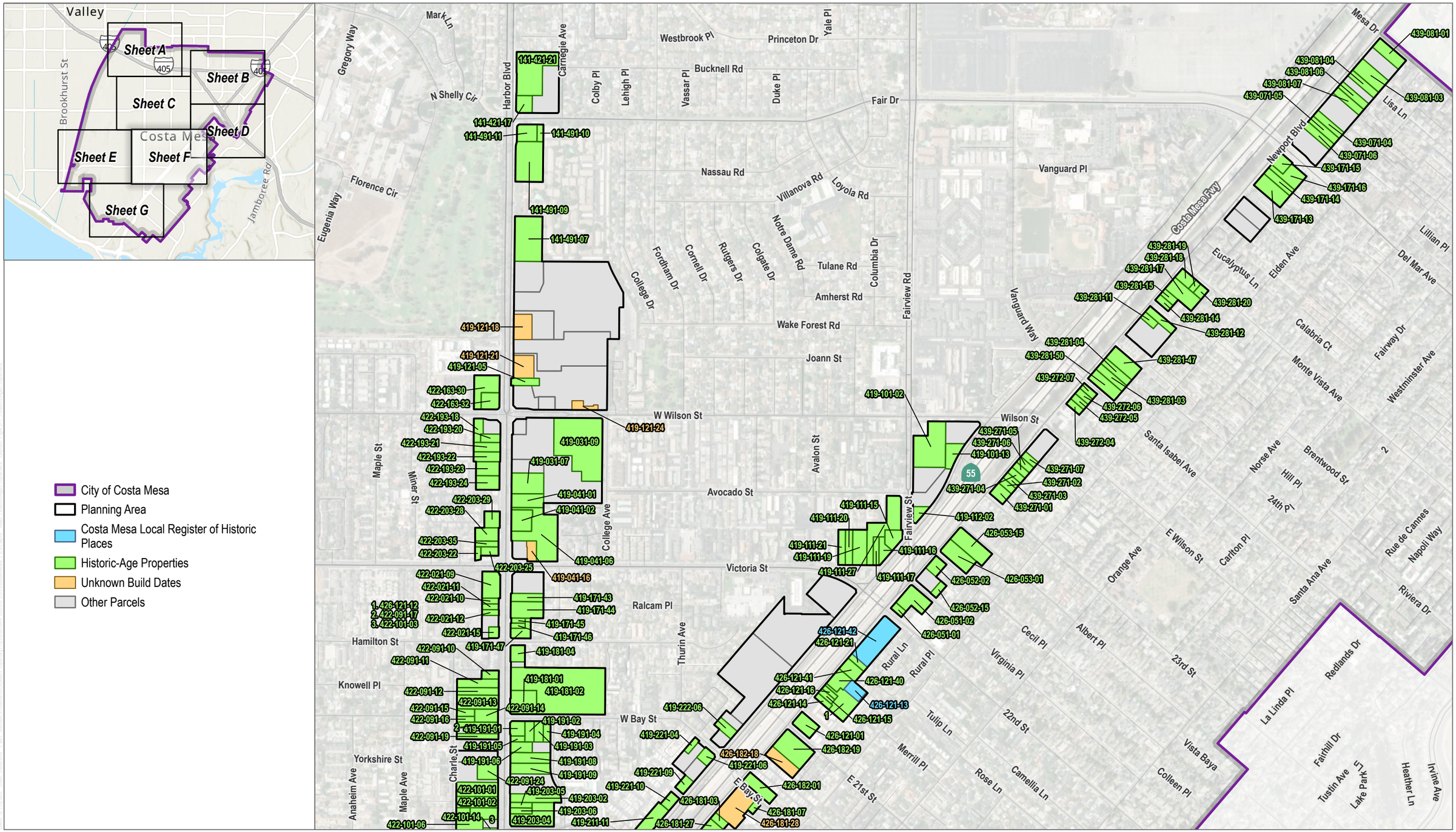

SOURCE: Esri Imagery, OpenStreeMap

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FIGURE 4.5-1F

Historic-Age and Unknown-Age Properties within the Planning Area

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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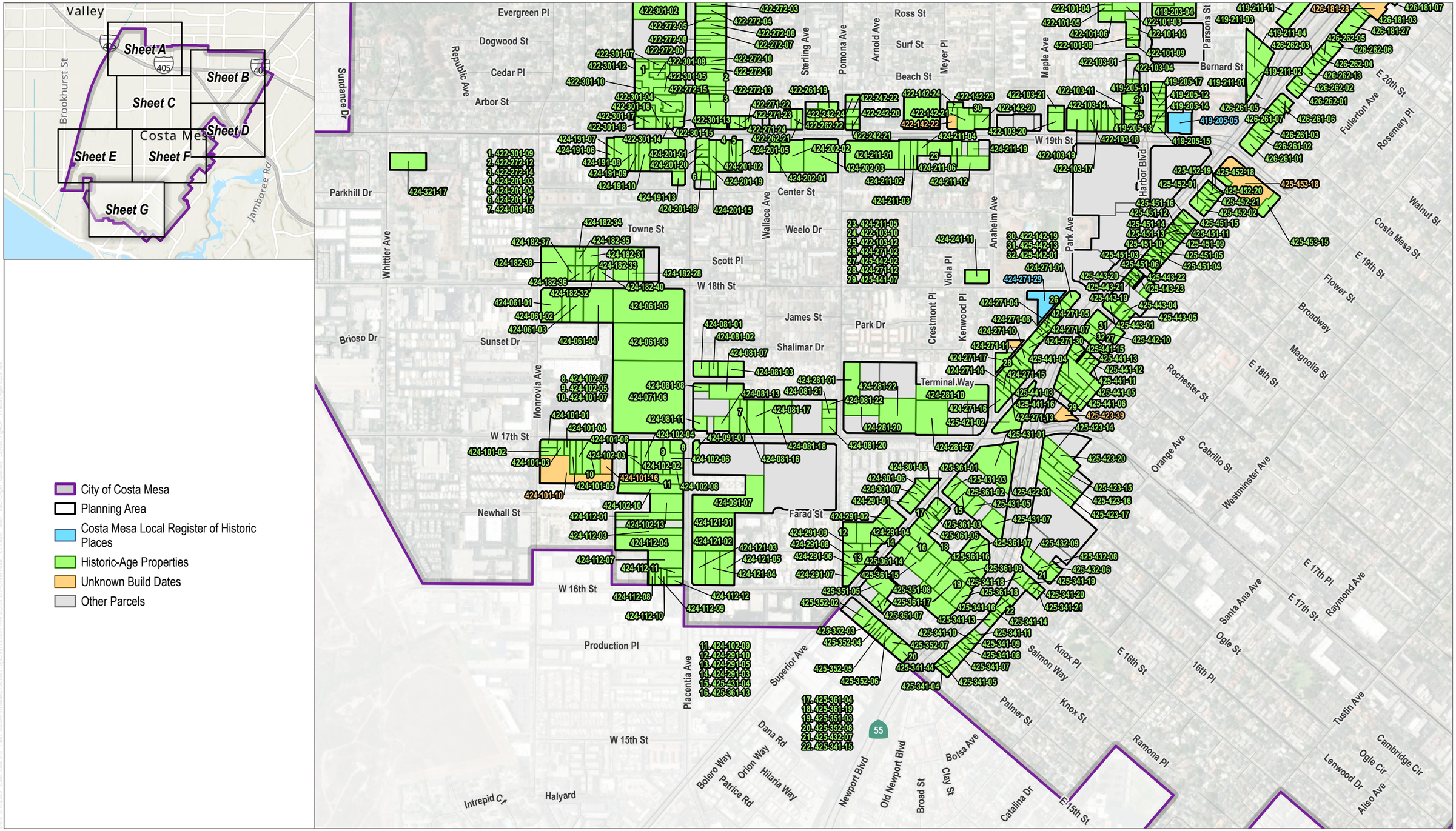

SOURCE: Esri Imagery, OpenStreeMap

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FIGURE 4.5-1G

Historic-Age and Unknown-Age Properties within the Planning Area

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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4.6 Energy

This section of the Draft PEIR analyzes the potential impacts from the implementation of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation (Project) on energy. The analysis includes the existing energy conditions to present the environmental baseline for the Project and an analysis of potentially wasteful, inefficient, or unnecessary consumption of energy resources during future construction and operation that is expected to occur under the Project, and compliance with state or local plans for renewable energy or energy efficiency. The analysis is based, in part, on review of information from the California Energy Commission (CEC), California Public Utilities Commission (CPUC), California Air Resources Board (CARB), Environmental Protect Agency (EPA), and information provided in the following technical appendix:

Appendix D Air Quality and Greenhouse Gas Emissions Modeling and Energy Calculations Appendix, prepared by Dudek

Other sources consulted are listed in Section 4.6.8, References.

4.6.1 Existing Conditions

Electricity

The production of electricity requires the consumption or conversion of energy resources, including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources, into electrical energy. The delivery of electricity involves several system components, including power generation facilities, transmission and distribution lines, substations, and transformers that lower transmission line power (voltage) to a level appropriate for on-site distribution and use. The electricity generated is distributed through a network of transmission and distribution lines commonly called a power grid. Production of electricity and its conveyance through the power grid occur in response to market demand.

Energy capacity, or electrical power, is generally measured in watts, while energy use is measured in watt-hours (Wh). For example, if a light bulb has a capacity rating of 100 watts, the energy required to keep the bulb on for 1 hour would be 100 Wh. If 10 100-watt bulbs were on for 1 hour, the energy required would be 1,000 Wh or 1 kilowatt-hour (kWh). On a utility scale, a generator's capacity is typically rated in megawatts (MW), which is 1 million watts, while energy usage is measured in megawatt-hours (1 million watt-hours) or gigawatt-hours (1 billion watt hours).

Southern California Edison (SCE) provides electricity to residents and businesses within Costa Mesa, including the Planning Area. SCE, a subsidiary of Edison International, serves approximately 180 cities in 11 counties across central and Southern California. According to CEC, approximately 79 million kWh of electricity were used in SCE's service area in 2024 (see Table 4.6-1 (CEC 2025a).

Table 4.6-1. Southern California Edison 2024 Electricity Consumption

Sector	Total Electricity (in millions of kWh)
Agricultural and Water Pumps	2,963
Commercial	28,843
Transportation, Communications, and Utilities	6,407
Industrial	12,239
Mining	1,205
Residential	27,131
Streetlight	553
Total Consumption	**79,341**

Source: CEC 2025a.
Notes: kWh = kilowatt-hour.
Total may not sum precisely due to rounding.

SCE receives electric power from a variety of sources. According to the CPUC 2025 California Renewables Portfolio Standard (RPS) Annual Report, 36 percent of SCE's power came from eligible renewable energy sources in 2024, including biomass/waste, geothermal, small hydroelectric, solar, and wind sources (CPUC 2025). Therefore, SCE exceeded the state's RPS goal of 33 percent renewable energy delivered by 2020.

In Orange County, SCE reported an annual electrical consumption of approximately 19,225 GWh in 2024, with 12,089 million GWh for nonresidential-residential uses and 7,136 GWh for residential uses (CEC 2025a).

According to the U.S. Energy Information Administration, California used approximately 247,717 gigawatt hours of electricity in 2024 (EIA 2025a). Electricity usage in California for different land uses varies substantially by the types of uses in a building, the type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building. Due to the state's energy efficiency building standards and efficiency and conservation programs, California's electricity use per capita in the residential sector is lower than any other state except Hawaii (EIA 2025b).

Natural Gas

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

CPUC regulates natural gas utility service for approximately 10.8 million customers who receive natural gas from Southern California Gas Company (SoCalGas), Pacific Gas and Electric, San Diego Gas and & Electric Company, Southwest Gas, and several smaller natural gas utilities. SoCalGas provides Orange County with natural gas service. SoCalGas' service territory encompasses approximately 20,000 square miles and more than 500 communities. As shown in Table 4.6-2, SoCalGas customers consumed approximately 4,959 million therms of natural gas in 2024 (CEC 2025b).

Table 4.6-2. Southern California Gas Company 2024 Natural Gas Consumption

Sector	Total Natural Gas (in millions of therms)
Agricultural and Water Pumps	68
Commercial	901
Transportation, Communications, and Utilities	100
Industrial	1,604
Mining	136
Residential	2,150
Total Consumption	**4,959**

Source: CEC 2025b.
Note: Total may not sum precisely due to rounding.

In 2024, SoCalGas delivered 561.7 million therms of natural gas to Orange County, with the majority going to residential uses (338.7 million therms) (CEC 2025b).

According to the U.S. Energy Information Administration, California used approximately 29,827 billion cubic feet of natural gas in 2024 (EIA 2025c). The majority of California's natural gas customers is the electric power sector. These customers account for approximately 45 percent of the natural gas delivered by California utilities (EIA 2025c). CPUC regulates California natural gas rates and natural gas services, including in-state transportation over transmission and distribution pipeline systems, storage, procurement, metering, and billing. Most of the natural gas used in California comes from out-of-state natural gas basins. California gas utilities may soon also begin receiving biogas into their pipeline systems (CPUC 2026).

Petroleum

There are more than 36 million registered vehicles in California, and those vehicles consume an estimated 29 billion gallons of fuel each year (DMV 2025). CARB reformulated gasoline and diesel currently account for approximately 83 percent of California's transportation energy consumption (CEC 2026). However, technological advances, market trends, consumer behavior, and government policies could result in significant changes in fuel consumption by type and in total. At the federal and state levels, various policies, rules, and regulations have been enacted to improve vehicle fuel efficiency, promote the development and use of alternative fuels, reduce transportation-source air pollutants and GHG emissions, and reduce vehicle miles traveled (VMT). Section 4.6.2, Regulatory Framework, herein as well as Section 4.8.2 within the Greenhouse Gas Emissions section, discusses in more detail federal, state, and local regulations that would help increase fuel efficiency of motor vehicles and reduce GHG emissions.

Largely as a result of and in response to these multiple factors, gasoline consumption within the state has declined in recent years, and availability of other alternative fuels/energy sources has increased. The quantity, availability, and reliability of transportation energy resources have increased in recent years, and this trend will likely continue and accelerate. Increasingly available and diversified transportation energy resources act to promote continuing reliable and affordable means to support vehicular transportation within the state. According to the California Air Resources Board (CARB) Emission Factor (EMFAC) Web Database, Orange County on-road transportation sources were estimated to consume 886 million gallons of gasoline and 148 million gallons of diesel fuel in 2027 (CARB 2025).

4.6.2 Regulatory Requirements

Although the focus of many of the federal and state regulations is on the reduction of air pollutants and greenhouse gas (GHG) emissions, one co-benefit of implementation of these standards is a reduced demand for energy resources. As such, this section only presents regulations that pertain to energy that are not included in either Chapter 4.3 (Air Quality) or Chapter 4.8 (Greenhouse Gas Emissions) of this PEIR, or that are specifically referenced in the energy impact determinations herein.

4.6.2.1 Federal

Federal Energy Policy and Conservation Act and Corporate Average Fuel Economy Standards

The federal Energy Policy and Conservation Act (EPCA), enacted in 1975, was a foundational law aimed at reducing U.S. dependence on foreign oil, promoting energy conservation, and improving energy efficiency. One of its key provisions was the establishment of Corporate Average Fuel Economy (CAFE) standards, which require automakers to achieve specific average fuel efficiency targets across their fleets. These standards have evolved over time to address environmental concerns and technological advancements.

Under President Trump's second term beginning in 2025, a series of executive orders has altered the trajectory of U.S. energy and environmental policy. These actions included revoking previous climate-focused executive orders, declaring a national energy emergency, and rolling back regulations that supported clean energy and fuel efficiency. Specifically, the administration is seeking to pause or reverse CAFE standard enhancements, arguing that such regulations burdened domestic energy production and vehicle manufacturing. The orders have also halted new wind and solar projects on federal lands.

Energy Policy Act of 1992 and 2005

The Energy Policy Act of 1992 was passed to reduce the country's dependence on foreign petroleum and improve air quality. The act includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. The act requires certain federal, state, and local government and private fleets to purchase a percentage of light-duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are also included in the act. Federal tax deductions are allowed for businesses and individuals to cover the incremental cost of AFVs. The Energy Policy Act also requires states to consider a variety of incentive programs to help promote AFVs. The Energy Policy Act provides renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

In January 2005, the new Energy Policy Act was signed into law. It addresses energy production in the United States, including energy efficiency, renewable energy, oil and gas, coal, Tribal energy, nuclear matters and security, vehicles and motor fuels, including ethanol, hydrogen, electricity, energy tax incentives, hydropower and geothermal energy, and climate change technology. The Energy Policy Act provides loan guarantees for entities that develop or use innovative technologies that avoid the by-production of GHGs. Another provision of the Energy Policy Act is the Renewable Fuel Standard (RFS), which increases the amount of biofuel that must be mixed with gasoline sold in the United States.

President Trump's 2025 executive orders have resulted in a shift away from the goals of the 1992 and 2005 act, emphasizing fossil fuel expansion over clean energy and environmental protection.

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 (CAFE) standards for motor vehicles, the EISA facilitates the reduction of national GHG emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) that requires fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.
- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020.
- While superseded by the U.S. Environmental Protection Agency (EPA) and NHTSA actions described previously, establishing miles per gallon targets for cars and light trucks and directing the NHTSA to establish a fuel economy program for medium-and heavy-duty trucks and create a separate fuel economy standard for trucks.

This federal legislation requires ever-increasing levels of renewable fuels (the RFS) to replace petroleum (EPA 2025a). 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 key ways that laid the foundation for achieving significant reductions of GHG emissions through the use of renewable fuels, for reducing imported petroleum, and for encouraging the development and expansion of our nation's renewable fuels sector. The updated program ("RFS2") 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, promoting research for alternative energy, additional research in carbon capture, international energy programs, and the creation of green (environmentally beneficial) jobs.

In 2025, President Trump's executive orders have significantly shifted the direction of U.S. energy policy, impacting the implementation of EISA. These orders:

- Rolled back fuel economy and emissions standards, effectively pausing or reversing progress made under EISA's CAFE provisions.
- Reduced federal support for renewable fuels and clean energy projects, undermining the RFS and other clean energy initiatives.
- Streamlined regulatory processes to accelerate fossil fuel development, including coal and offshore drilling.
- Preempted state-level climate regulations, weakening local efforts aligned with EISA's goals.

These changes reflect a broader strategy to prioritize fossil fuel production and deregulation over environmental protection and clean energy development.

Intermodal Surface Transportation Efficiency Act of 1991

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 promoted the development of intermodal transportation systems to maximize mobility and address national and local interests in air quality and energy. ISTEA contained factors for metropolitan planning organizations to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, metropolitan planning organizations adopted policies defining the social, economic, energy, and environmental values guiding transportation decisions.

Transportation Equity Act for the 21st Century

The Transportation Equity Act for the 21st Century was signed into law in 1998 and builds on the initiatives established in the ISTEA legislation (previously discussed). The Transportation Equity Act authorizes highway, highway safety, transit, and other efficient surface transportation programs. The act continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of transportation decisions. The Transportation Equity Act also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of intelligent transportation systems to help improve operations and management of transportation systems and vehicle safety.

President Trump's 2025 executive orders have significantly altered the trajectory of transportation equity efforts. According to recent reports, the administration has:

- Rolled back equity-focused initiatives introduced under the Biden administration, including the dismantling of the U.S. Department of Transportation's (USDOT) Equity Action Plans and performance metrics that were designed to address systemic disparities in transportation access.
- Eliminated the use of disparate-impact liability, a legal framework that allowed federal agencies to address policies that disproportionately harmed certain racial or socioeconomic groups, even without explicit discriminatory intent
- Shifted funding priorities away from transit, pedestrian, and bicycle infrastructure, which are vital for underserved communities, and toward traditional highway and automobile-centric projects.

These changes represent a significant departure from the inclusive goals of TEA-21, potentially reducing mobility options and economic opportunities for communities that have historically been underserved by federal transportation investments.

Infrastructure Investment and Jobs Act

The Infrastructure Investment and Jobs Act (Infrastructure Deal) was signed into law November 15, 2021. The legislation includes $39 billion of new investment to modernize transit, in addition to continuing the existing transit programs for five years as part of surface transportation reauthorization. The Infrastructure Deal would also invest $7.5 billion to build out a national network of EV chargers. The Infrastructure Deal would provide funding for deployment of EV chargers along highway corridors to facilitate long-distance travel and within communities to provide convenient charging where people live, work, and shop to support a goal of building a nationwide network of 500,000 EV chargers. This would accelerate the adoption of EVs, which would help reduce emissions and improve air quality. In addition, the Infrastructure Deal would include more than $65 billion of investments in clean energy transmission including upgrading existing power infrastructure through expanding transmission lines to facilitate the expansion of renewables and clean energy.

President Trump's 2025 executive orders have had a significant and disruptive impact on the Infrastructure Deal. Key impacts of the executive orders include:

- Temporary Halt of Infrastructure Deal Funds: An executive order signed on inauguration day paused the disbursement of remaining IIJA funds, including those already appropriated by Congress. This created immediate confusion, leading the Federal Highway Administration to briefly stop reimbursements to states.
- Suspension of Climate and Equity Initiatives: The same order rescinded the Biden-era "Justice40 Initiative," which directed 40 percent of climate-related investments to disadvantaged communities, and removed climate change as a central focus of infrastructure policy.
- Legal and Administrative Uncertainty: A broader order temporarily froze all federal financial assistance programs, including grants and loans tied to infrastructure projects. Although this freeze was quickly challenged in court and partially reversed, it introduced widespread uncertainty for contractors, state agencies, and local governments relying on Infrastructure Deal funding.
- Project Delays and Risk of Termination: Legal experts warn that the funding pause could delay or even terminate infrastructure projects already underway, potentially affecting billions of dollars in investments and thousands of jobs.

These actions mark a sharp departure from the Infrastructure Deal's original goals of sustainable, equitable infrastructure development and have raised concerns among stakeholders about the future of federal infrastructure investment.

The Inflation Reduction Act of 2022

The Inflation Reduction Act was signed into law by President Biden in August 2022. The bill includes specific investment in energy and climate reform and is projected to reduce GHG emissions within the United States by 40 percent as compared to 2005 levels by 2030. The Act allocates funds to boost renewable energy infrastructure (e.g., solar panels and wind turbines), includes tax credits for the purchase of electric vehicles, and includes measures that will make homes more energy efficient.

The Inflation Reduction Act authorized the EPA to implement the Greenhouse Gas Reduction Fund program, which is a historic, $27 billion investment to mobilize financing and private capital to combat the climate crisis and ensure American economic competitiveness. The Greenhouse Gas Reduction Fund will be designed to achieve the following program objectives: reduce GHG emissions and other air pollutants; deliver the benefits of GHG- and air-pollution-reducing projects to American communities, particularly low-income and disadvantaged communities; and mobilize financing and private capital to stimulate additional deployment of GHG and air pollution reducing projects (EPA 2025b).

The Inflation Reduction Act confirms that reduction of GHGs is a core goal of the Clean Air Act and that the funding provided should allow the EPA to increase the scope of its Clean Air Act rulemakings. The Act also confirms applicability of the Inflation Reduction Act to GHGs in three specific areas: (1) California's ability to regulate GHG emissions from vehicles; (2) the EPA's authority to regulate CH_4 emissions from oil and gas facilities; and (3) the EPA's authority to regulate GHG emissions from power plants.

On July 4, 2025, President Trump enacted the One Big Beautiful Bill Act (OBBBA), which reduces the scope of the IRA and accelerates the phaseout of multiple IRA clean energy incentives, such as residential energy and electric vehicle credits. The OBBBA also rescinds substantial federal funding for clean energy, environmental justice, and climate resilience programs, including the Greenhouse Gas Reduction Fund. Furthermore, on July 7, 2025, President Trump signed the Executive Order (EO) 14315, which reinforces the changes made under the OBBBA, further hindering clean energy programs by eliminating taxpayer subsidies for wind, solar, and other clean energy sources.

Executive Order 14154

EO 14154 declares a national energy emergency under the National Emergencies Act and directs federal agencies to use their statutory emergency powers to accelerate the development and authorization of energy projects. The EO defines energy projects as those involving crude oil, natural gas, lease condensates, natural gas liquids, refined petroleum products, uranium, coal, biofuels, geothermal heat, the kinetic movement of flowing water, and critical minerals. Notably, EO 14154 explicitly excludes solar, wind, battery-electric technologies, and other energy sources not included within its definition of "energy."

Executive Order 14262

EO 14262 directs the Secretary of Energy, after consulting with any executive departments or agencies the Secretary deems appropriate, to streamline, systemize, and expedite, to the maximum extent permitted by law, the Department of Energy's processes for issuing orders under Section 202(c) of the Federal Power Act. This would include accelerating the review and approval of applications from electric generation resources seeking to operate at maximum capacity.

4.6.2.2 State

Warren-Alquist Act

The California Legislature passed the Warren–Alquist Act in 1974, which created the CEC. The legislation also incorporated the following three key provisions designed to address the demand side of the energy equation:

- The act 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 removed the responsibility of electricity demand forecasting from the utilities, which had a financial interest in high-demand projections, and transferred it 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 CPUC approved the first State of California Energy Action Plan in 2003. The plan established shared goals and specific actions to ensure the provision of adequate, reliable, and reasonably priced electrical power and natural gas supplies; it also identified cost-effective and environmentally sound energy policies, strategies, and actions for California's consumers and taxpayers. In 2005, the CEC and CPUC adopted a second Energy Action Plan 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 below). 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, 107, X1-2, 350, 100, and 1020

Senate Bill (SB) 1078 (2002) established the California 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 percent standard by December 31, 2017. These retail sellers include electrical corporations, community choice aggregators, and electric service providers. As a related measure, SB 1078 required 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 Program established by SB 1078 by requiring that 20 percent of electricity retail sales be served by renewable energy resources by 2010 (not 2017). Additionally, SB X1-2 (2011) required all California utilities to generate 33 percent of their electricity from eligible renewable energy resources by 2020. Specifically, SB X1-2 set a three-stage compliance period: by December 31, 2013, 20 percent of electricity had to come from renewables; by December 31, 2016, 25 percent had to come from renewables; and by December 31, 2020, 33 percent was required to come from renewables.

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

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

SB 1020 (September 2022) revises the standards from SB 100, requiring the following percentage of retail sales of electricity to California end-use customers to come from eligible renewable energy resources and zero-carbon resources: 90 percent by December 31, 2035; 95 percent by December 31, 2040; and 100 percent by December 31, 2045.

Consequently, utility energy generation from nonrenewable resources is expected to be reduced based on implementation of the RPS requirements described above. The Project's reliance on nonrenewable energy sources would be reduced accordingly.

Assembly Bill 32 and Senate Bill 32

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 Senate Bill (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 percent below 1990 levels by 2030. In accordance with AB 32 and SB 32, the California Air Resources Board (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.

California Building Standards

The California Building Standards Code was established in 1978 and serves to enhance and regulate California's building standards. While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically established Building Energy Efficiency Standards that are designed to ensure that new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. These energy efficiency standards are reviewed every 3 years by the Building Standards Commission and the California Energy Commission (CEC) and revised if necessary (California Public Resources Code Section 25402[b][1]). The regulations receive input from members of industry, as well as the public, to "reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy" (California Public Resources Code Section 25402). These regulations are carefully scrutinized and analyzed for technological and economic feasibility (California Public Resources Code Section 25402[d]) and cost effectiveness (California Public Resources Code Section 25402[b][2–3]). As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment. The current Title 24 standards are the 2025 Title 24 building energy efficiency standards, which became effective January 1, 2026.

In addition to CEC's efforts, 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), which is commonly referred to as California's Green Building Standards (CALGreen), establishes minimum mandatory standards and voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality.

Integrated Energy Policy Report

The CEC is responsible for preparing integrated energy policy reports that identify emerging trends related to energy supply, demand, and conservation; public health and safety; and maintenance of a healthy economy. The CEC's 2025 Integrated Energy Policy Report discusses the state's policy goals of decarbonizing buildings, ensuring energy

reliability, decarbonizing the state's gas system, the state's energy demand forecast, and quantifying the benefits of the clean transportation program (CEC 2025c). SB 100 calls for California's electricity system to become 100 percent zero-carbon by 2045. CEC, CPUC, and CARB are working together to identify pathways to deeply decarbonize the state's electricity system in response to SB 100. The aim is to leverage California's clean electricity system to decarbonize, or remove carbon from, other portions of the state's energy system. Over time these policies and trends would serve to beneficially reduce the Project's GHG emissions profile and energy consumption as they are implemented.

Senate Bill 1368

SB 1368 (2006) required the CEC to develop and adopt regulations for GHG emission performance standards for the long-term procurement of electricity by local publicly owned utilities (California Public Utilities Code Section 8340-8341 et seq.). These standards must be consistent with the standards adopted by the California Public Utilities Commission (CPUC).

State Vehicle Standards (Assembly Bill 1493 and Executive Order B-16-12)

Since the early 2000s, California has advanced a robust rubric of complementary legislation, regulation and policy to achieve the reduction of GHG emissions from mobile sources. Key components of that rubric follow:

- AB 1493's (2002) direction to CARB to establish GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by CARB to be vehicles primarily used for noncommercial personal transportation in the state. CARB has adopted implementing standards for model years 2009 and beyond.
- CARB's adoption of the Advanced Clean Cars I and II regulations (2012 and 2022, respectively), which combined the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package of regulations: the low-emission vehicle regulation for criteria air pollutant and GHG emissions and a technology-forcing regulation for zero-emission vehicles that contributes to both types of emission reductions (CARB 2021a).
- CARB's adoption of the Advanced Clean Trucks regulation (2022), which is designed to accelerate the market for zero-emission vehicles in the medium- and heavy-duty truck sector through a manufacturer sales requirement and a reporting requirement (CARB 2021b).

In June 2025, President Trump signed multiple Congressional Review Act resolutions that rescinded the preemption waivers previously granted to California by the EPA for both the Advanced Clean Cars and Advanced Clean Trucks regulations, among other California regulations. The revocation of the preemption waivers undermines California's ability to set its own vehicle emission standards for light-duty, medium-duty and heavy-duty vehicles.

The State of California, in concert with ten other states, filed a federal lawsuit on June 12, 2025 challenging the legal basis for the revocation of the preemption waivers (see *State of California et al. v. United States of America* [Case 3:25-cv-04966]). Governor Newsom simultaneously issued EO N-27-25, which reaffirmed the state's commitment to accelerate the deployment of zero-emission technologies and directed CARB to develop an alternative regulatory framework to achieve that objective, with the alternative serving as a backstop in the event that pending litigation is not resolved in California's favor. The ongoing tension and conflicts between the federal and state regulatory agendas has created uncertainty regarding California's ability to lawfully and effectively pursue its GHG emission reduction objectives in the vehicle sector.

Assembly Bill 1007

Assembly Bill 1007 (2005) required CEC to prepare a statewide plan to increase the use of alternative fuels in California (State Alternative Fuels Plan). The CEC prepared the State Alternative Fuels Plan in partnership with CARB and in consultation with other state, 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.

Executive Order S-1-07

EO S-1-07 (January 2007, implementing regulation adopted in April 2009) sets a declining low carbon fuel standard (LCFS) for GHG emissions measured in CO_2e grams per unit of fuel energy sold in California. The initial target of the LCFS was to reduce the carbon intensity of California passenger vehicle fuels by at least 10 percent by 2020 (17 CCR 95480 et seq.). The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel—including extraction/feedstock production, processing, transportation, and final consumption—per unit of energy delivered. In September 2018, CARB approved amendments for the LCFS that require a 20 percent reduction in carbon intensity by year 2030.

Senate Bill 375

In August 2008, the legislature passed, and on September 30, 2008, Governor Schwarzenegger signed, SB 375 (Steinberg), which addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. Regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035, as determined by CARB, are required to consider the emission reductions associated with vehicle emission standards (see SB 1493), the composition of fuels (see EO S-1-07), and other CARB-approved measures to reduce GHG emissions. Regional metropolitan planning organizations will be responsible for preparing a Sustainable Communities Strategy (SCS) within their Regional Transportation Plan (RTP). The goal of the SCS is to establish a development plan for the region, which, after considering transportation measures and policies, will achieve, if feasible, the GHG reduction targets. If an SCS is unable to achieve the GHG reduction target, a metropolitan planning organization must prepare an alternative planning strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies. SB 375 provides incentives for streamlining CEQA requirements by substantially reducing the requirements for "transit priority projects," as specified in SB 375, and eliminating the analysis of the impacts of certain residential projects on global warming and the growth-inducing impacts of those projects when the projects are consistent with the SCS or alternative planning strategy.

SCAG has developed Connect SoCal, the 2024–2050 RTP/SCS build on the successes of the 2016–2040 RTP/SCS and the 2020–2045 RTP/SCS. The 2024–2050 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. Connect SoCal charts a path toward a more mobile, sustainable, and prosperous region by making connections between transportation networks, planning strategies, and the people whose collaboration can improve the quality of life for Southern Californians. Connect SoCal embodies a collective vision for the region's future and is developed with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses, and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The SCAG 2024–2050 RTP/SCS was adopted on April 4, 2024.

4.6.2.3 Local

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

City of Costa Mesa Sustainability Initiatives

The City of Costa Mesa implements a comprehensive set of sustainability initiatives aimed at reducing greenhouse gas emissions, improving resource efficiency, and enhancing long-term climate resilience. These efforts are coordinated across City departments and center on environmental stewardship, public health, equity, and community resilience. Key programs include development of the Climate Action and Adaptation Plan (CAAP), which serves as a community-driven framework to lower emissions and prepare for climate impacts; citywide energy efficiency measures, such as replacing 6,150 high-pressure sodium streetlights with energy-efficient LED fixtures to reduce energy use and operating costs; and support for clean transportation, including installation of the City's first electric-vehicle charging stations at City Hall and advancement of zero-emission and low-carbon mobility options. The City also administers programs to expand recycling and organic waste diversion, promote water conservation and green infrastructure, and enhance urban ecology through tree canopy expansion, urban food systems, and environmental education. In addition, Costa Mesa integrates sustainability into economic development by encouraging green jobs, workforce training, and support for environmentally responsible local businesses, all of which contribute to reducing the community's carbon footprint and advancing local climate action goals.

City of Costa Mesa Climate Action and Adaptation Plan (CAAP)

The City of Costa Mesa is actively developing its Climate Action and Adaptation Plan (CAAP), a community-driven roadmap designed to reduce GHG emissions, prepare for climate impacts, and support a healthier and more resilient city. In 2025, City staff and consultants gathered data, assessed climate risks, and conducted extensive community engagement. Community feedback shows strong public interest in clean energy, greener neighborhoods, improved transportation options, and long-range planning for future climate conditions.

Costa Mesa General Plan

Goals and policies have been established for the City of Costa Mesa to reduce impacts associated with energy consumption within the city. These potential for the Project to conflict with these goals and policies is detailed in Section 4.9, Land Use and Planning, of this Draft PEIR.

Conservation Element

Goal CON-2: **Conserved Natural Resources through Environmental Sustainability.** Reduce the City's carbon footprints and manage resources wisely to meet the needs of a growing population and economy. Base community planning decisions on sustainable practices that reduce environmental pollutants, conserve resources, and minimize waste. Encourage the design of energy-efficient buildings, use renewable energy, and promote alternative methods of transportation.

Policy CON-2.A.1: Promote efficient use of energy and conservation of available resources in the design, construction, maintenance, and operation of public and private facilities, infrastructure, and equipment.

Policy CON-2.A.2: Consult with regional agencies and utility companies to pursue energy efficiency goals. Expand renewable energy strategies to reach zero net energy for both residential and commercial new construction.

Policy CON-2.A.3: Continue to develop partnerships with participating jurisdictions to promote energy efficiency, energy conservation, and renewable energy resource development by leveraging the abilities of local governments to strengthen and reinforce the capacity of energy efficiency efforts.

Policy CON-2.A.4: Encourage new development to take advantage of Costa Mesa's optimal climate in the warming and cooling of buildings, including use of heating, ventilation and air conditioning (HVAC) systems.

Policy CON-2.A.5: Promote environmentally sustainable development principles for buildings, master planned communities, neighborhoods, and infrastructure.

Policy CON-2.A.6: Encourage construction and building development practices that reduce resource expenditures throughout the lifecycle of a structure.

Policy CON-2.A.7: Continue to require all City facilities and services to incorporate energy and resource conservation standards and practices and require that new municipal facilities be built within the LEED Gold standards or equivalent.

Policy CON-4.A.5: Encourage compact development, infill development, and a mix of uses that are in proximity to transit, pedestrian, and bicycling infrastructures.

Policy CON-4.A.6: Enhance bicycling and walking infrastructure, and support public bus service, pursuant to the Circulation Element's goals, objectives, and policies.

Policy CON-4.A.7: Encourage installation of renewable energy devices for businesses and facilities and strive to reduce communitywide energy consumption.

Existing Community-Based and Specific Plans

The 19 West Urban Plan, SoBECA Urban Plan, Mesa West Bluffs Urban Plan, Mesa West Residential Ownership Urban Plan/Mixed-Use Overlay, Harbor Mixed-Use Overlay, Residential Incentive Overlay, North Costa Mesa Specific Plan, One Metro West Specific Plan, and the Newport Boulevard Specific Plan are the only existing community-based or specific plans within the city. However, there are no goals or policies pertaining to GHGs within these plans.

4.6.3 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:

Threshold 4.6-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction and operation.

The following threshold question for this topic required in accordance with Appendix G of the CEQA Guidelines was scoped out of this Draft PEIR, having been adequately addressed in the Initial Study, wherein it was determined that the Project would have no impact or a less than significant impact on the environment:

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

Thus, an analysis of this threshold is included in Appendix A-1, NOP and Initial Study, of this Draft PEIR.

4.6.4 Impact Analyses

4.6.4.1 Methodology

As described in Chapter 3, Project Description, the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation Project is a policy document that does not include or propose any site-specific development that could directly result in construction or operational impacts to the environment. However, implementation of the Project would facilitate additional future development in the city. Therefore, this Draft PEIR does not assess the site-specific construction and operation details of each future development within the Planning Area. Rather, it assesses the impacts associated with changes to existing land uses and the associated overall effects of buildout of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation through 2056, where reasonably foreseeable physical changes to the environment could occur. Analysis at a parcel or site-specific level was not conducted because, unless otherwise noted within this assessment, the actual locations of Project development (and its chronologic sequence or concurrence) that may be implemented in the future are speculative.

Therefore, since specifics for construction and operation of future development under the Project are not known, the California Emissions Estimator Model (CalEEMod) default values were assumed based on development land use type and size, as described in Section 4.3.2.1, Methodology of Section 4.3, Air Quality of this Draft PEIR. A brief overview of the methodology applied to assess the Project's potential energy-related impacts is provided below:

Electricity and Natural Gas

The estimation of operational electricity and natural gas consumption was based on CalEEMod land use defaults and units or total area (i.e., square footage) of the Project's land uses. The electricity and natural gas use from nonresidential land uses is based on 2019 consumption estimates from the CEC's 2018-2030 Uncalibrated Commercial Sector Forecast (Commercial Forecast), and the energy use from residential land uses is based on the 2019 Residential Appliance Saturation Survey (RASS). The Commercial Forecast and RASS datasets derive energy intensities of different end use categories for different land use subtypes for electricity demand forecast zones (EDFZ) throughout the state. However, the energy use estimates are based on existing buildings and residences and are not representative of those constructed in compliance with energy efficiency requirements of the latest Title 24 Building Energy Efficiency Standards (e.g., the average residence surveyed in the RASS was constructed in 1974). Therefore, per Appendix D, Technical Source Documentation for Emissions Calculations, of the CalEEMod Version 2022.1 User Guide, "the default energy consumption estimates provided in CalEEMod based on the Commercial Forecast and RASS are very conservative, overestimating expected energy use compared to what would be expected for new buildings subject to the latest Energy Code with more stringent energy efficiency measures" (CAPCOA 2022).

Petroleum

Potential impacts were assessed through projected traffic trip generation during construction and operation, as provided by the CalEEMod outputs that was prepared for the Project (Appendix D). Fuel consumption from construction equipment was estimated by converting the total CO_2 emissions from each construction phase to gallons using conversion factors for CO_2 to gallons of gasoline or diesel. The conversion factor for gasoline is 8.78 kilograms per metric ton CO_2 per gallon, and the conversion factor for diesel is 10.21 kilograms per metric ton CO_2 per gallon (The Climate Registry 2025). Heavy-duty construction equipment associated with construction activities and haul trucks involved in importing or exporting material to and from the site such as export of demolition material are assumed to use diesel fuel. It is assumed that construction workers would travel in the Project area in gasoline-powered vehicles. Fuel consumption from worker and vendor trips was estimated by converting the total CO_2 emissions from the construction phase to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. Worker vehicles are assumed to be gasoline fueled, and vendor/hauling vehicles are assumed to be diesel fueled. The fuel consumption resulting from the Project's operational phase would be attributable to vehicle travel within the Project area.

Similar to construction worker and vendor trips, fuel consumption for operation was estimated by converting the total CO_2 emissions from the Project to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. Regulatory measures related to mobile sources include AB 1493 (Pavley) and related federal standards. AB 1493 required that CARB establish GHG emission standards for automobiles, light-duty trucks, and other vehicles determined by CARB to be used primarily for noncommercial personal transportation in the State. However, following the Trump administration's 2025 rescission of California's Clean Air Act waivers—implemented through Congressional Review Act resolutions—the State is currently preempted from enforcing its own vehicle GHG emission standards, including those originally adopted under AB 1493, unless and until ongoing litigation restores this authority. In response, CARB has developed off-model adjustment factors to remove the emissions-reduction benefits of regulations. The CARB adjustment factors describe the methodology used to generate these factors by comparing EMFAC scenarios with and without these regulations, enabling consistent calculation of adjusted emissions across vehicle classes, pollutants, and calendar years. Notably, the NHTSA and EPA have established corporate fuel-economy standards and federal GHG-emission standards for automobiles and light-, medium-, and heavy-duty vehicles, which remain applicable nationwide. Implementation of these federal standards, along with natural fleet turnover (replacement of older vehicles with newer ones), will gradually reduce emissions from the Project's motor vehicles. The effectiveness of fuel-economy improvements was evaluated by using the CalEEMod emission factors for motor vehicles in 2050 for the Project to the extent that these efficiencies are reflected in EMFAC 2021.

Given the uncertainty surrounding the legality of the federal actions affecting California's vehicle-emission standards, the GHG analysis in the Draft PEIR will present adjusted petroleum consumption estimates consistent with the documentation and off-model factors released by CARB and approved by EPA, ensuring that the analysis remains aligned with the most current, federally recognized modeling guidance.

4.6.4.2 Environmental Analyses

Threshold 4.6-1 ***Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction and operation?***

Construction Use

Less Than Significant Impact. Future construction activities that would be reasonably foreseeable due to the proposed land use and policy changes set forth in the Neighborhoods Where We All Belong Zoning Updates and Housing Element would increase demands for electricity, natural gas, gasoline, and diesel consumption in the Project area, which are evaluated below. However, energy use would not represent wasteful, inefficient, or unnecessary consumption of energy use and impacts would be less-than-significant.

Electricity

Energy use from construction of future residential, commercial, and mixed-use development would primarily occur in association with fuel use by vehicles and other equipment to conduct construction activities.

The electricity demand at any given time would vary throughout the construction period based on the construction activities being performed and would cease upon completion of construction. When not in use, electric equipment would be powered off to avoid unnecessary energy consumption. The electricity used for construction activities would be temporary and minimal; it would be within the supply and infrastructure service capabilities of SCE, and it would not require additional local or regional capacity. The electricity demand during construction is anticipated to be minimal as future projects would be built over 30 years. The electricity used for any potential future construction activities would be temporary and minimal.

Natural Gas

Natural gas is not anticipated to be required during Project construction because construction of new buildings and facilities typically do not consume natural gas. Peak energy demand specifically applies to electricity; because natural gas (and petroleum) are liquid, these energy resources do not have the same constraints as electricity supply. Nonetheless, any use of natural gas is anticipated to be sufficiently served by existing supply from SoCalGas and would not require additional local or regional capacity. Any minor amounts of natural gas that may be consumed because of construction would be temporary and negligible and would not have an adverse effect.[1]

Petroleum

Heavy-duty equipment associated with construction during development allowed for by the Project would rely on diesel fuel, as would vendor trucks involved in delivery of materials to the individual parcels within the Project area and haul trucks exporting demolition material or other materials off site or importing material. Construction workers

[1] While no natural gas is anticipated to be used during construction as construction equipment is typically diesel-fueled, the possibility of natural gas use is acknowledged in the event a natural gas-fueled piece of equipment is used or a natural gas-fueled hot water boiler is used for pipe relining. However, as noted previously, all equipment was assumed to be diesel-fueled in CalEEMod.

would travel to and from each of the parcels within the Project area throughout the duration of construction. Appendix D lists the assumed equipment usage and vehicle trips.

Construction is estimated to occur intermittently over the planning horizon of the Project, which is 30 years. The estimated energy demand from a one-year development scenario was multiplied by the estimated number of years till Project buildout in 2056 (i.e., 30 years) to estimate the annual petroleum consumption from construction.

The estimated diesel fuel usage from construction equipment, haul trucks, and vendor trucks, as well as estimated gasoline fuel usage from worker vehicles, is shown in Table 4.6-2.

Table 4.6-3. Total Proposed Project Construction Petroleum Demand

Project	Off-Road Equipment (diesel)	Haul Trucks (diesel)	Vendor Trucks (diesel)	Worker Vehicles (gasoline)
	Gallons			
Total for one year	69,205	11,313	80,191	179,139
Total over 30 years	2,076,154	339,404	2,405,728	5,374,156

Source: Appendix D.

In summary, construction associated with the potential future development facilitated by the Project over 30 years is conservatively anticipated to consume 5,374,156 gallons of gasoline and 4,821,286 gallons of diesel. Each year, it is anticipated that implementation of the Project would consume on average 179,139 gallons of gasoline and 160,710 gallons of diesel.[2]

Notably, the Project would be subject to CARB's In-Use Off-Road Diesel Vehicle Regulation that applies to certain off-road diesel engines, vehicles, or equipment greater than 25 horsepower. The regulation (1) imposes limits on idling, requires a written idling policy, and requires a disclosure when selling vehicles; (2) requires all vehicles to be reported to CARB (using the Diesel Off-Road Online Reporting System) and labeled; (3) restricts the adding of older vehicles into fleets starting on January 1, 2014; and (4) requires fleets to reduce their emissions by retiring, replacing, or repowering older engines or installing Verified Diesel Emission Control Strategies (i.e., exhaust retrofits). The fleet must either show that its fleet average index was less than or equal to the calculated fleet average target rate, or that the fleet has met the Best Achievable Control Technology requirements. Overall, the Project would not be unusual as compared to overall local and regional demand for energy resources and would not involve characteristics that require equipment that would be less energy-efficient than at comparable construction sites in the region or state.

Additionally, any future development facilitated by the Project would be required to adhere to all federal, state, and local requirements for energy efficiency, including the latest Title 24 standards. Considering these requirements, the Project would not result in the inefficient, wasteful, or unnecessary consumption of building energy. Therefore, construction impacts would be less than significant, and no mitigation is required.

[2] For disclosure only, by comparison, California as a whole consumes approximately 29 billion gallons of petroleum per year. Countywide total petroleum use by on-road vehicles only (i.e., not including construction off-road equipment) is expected to be approximately 1.0 billion gallons per year in 2027 (CARB 2025).

Operational Use

Less Than Significant Impact. Future operation of development that would be reasonably foreseeable due to the proposed land use changes set forth in the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation Project would increase demands for electricity, natural gas, gasoline, and diesel consumption in the Project area, which are evaluated below.

Electricity

Project operation would require electricity for multiple purposes including, but not limited to, building heating and cooling, lighting, appliances, and electronics. Additionally, the supply, conveyance, treatment, and distribution of water would indirectly result in electricity usage. CalEEMod was used to estimate Project emissions from electricity uses (see Appendix D for calculations). Default electricity generation rates in CalEEMod were used based on the proposed land use and climate zone. The increase in electricity demand for the future potential buildout of the additional 21,522 new dwelling units and 10,630,361 square feet of commercial uses, is presented in Table 4.6-4.

Table 4.6-4. Project Annual Operational Electricity Demand Summary

Land Use	Electricity Demand (mWh/year)
Residential	81.0
Commercial	124.1
Total Project Electricity Demand	**205.1**

Source: Appendix D.
Notes: mWh = megawatt hours.

As shown in Table 4.6-4, the increase in potential development is estimated to have a total electrical demand of approximately 205.1 megawatt-hours per year. The energy demand calculations do not consider all the potential future energy-saving regulations and code requirements that are currently unknown for the Project buildout year of 2056. For example, Title 24 2025 standards which would increase the required amount of solar for non-residential spaces and would expand battery storage systems requirements compared to the 2019 standards. As such, the Project's electricity use would likely be lower than the calculations presented above. Additionally, the applicable Title 24 standards would further ensure that the energy demands would not be inefficient, wasteful, or otherwise unnecessary. Therefore, impacts would be less than significant.

Natural Gas

The operation of the residential and commercial uses would require natural gas for various purposes, including building heating and cooling, service water heating, and appliances. Default natural gas usage rates in CalEEMod for the proposed land uses and climate zone were used. Table 4.6-5 presents the increase in natural gas demand for the future potential buildout of the additional 21,522 new dwelling units and 10,630,361 square feet of commercial uses.

Table 4.6-5. Project Annual Operational Natural Gas Demand Summary

Land Use	Natural Gas Demand (mBTU/year)
Residential	245,461
Commercial	220,891
Total Project Natural Gas Demand	**466,352**

Source: Appendix D.
Notes mBTU = million British Thermal Units.

As shown in Table 4.6-5, the increase in residential and commercial uses is estimated to have a total natural gas demand of 466,352 million British Thermal Units per year. Any future development facilitated by the Project is subject to statewide mandatory energy requirements as outlined in Title 24, Part 6, of the California Code of Regulations. Prior to development at individual parcel sites, applicants would ensure that the proposed development would meet Title 24 requirements applicable at that time. Thus, the natural gas consumption related to development facilitated by the Project would not be considered inefficient or wasteful, and impacts would be less than significant.

Petroleum

During operations, the majority of fuel consumption resulting from the future development facilitated by the Project would involve the use of motor vehicles, as well as fuels used for alternative modes of transportation that may be used by residents, employees and visitors of the future development. Petroleum fuel consumption associated with motor vehicles traveling to and from future development is a function of the VMT as a result of operation of the development of the Project. Fuel estimates for the future potential buildout of the additional 21,522 new dwelling units and 10,630,361 square feet of commercial uses are provided in Table 4.6-6.

Table 4.6-6. Project Annual Operational Petroleum Demand Summary

Land Use	Annual VMT	Estimated Annual Fuel Consumption (Gallons)		
		Gasoline	Diesel	Total
Project	732,741,758	21,354,635	952,117	22,306,752

Source: Appendix D.
Notes: VMT = Vehicle miles traveled.
Totals may not sum due to rounding.

As summarized in Table 4.6-6, the potential buildout of the future development facilitated by the Project would result in annual VMT of approximately 732,741,758 annually and an estimated increase in annual fuel demand of 22,306,752 gallons of petroleum per year. Fuel would be provided by current and future commercial vendors. The Project does not propose uses or operations that would inherently result in excessive and wasteful vehicle trips and VMT or associated excess and wasteful vehicle energy consumption.

As discussed in Section 4.6.4.1 Methodology, Petroleum, the State is currently preempted from enforcing its own vehicle GHG emission standards and regulations, as such, CARB provided information on how to adjust the mobile source emissions to reflect the emission without the benefit of affected regulations. Table 4.6-7 presents the adjusted petroleum consumption for the proposed Project at buildout.

Table 4.6-7. Project Annual Operational Petroleum Demand Summary (CARB Adjustments)

Land Use	Annual VMT	Estimated Annual Fuel Consumption (Gallons)		
		Gasoline	Diesel	Total
Project	732,741,758	23,383,325	1,042,568	24,425,894

Source: Appendix D.
Notes: VMT = Vehicle miles traveled.
Totals may not sum due to rounding.

As shown in Table 4.6-7, the adjusted estimated increase in annual fuel demand would be approximately 24,425,894 gallons of petroleum per year. This represents an increase of approximately 9.5 percent over the unadjusted fuel demand. As with the unadjusted fuel demand, fuel would be provided by current and future commercial vendors. The Project does not propose uses or operations that would inherently result in excessive and wasteful vehicle trips and VMT or associated excess and wasteful vehicle energy consumption.

Enhanced fuel economies realized pursuant to federal and state regulatory actions, and related transition of vehicles to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells) would likely decrease future gasoline fuel demands per VMT. Additionally, the general location of the parcels subject to proposed land use changes proximate to regional and local roadway systems tends to reduce VMT within the region, acting to reduce regional vehicle energy demands. Furthermore, approval of the Project itself, as a policy document update, would not change these regulations related to transportation energy consumption. Therefore, transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary and impacts would be less than significant.

Renewable Energy Potential

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

Given the Project's location in an urban area and the nature of the Project, there are anticipated considerable site constraints at a parcel level including potential 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 within the Project area. Regarding wind power, due to the urban nature of the Project area parcels and surrounding land uses, wind turbines are generally anticipated to not be feasible as it represents an incompatible use due to the height of the wind turbine blades and the need to avoid nearby obstacles.[3]

Regarding solar power, the future development allowed by the Project is anticipated to include solar power, which at a minimum, is anticipated to be provided for newly built or modified low-rise residential and most new non-residential buildings. As solar power technology improves in the future and regulations require additional solar, it is reasonable to assume that additional solar power may be provided to the future development allowed for by the

[3] 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).

Project. In addition, the potential for installation of battery storage in future developments, if determined to be a feasible and compatible land use of the site, could also be provided, but is unknown at this time of the scale and level of adoption.

In summary, future development under the Project is anticipated to include the onsite renewable energy source (i.e., solar) that is determined to be feasible for the Project area and type of development; however, incorporation of solar energy was not included in the quantification and CalEEMod outputs. Therefore, this analysis provides a conservative assessment of energy use. Further, this analysis assumes that the Project would likely not include the onsite renewable energy sources and are anticipated to be infeasible.

Summary**.** As explained above, the Project would use renewable energy onsite as determined to be feasible and would not result in wasteful, inefficient, or unnecessary consumption of energy resources, including electricity, natural gas, or petroleum during Project construction or operation. Impacts would be less than significant.

4.6.5 Cumulative Impact Analyses

Where a lead agency concludes that the cumulative effects of a project, taken together with the impacts of other closely related past, present, and reasonably foreseeable future projects are significant, the lead agency then must determine whether the project's incremental contribution to such significant cumulative impact is "cumulatively considerable" (and thus significant in and of itself) (State CEQA Guidelines Section 15130[a]). The cumulative study area used to assess potential cumulative energy impacts includes the entirety of Orange County and considers the future buildout of applicable local and regional plans. The full list of related plans applicable to the Project's cumulative analyses is provided in Section 2.5, Cumulative Impact Analysis, in Chapter 2, Environmental Setting of this Draft PEIR.

Threshold 4.6-1. Cumulative projects that could exacerbate the Project's impacts include projects within Orange County that could result in wasteful, inefficient, or unnecessary use of energy. As such, existing and projected cumulative development under approved planning documents (e.g., the 2024-2050 RTP/SCS, and General Plan) has been reviewed for consideration of energy efficiency. Buildout of the cumulative study area would be required to conform to current federal, state, and local energy conservation standards, including the California Energy Code Building Energy Efficiency Standards (24 CCR Part 6), the CALGreen Code (24 CCR Part 11), and SB 743. As a result, the Project, in combination with other cumulative development projects, would not cause a wasteful use of energy or other non-renewable natural resources. The Project would result in less than significant impacts to energy resources related to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction and operation, and the Project's incremental contribution to impacts would not be cumulatively considerable.

4.6.6 Mitigation Measures

No mitigation measures are required.

4.6.7 Level of Significance Conclusion

Threshold 4.6-1: The Project would result in **less than significant** environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction and operation. Impacts would not be cumulatively considerable.

4.6.8 References

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4.7 Geology and Soils

This section of the Draft PEIR analyzes the potential impacts from the implementation of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation (Project) on geology and soils, specifically, the potential for the Project to impact to paleontological resources. A description of the existing conditions related to paleontological resources in the City of Costa Mesa (City), focusing on the Planning Area and surrounding vicinity, is also provided in this section to present the environmental baseline for the Project. The analysis is based, in part, on the City's planning documents, including the Costa Mesa 2015-2035 General Plan ("General Plan;" City of Costa Mesa 2016a) and the General Plan Draft Environmental Impact Report ("General Plan EIR;" City of Costa Mesa 2016b). In addition, the analysis is based on publicly available information from the California Geological Survey (CGS), U.S. Geological Survey (USGS), as specified in Section 4.7.8, References, as well as the following:

Appendix F-1 Confidential Natural History Museum of Los Angeles County (NHMLA) Records Search Results, prepared by Dudek, February 2026.

Appendix F-2 Confidential Orange County Parks Cooper Center (Cooper Center) Records Search Results, prepared by Dudek, February 2026.

4.7.1 Existing Conditions

4.7.1.1 Physiography

The Planning Area is located within the Southern Coastline Sub Province that overlaps the features of the Peninsular Ranges Geomorphic Province. The Peninsular Ranges Geomorphic Province is bounded by the Pacific Ocean to the west of the city, but includes the offshore islands (Santa Catalina, Santa Barbara, San Clemente, and San Nicolas islands) and the continental shelf, the Transverse Ranges Geomorphic Province to the north, and the Colorado Desert Geomorphic Province to the east (CGS 2002; Norris and Webb 1990). The Peninsular Ranges Province consists of a series of northwest-trending mountain ranges separated by long valleys, formed from subparallel faults stemming from the San Andreas Fault. The topography resembles that of the Coast Ranges, but compositionally it is more similar to that of the Sierra Nevada Province (CGS 2002; Koordinates 2026). Because the coastline is such a dominating feature of California it qualifies as its own sub province that is split between north and south. The Southern Coastline Sub Province covers the area from San Diego north-northwest to Point Conception. These southern shores are generally sheltered from storms due to the broad continental shelf along this section and beaches are usually well developed and sandy with sand deposition that started approximately 10,000 years ago (Koordinates 2026).

4.7.1.2 Paleontological Resources

Paleontological resources are the remains or traces of plants and animals that are preserved in Earth's crust, and per the Society of Vertebrate Paleontology ([SVP] 2010) guidelines, are older than written history or older than approximately 5,000 years, which approximates the middle Holocene (Cohen et al. 2024). They are limited, nonrenewable resources of scientific and educational value and are afforded protection under state laws and regulations.

According to surficial geological mapping (Morton and Miller 2006a) at a 1:100,000 scale and the geological time scale (Cohen et al. 2024), the Planning Area is underlain by Holocene and late Pleistocene (recent to 129,000

years ago), young axial-channel deposits (map unit Qya), and young alluvial-fan deposits (map unit Qyf); late to middle Pleistocene (approximately 11,700 – 774,000 years ago), old paralic deposits, undivided (map unit Qop), and old paralic deposits overlain by alluvial-fan deposits (map unit Qopf); and middle to early Pleistocene (approximately 129,000 – 2.58 million years ago years ago) very old paralic deposits (map unit Qvop) (see Figure 4.7-1, Geology and Paleontological Sensitivity Map). The old paralic deposits and very old paralic deposits are roughly equivalent to the Palos Verdes Sand and San Pedro Sand, respectively. Holocene to late Pleistocene deposits are typically a mixture of silt, sand, and gravel (pebbles to boulders) with varying degrees of consolidation (none to moderate) (Morton and Miller 2006b). The old paralic deposits and very old paralic deposits generally consist of reddish-brown, relatively permeable, poorly sorted, sand, silt and cobbles. In some areas, these are capped by thin, laterally extensive, sandy alluvial fan deposits (Morton and Miller 2006b).

A records search request was sent to the Natural History Museum of Los Angeles County (NHMLA) and the Orange County Parks Cooper Center (Cooper Center) on January 5, 2026. The results from the NHMLA were received on January 11, 2026. The museum reported three localities that plotted within the Planning Area, two localities that plotted within the half-mile radius buffer but outside Planning Area, and three localities that plotted outside of the half-mile radius buffer. These fossil localities are as follows:

- LACM IP (Los Angeles County Museum, Invertebrate Paleontology) 31322 produced uncatalogued invertebrates from the Palos Verdes Sand (Confidential Appendix F-1) from the bottom of a roadcut within the Planning Area.
- LACM VP (Vertebrate Paleontology) 4219 / LACM IP 5062 yielded camel, sea turtle, uncatalogued fish and birds, bivalves, gastropods from 30 feet below the ground surface (bgs) within the Planning Area (Confidential Appendix F-1).
- LACM IP 4695 produced bivalve and bryozoan fossils from an unknown depth bgs within the Planning Area (Confidential Appendix F-1).
- Approximately 55 feet east of the Planning Area, and within the half-mile radius buffer, LACM VP 3267 produced fossils of an unidentified proboscidean from an unknown Pleistocene formation at an unknown depth bgs (Confidential Appendix F-1).
- Approximately 500 feet south of the nearest Planning Area parcels, but within the half-mile radius buffer, LACM IP 4929-4930 yielded bivalves from surficial Palos Verdes Sand deposits (Confidential Appendix F-1).
- Outside of the half-mile radius buffer, 1.37 miles west of the nearest Planning Area parcels, along the Santa Ana River, LACM IP 21488 produced unspecified invertebrates from an unknown Pleistocene unit at an unknown depth bgs (Confidential Appendix F-1).
- Outside of the half-mile radius buffer, approximately 0.73 miles south-southwest of the southernmost Planning Area, LACM VP 6370, 6371 yielded horse and other unspecified mammals, bivalves, scaphopods, and marine gastropods from Pleistocene age silty sandstones while grading for a parking lot (Confidential Appendix F-1).
- Outside of the half-mile buffer, approximately 0.89 miles east the nearest Planning Area parcels, along Upper Newport Bay, LACM VP 1070, 4422; LACM IP 136, 487, 73, 136, 41655, 41694, 5193, 239, 22539 produced uncatalogued mammals and mostly uncatalogued invertebrates from the late Pleistocene Palos Verdes Sand from the surface and an unspecified depth bgs (Confidential Appendix F-1).

The results from the Cooper Center were received on February 27, 2026 (Confidential Appendix F-2). The Cooper Center reported one locality within the Planning Area and more than 16 localities from nearby within the half-mile radius Planning Area buffer. The results of the localities are summarized below.

- Approximately 9 feet north of a Planning Area parcel north of West 19th street, locality OCPC 03177 from marine terrace deposits produced sharks, rays, bony fishes, bird, rodent, and mastodon fossils from an unspecified depth bgs (Confidential Appendix F-2).
- Approximately 0.04 miles west of Planning Area parcels, along the freeway, localities OCPC 00508-00509, 00058, and 05554 from old paralic deposits overlain by alluvial fan deposits, general fossils found from these units are bivalves, gastropods, bony fish, sharks, rays crabs, barnacles, scaphopods, echinoids, corals, and bryozoans from an unspecified depth bgs (Confidential Appendix F-2).
- Approximately 0.28 miles east of Harbor Boulevard, locality OCPC 00080, from old paralic deposits overlain by alluvial fan deposits, produced invertebrate fossils from an unspecified depth bgs (Confidential Appendix F-2).
- Approximately 0.33 miles west of Planning Area parcels along Monrovia Avenue and west of Placentia Avenue, from old paralic deposits undivided, localities OCPC 00001 and 00090 yielded invertebrate fossils from an unspecified depth bgs (Confidential Appendix F-2).
- Approximately 0.36 miles west of Harbor Boulevard, locality OCPC 00091, from old paralic deposits overlain by alluvial fan deposits, produced invertebrate fossils from an unspecified depth bgs (Confidential Appendix F-2).
- Approximately 0.48 miles SW of the southernmost Planning Area, localities 00471-00477, 00478-00480, 00533, and 03185 all from old paralic deposits undivided, yielded bivalves, gastropods, bony fish, sharks, rays crabs, barnacles, scaphopods, echinoids, corals, bryozoans, tube worms, and fossil burrows from an unspecified depth bgs (Confidential Appendix F-2).

An unofficial records search of Dudek's internal paleontological records database with data derived from online databases and published and unpublished literature provided one locality outside of the half-mile radius buffer, close to the Planning Area.

- Approximately 0.71 miles west (west of Harbor Blvd along Adams Ave) of Planning Area parcels, LACM 1339 produced mammoth and camel fossils from old paralic deposits overlain by alluvial fan deposits (Cogstone 2018).

4.7.2 Regulatory Requirements

4.7.2.1 Federal

No federal laws, plans, or policies related to geology and soils are applicable to the proposed Project.

4.7.2.2 State

Paleontological Resources

The California Environmental Quality Act (CEQA) Guidelines require that all private and public activities not specifically exempted be evaluated against the potential for environmental damage, including effects to paleontological resources. Paleontological resources, which are limited, nonrenewable resources of scientific, cultural, and educational value, are recognized as part of the environment under these state guidelines. This study satisfies project requirements in accordance with CEQA (13 PRC [Public Resources Code], 21000 et seq.).

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]." This provision covers scientifically significant fossils, which include, but are not limited to, newly discovered species or genera, fossils exhibiting morphological features not previously recognized for a given animal group, fossils that increase the temporal range of a species, fossils discovered from geological units within which they were previously unknown, fossils that expand the biogeographic range of a species, and/or localities that yield fossils significant in their abundance, diversity, and preservation.

In addition to CEQA, the California Public Resources Code Section 5097.5 (Stats 1965, c 1136, p. 2792) regulates removal of paleontological resources from state lands, defines unauthorized removal of fossil resources as a misdemeanor, and requires mitigation of disturbed sites.

4.7.2.3 Local

Costa Mesa 2015-2035 General Plan

Historical and Cultural Resources Element

The Historical and Cultural Resources Element of the City's General Plan provides the following goals and policies relevant to paleontology for the proposed Project (City of Costa Mesa 2016a):

Goal HCR-1: **Historical, Archeological, and Paleontological Resource Preservation.** Encourage preservation and protection of the City's archaeological, paleontological, and historical resources.

Policy HCR-1.4: Require, as part of the environmental review procedure, an evaluation of the significance of paleontological, archaeological, and historical resources, and the impact of proposed development on those resources.

Policy HCR-1.6: Encourage development of an interpretive center for paleontological, archaeological, and historical resources at Fairview Park. The center may contain resources found in the park area as well as resources found throughout the City.

Policy HCR-1.9: Require paleontological studies for all applicable discretionary projects. The studies should identify paleontological resources in the project area and provide mitigation measures for any resources in the project area that cannot be avoided.

Policy HCR-1.10: Comply with the California Environmental Quality Act regarding the protection and recovery of paleontological resources during development activities.

Existing Urban Plans and Specific Plans

The 19 West Urban Plan, SoBECA Urban Plan, Mesa West Bluffs Urban Plan, Mesa West Residential Ownership Urban Plan/Mixed-Use Overlay, Harbor Mixed-Use Overlay, Residential Incentive Overlay, North Costa Mesa Specific Plan, One Metro West Specific Plan, and the Newport Boulevard Specific Plan are the only existing urban and specific plans within the city. However, these plans do not include any applicable goals or policies pertaining to paleontological resources.

4.7.3 Thresholds of Significance

The significance criteria used to evaluate the Project's impacts to geology and soils are based on Appendix G of the CEQA Guidelines.[1] According to Appendix G of the CEQA Guidelines, a significant impact related to geology and soils would occur if the Project would:

Threshold 4.7-1: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

The following threshold questions for this topic required in accordance with Appendix G of the CEQA Guidelines were scoped out of this Draft PEIR, having been adequately addressed in the Initial Study, wherein it was determined that the Project would have no impact or a less than significant impact on the environment:

- Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?
  - Strong seismic ground shaking?
  - Seismic-related ground failure, including liquefaction?
  - Landslides?
- Would the project result in substantial soil erosion or the loss of topsoil?
- 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?
- 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?
- 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?

Thus, an analysis of these thresholds is included in Appendix A-1, NOP and Initial Study, of this Draft PEIR.

4.7.4 Impact Analyses

4.7.4.1 Methodology

As described in Chapter 3, Project Description, the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation Project does not include or propose any site-specific development that could directly result in construction or operational impacts to the environment. However, implementation of the Project would facilitate additional future development in the city. Therefore, this Draft PEIR does not assess the site-specific

[1] Most geology and soils threshold questions required in accordance with Appendix G of the CEQA Guidelines were scoped out of this PEIR, having been adequately addressed in the Initial Study, wherein it was determined that the Project would have no impact or a less than significant impact on the environment for such topics. Thus, the threshold questions related to seismicity, fault rupture, seismically induced ground failure, soil erosion, unstable soils, expansive soils, and septic tanks are discussed briefly in Chapter 5, Other CEQA Considerations, of this PEIR.

construction and operation details of each future development within the Planning Area. Rather, it assesses the impacts associated with changes to existing land uses and the associated overall effects of buildout of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation Project through 2056, where reasonably foreseeable physical changes to the environment could occur. Analysis at a parcel or site-specific level was not conducted because, unless otherwise noted within this assessment, the actual locations of Project development (and its chronologic sequence or concurrence) that may be implemented in the future are speculative.

The following analysis evaluates the Project's potential impacts with regard to paleontological resources, taking into account applicable goals, policies, and regulations, as described in Section 4.7.2.3 of this Draft PEIR.

4.7.4.2 Environmental Analyses

Threshold 4.7-1 Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Significant and Unavoidable Impact. As detailed in Section 4.7.1, more than 25 fossil localities yielding numerous fossil invertebrates and vertebrates were identified within and near the Planning Area as a result of the NHMLA and Cooper Center records searches and desktop geological and paleontological review. In addition, the Planning Area is not anticipated to be underlain by unique geologic features. Portions of the Planning Area underlain by Holocene to late Pleistocene young axial-channel deposits and young alluvial-fan deposits have low paleontological sensitivity at the surface that increases to high at depth where the sediments become older. Portions of the Planning Area underlain by the late to middle and middle to early Pleistocene old paralic deposits, undivided, old paralic deposits overlain by alluvial-fan deposits, and the very old paralic deposits have high paleontological sensitivity (see Figure 4.7-1, Geology and Paleontological Sensitivity Map). If intact paleontological resources are located onsite, ground-disturbing activities associated with any proposed construction within the Planning Area, such as large diameter (2-feet or greater) drilling, grading during site preparation and trenching for utilities, have the potential to destroy a unique paleontological resource or site. As such, the Planning Area is considered to be potentially sensitive for paleontological resources and as such, potential damage to paleontological resources during construction is considered a potentially significant impact.

Given the proximity of past fossil discoveries in the surrounding area within the old and very old paralic deposits, the majority of the Planning Area is highly sensitive for supporting paleontological resources below the depth of fill and weathered sedimentary deposits, and potential impacts to directly or indirectly destroying a unique paleontological resource or site would be potentially significant. Therefore, implementation of MM-4.7-1, Mitigation Protocols for Paleontological Resources, would be required. Implementation of MM-4.7-1 would require future discretionary projects subject to the MUOD within the Planning Area to follow steps depending on whether or not the future project site is within an area of low or high paleontological sensitivity. However, even though background research, paleontological assessments, evaluations, construction monitoring, and avoidance of known resources are common mitigation measures for projects in which there are potential impacts to paleontological resources, these measures cannot ensure that all impacts from future development projects would be mitigated to a level of less than significant. Additionally, future non-discretionary projects that would be implemented under the Project would be subject to the state regulations mentioned above; however, these non-discretionary projects would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. As such, even with implementation of existing applicable regulations and MM-4.7-1 as applied to future discretionary projects, impacts related to the potential to directly or indirectly destroy unique paleontological

resources or sites would be significant and unavoidable because it is not possible to ensure the successful preservation of all paleontological resources where new development may occur.

4.7.5 Cumulative Impact Analyses

Where a lead agency concludes that the cumulative effects of a project, taken together with the impacts of other closely related past, present, and reasonably foreseeable probable future projects are significant, the lead agency then must determine whether the Project's incremental contribution to such significant cumulative impact is "cumulatively considerable" (and thus significant in and of itself). The cumulative geographic study area used to assess potential cumulative paleontological impacts includes the city, which includes areas of varying conditions and is all considered within a region of seismic risks. Paleontological impacts are generally site-specific, can change considerably over relatively short distances, and do not combine with other projects resulting in a cumulative impact. The full list of related plans applicable to this Project's cumulative analyses is provided in Section 2.5, Cumulative Impact Analysis, in Chapter 2, Environmental Setting of the Draft PEIR.

Threshold 4.7-1. As discussed under Threshold 4.7-1 above, the chance of encountering paleontological resources within portions of the Planning Area underlain by Pleistocene old paralic deposits, undivided, old paralic deposits overlain by alluvial-fan deposits, and the very old paralic deposits have high paleontological sensitivity. Potential cumulative impacts to paleontological resources considers whether the impacts of the Project together with the cumulative projects would substantially diminish the number of paleontological resources within the same or similar context or property type. The majority of impacts to paleontological resources are site-specific and are therefore generally mitigated on a project-by-project basis, as cumulative projects would incorporate individual mitigation for site-specific geological units present on each individual project site. However, cumulative projects through buildout of the General Plan located throughout the city would have the potential to result in a cumulative impact associated with the loss of paleontological resources through the physical demolition, destruction, relocation, or alteration of a resource. Even with existing state regulations in place designed to protect paleontological resources and implementation of MM-4.7-1, individual paleontological resources would still have the potential to be impacted as a result of new development or redevelopment allowable under cumulative projects and the Project. Therefore, even with implementation of MM-4.7-1, the Project's incremental contribution to cumulative paleontological resource impacts would be cumulatively considerable.

4.7.6 Mitigation Measures

MM-4.7-1 Mitigation Protocols for Paleontological Resources. Prior to the issuance of any building permits for future development projects subject to the MUOD within the Planning Area, the City's Planning Division shall determine whether the project site is within areas of low paleontological sensitivity or high paleontological sensitivity, as depicted on Figure 4.7-1, Geology and Paleontological Sensitivity, of the Draft PEIR.

For projects within areas of the Planning Area designated as having low paleontological sensitivity, the following shall be implemented:

a) Prior to commencement of any grading activity for individual projects within the Planning Area, the project applicant shall retain a qualified paleontologist per the Society of Vertebrate Paleontology (SVP) (2010) guidelines. A qualified paleontological monitor shall be on site during all ground-disturbing activities (including augering) below a depth of 5

feet. No paleontological monitoring is necessary during ground disturbance within artificial fill or previously disturbed sediments, if determined to be present. See section (c), below, in the event that paleontological resources (e.g., fossils) are unearthed during ground disturbing activities.

For projects within areas of the Planning Area designated as having high paleontological sensitivity, the following shall be implemented:

b) Prior to commencement of any grading activity, the project applicant shall retain a qualified paleontologist per the Society of Vertebrate Paleontology (SVP) (2010) guidelines. The qualified paleontologist shall prepare and implement a Paleontological Resources Mitigation and Monitoring Program (PRMMP) for the project. The PRMMP shall be consistent with the SVP (2010) guidelines and should outline requirements for preconstruction meeting attendance and worker environmental awareness training; where monitoring is required within the proposed project site based on construction plans and/or geotechnical reports; procedures for adequate paleontological monitoring and discoveries treatment; and paleontological methods (including sediment sampling for 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 large diameter [2-feet or greater] augering) in previously undisturbed deposits of high paleontological sensitivity. See section (c), below, in the event that paleontological resources (e.g., fossils) are unearthed during ground disturbing activities.

If paleontological resources (e.g., fossils) are exposed during project construction, all construction work occurring within 50 feet of the find shall immediately stop. The qualified paleontologist shall evaluate the significance of the find and determine whether or not additional study is warranted. If the discovery is clearly not significant, the qualified paleontologist may document the find and allow work to continue. In the event that significant paleontological resources (e.g., fossils) are unearthed during ground disturbing activities, documentation and collection of the find shall be completed. Then, the qualified paleontological monitor shall allow activity to recommence in the area of the find. Significant paleontological resources recovered during project ground-disturbing activities shall be donated to an accredited repository, such as the Orange County Parks Cooper Center or Natural History Museum of Los Angeles County. Costs for laboratory processing, curation, and accessioning of significant fossil collections into the accredited repository are the responsibility of the project applicant.

4.7.7 Level of Significance Conclusion

Threshold 4.7-1. Even with implementation of MM-4.7-1, the Project could indirectly destroy a unique paleontological resource or site or unique geologic feature, and thus, impacts would be **significant and unavoidable** and cumulatively considerable.

4.7.8 References

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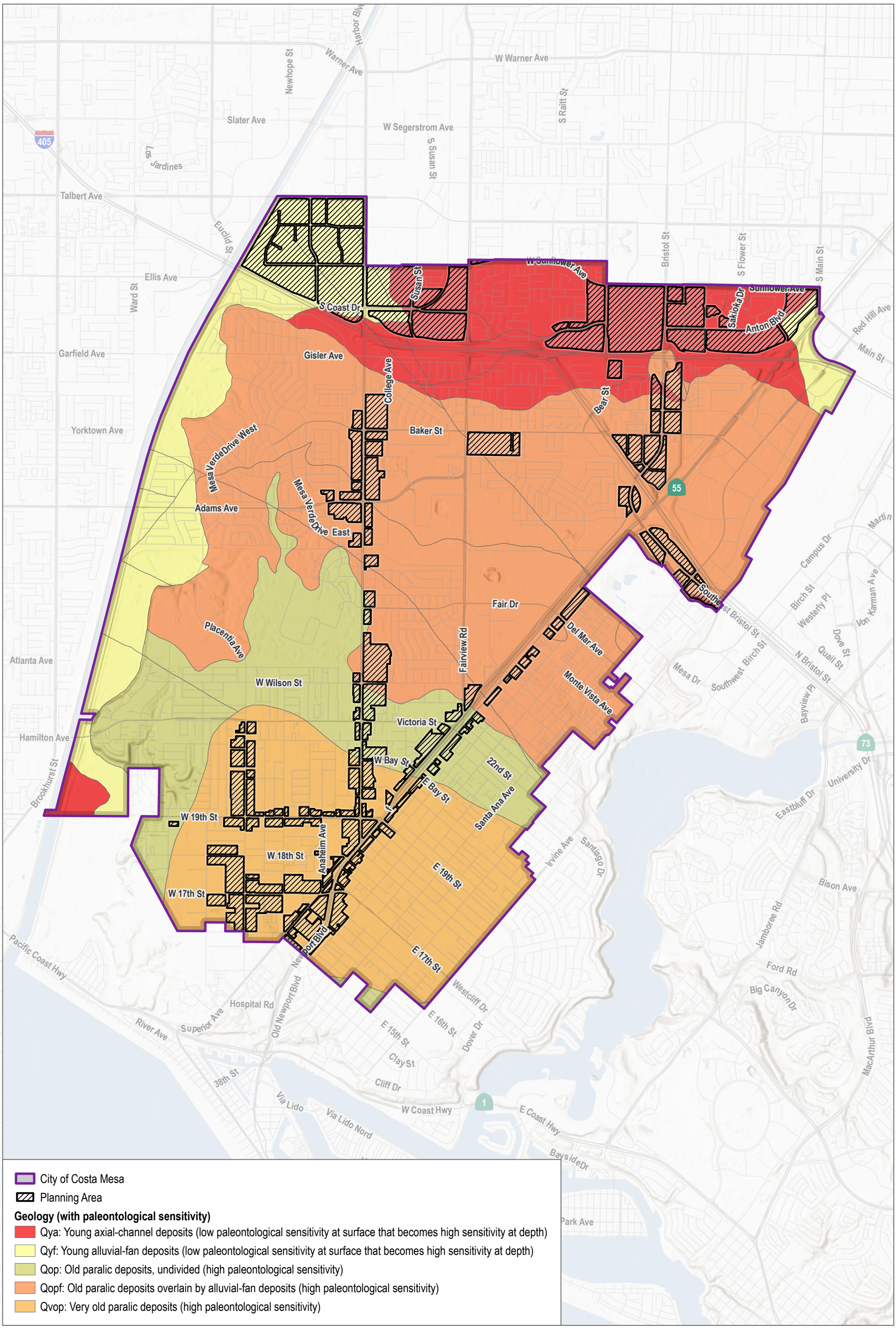

SOURCE: Douglas K. Morton and Fred K. Miller 2006, Open Street Map

DUDEK

0 1,500 3,000 Feet

FIGURE 4.7-1

Geology and Paleontological Sensitivity

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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4.8 Greenhouse Gas Emissions

This section of the Draft PEIR analyzes the potential greenhouse gas (GHG) emissions impacts from the implementation of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation (Project). This section identifies associated regulatory requirements, evaluates potentially adverse impacts related to GHG emissions during construction and operation of the Project on a programmatic level. The analysis is based, in part, on review of the proposed City of Costa Mesa Neighborhoods Where We All Belong Zoning Update and Housing Element Implementation, South Coast Air Quality Management District (SCAQMD) guidance, and information provided in the following technical analysis:

Appendix D Air Quality and Greenhouse Gas Emissions Modeling and Energy Calculations, Prepared By Dudek

Other sources consulted are listed in Section 4.8.8, References.

4.8.1 Existing Conditions

4.8.1.1 Climate Change Overview

Climate refers to the weather conditions, which include temperature, precipitation, and seasonal patterns, such as storms and wind, in a particular region over an extended period, typically decades or longer. Global Climate Change refers to the long-term shift in these weather patterns, including changes in temperature patterns, precipitation, sea levels, and more. The Earth's temperature depends on the balance between energy entering and leaving the planet's system. Many factors, both natural and human, can cause changes in Earth's energy balance, including variations in the sun's energy reaching Earth, changes in the reflectivity of Earth's atmosphere and surface, and changes in the greenhouse effect, which affects the amount of heat retained by Earth's atmosphere (EPA 2025a).

The greenhouse effect is the trapping and build-up of heat in the atmosphere (troposphere) near the Earth's surface. The greenhouse effect traps heat in the troposphere through a threefold process as follows: Short-wave radiation emitted by the Sun is absorbed by the Earth, the Earth emits a portion of this energy in the form of long-wave radiation, and GHGs in the upper atmosphere absorb this long-wave radiation and emit it into space and toward the Earth. The greenhouse effect is a natural process that contributes to regulating the Earth's temperature and creates a pleasant, livable environment on the Earth. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and causing the Earth's surface temperature to rise (EPA 2025a).

The scientific record of the Earth's climate shows that the climate system varies naturally over a wide range of time scales and that, in general, climate changes prior to the Industrial Revolution in the 1700s can be explained by natural causes, such as changes in solar energy, volcanic eruptions, and natural changes in GHG concentrations. Recent climate changes, in particular the warming observed over the past century, however, cannot be explained by natural causes alone. Rather, it is extremely likely that human activities have been the dominant cause of that warming since the mid-twentieth century and are the most significant driver of observed climate change (IPCC 2013; EPA 2025b). Human influence on the climate system is evident from the increasing GHG concentrations in the atmosphere, positive radiative forcing, observed warming, and improved understanding of the climate system (IPCC 2013). The global atmospheric concentrations of GHGs have increased to levels unprecedented in the last 800,000 years, primarily from fossil fuel emissions and secondarily from emissions associated with land use changes (IPCC 2013). Continued emissions of GHGs will cause further warming and changes in all components of

the climate system on a global level, which is discussed further in the subsequent section titled "Potential Effects of Climate Change."

4.8.1.2 Greenhouse Gases

A GHG is any gas that absorbs infrared radiation in the atmosphere; in other words, GHGs trap heat in the atmosphere. As defined in California Health and Safety Code Section 38505(g), for purposes of administering many of the State's primary GHG emissions reduction programs, GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3) (see also 14 CCR 15364.5).[1] Some GHGs, such as CO_2, CH_4, and N_2O, are emitted into the atmosphere through natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Manufactured GHGs have a much greater heat-absorption potential than CO_2 and include fluorinated gases, such as HFCs, PFCs, and SF_6, which are associated with certain industrial products and processes. The following paragraphs provide a summary of the most common GHGs and their sources.[2]

Carbon Dioxide. CO_2 is a naturally occurring gas and a by-product of human activities; it is the principal anthropogenic GHG that affects the Earth's radiative balance. Natural sources of CO_2 include respiration of bacteria, plants, animals, and fungi; evaporation from oceans; volcanic out-gassing; and decomposition of dead organic matter. Human activities that generate CO_2 are the combustion of fossil fuels such as coal, oil, natural gas, and wood/wood products, and changes in land use (e.g. conversion of vegetated/forested land to developed lands).

Methane. CH_4 is produced through both natural and human activities. CH_4 is a flammable gas and is the main component of natural gas. Methane is produced through anaerobic (without oxygen) decomposition of waste in landfills, flooded rice fields, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion.

Nitrous Oxide. N_2O is produced through natural and human activities, mainly through agricultural activities and natural biological processes, although fuel burning and other processes also create N_2O. Sources of N_2O include soil cultivation practices (microbial processes in soil and water), especially the use of commercial and organic fertilizers, manure management, industrial processes (such as in nitric acid production, nylon production, and fossil-fuel-fired power plants), vehicle emissions, and using N_2O as a propellant (such as in rockets, racecars, and aerosol sprays).

Fluorinated Gases. Fluorinated gases (also referred to as F-gases) are synthetic powerful GHGs emitted from many industrial processes. Fluorinated gases are commonly used as substitutes for stratospheric ozone-depleting substances (e.g., chlorofluorocarbons [CFCs], hydrochlorofluorocarbons [HCFCs], and halons). The most prevalent fluorinated gases include the following:

- **Hydrofluorocarbons:** HFCs are compounds containing only hydrogen, fluorine, and carbon atoms. HFCs are synthetic chemicals used as alternatives to ozone-depleting substances in serving many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are used in manufacturing.
- **Perfluorocarbons:** PFCs are a group of human-made chemicals composed of carbon and fluorine only. These chemicals were introduced as alternatives, with HFCs, to the ozone depleting substances. The two

1 Climate-forcing substances include GHGs and other substances, such as black carbon and aerosols. This discussion focuses on the seven GHGs identified in California Health and Safety Code Section 38505.

2 The descriptions of greenhouse gases (GHGs) are summarized from the Intergovernmental Panel on Climate Change Fourth Assessment Report (IPCC 2007), the CARB GHG Inventory Glossary (CARB 2025a), and the EPA Glossary of Climate Change Terms (EPA 2017).

main sources of PFCs are primary aluminum production and semiconductor manufacturing. Since PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere, these chemicals have long lifetimes, ranging between 10,000 and 50,000 years.

- **Sulfur Hexafluoride:** SF_6 is a colorless gas soluble in alcohol and ether and slightly soluble in water. SF_6 is used for insulation in electric power transmission and distribution equipment, semiconductor manufacturing, the magnesium industry, and as a tracer gas for leak detection.
- **Nitrogen Trifluoride:** NF_3 is used in the manufacture of a variety of electronics, including semiconductors and flat panel displays.

4.8.1.3 Global Warming Potential

Gases in the atmosphere can contribute to climate change both directly and indirectly. Direct effects occur when the gas itself absorbs radiation. Indirect radiative forcing occurs when chemical transformations of the substance produce other GHGs, when a gas influences the atmospheric lifetimes of other gases, or when a gas affects atmospheric processes that alter the radiative balance of the Earth (e.g., affect cloud formation or albedo) (EPA 2025b). The Intergovernmental Panel on Climate Change (IPCC) developed the global warming potential (GWP) concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP of a GHG is defined as the ratio of the time-integrated radiative forcing from the instantaneous release of 1 kilogram of a trace substance relative to that of 1 kilogram of a reference gas (IPCC 2014). The reference gas used is CO_2; therefore, GWP-weighted emissions are measured in metric tons of CO_2 equivalent (MT CO_2e).

The current version of California Emissions Estimator Model (CalEEMod) (Version 2022.1) assumes that the GWP for CH_4 is 25 (so emissions of 1 MT of CH_4 are equivalent to emissions of 25 MT of CO_2), and the GWP for N_2O is 298, based on the IPCC Fourth Assessment Report (IPCC 2007). The GWP values identified in CalEEMod were applied to the Project.

4.8.1.4 Greenhouse Gas Inventories

Global Inventory

Anthropogenic GHG emissions worldwide in 2020 (the most recent year for which data is available) totaled approximately 49,800 MMT CO_2e, excluding land use change and forestry (PBL 2022). The five largest emitting countries and the European Union (EU-27), together account for about 60 percent of total global GHG emissions: China (27 percent), the United States (12 percent), the European Union (about 7 percent), India (7 percent), the Russian Federation (4.5 percent) and Japan (2.4 percent). These countries also have the highest CO2 emission levels (PBL 2022).

Per the EPA Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2022, total United States GHG emissions were approximately 6,343 MMT CO_2e in 2022 (EPA 2024). Total U.S. emissions have decreased by 3.1 percent from 1990 to 2022, down from a high of 15.2 percent above 1990 levels in 2007. Emissions increased from 2021 to 2022 by 0.2 percent (14.4 MMT CO_2e). Net emissions (i.e., including sinks) were 5,489.3 MMT CO_2e in 2022. Overall, net emissions increased 1.3 percent from 2021 to 2022 and decreased 16.7 percent from 2005 levels. From 2021 to 2022, the increase in total GHG emissions was driven largely by an increase in CO_2 emissions from fossil fuel combustion across most end-use sectors due, in part, to increased energy use from the continued rebound of economic activity after the height of the COVID-19 pandemic. The CO_2 emissions from fossil fuel combustion increased by 1.0 percent from 2021 to 2022 and were 1.1 percent below emissions in 1990. CO_2

emissions from natural gas use increased by 5.2 percent (84.80 MMT CO_2e) from 2021, and CO_2 emissions from coal consumption decreased by 6.1 percent (58.6 MMT CO_2e) from 2021 to 2022 (EPA 2024).

State Inventory

According to California's 2000–2023 GHG emissions inventory (2025 edition), California emitted 360.4 MMT CO_2e in 2023, including emissions resulting from out-of-state electrical generation (CARB 2025b). The sources of GHG emissions in California include transportation, industrial uses, electric power production from both in-state and out-of-state sources, commercial and residential uses, agriculture, high-GWP substances, and recycling and waste. The California GHG emission source categories and their relative contributions in 2023 are presented in Table 4.8-1.

Table 4.8-1. Greenhouse Gas Emissions Sources in California

Source Category	Annual GHG Emissions (MMT CO_2e)	Percent of Total[a]
Transportation	133.7	37 percent
Industrial	66.9	19 percent
Electric power	57.2	16 percent
Commercial and Residential	43.3	12 percent
Agriculture	29.2	8 percent
High global-warming potential substances	21.4	6 percent
Recycling and waste	8.6	2 percent
Total	**360.4**	**100 percent**

Source: CARB 2025b.
Notes: GHG = greenhouse gas; MMT CO_2e = million metric tons of carbon dioxide equivalent.
[a] Percentage of total has been rounded, and total may not sum due to rounding.

In 2023, emissions from statewide emitting activities were 360.4 MMT CO_2e, 10.7MMT CO_2e (2.9 percent) lower than 2022 levels. Since the peak level in 2004 of 487 MMT, California's GHG emissions have generally followed a decreasing trend with an approximately 26 percent decrease from 2004. In 2014, statewide GHG emissions dropped below the 2020 GHG Limit of 431 MMT CO_2e and have remained below the Limit since that time (CARB 2025b).

Local Inventory

The City of Costa Mesa is in the process of developing a Climate Action and Adaptation Plan (CAAP). A status update was presented to the City Council and the public on February 3, 2026, that included a preliminary draft inventory of GHG emissions for the baseline year of 2023 (City of Costa Mesa 2026). In 2023, on-road transportation is estimated to represent the largest source of GHG emissions in the City's GHG inventory (approximately 63 percent) with building energy the second largest (approximately 31 percent). The solid waste, water and wastewater, and off-road equipment sectors represent the remaining 6 percent. The forthcoming Final CAAP will provide refined inventory estimates.

4.8.1.5 Potential Effects of Climate Change

The 2009 CEQA Statement of Reasons for Regulatory Action in Implementing SB 97, explained that "[S]ome comments submitted to OPR during its public workshops indicated that the [CEQA] Guidelines should be addressed

to 'Climate Change' rather than just the effects of GHG emissions. The focus in the Guidelines on GHG emissions is appropriate" (CNRA 2009). Nevertheless, this section provides an overview of the consequences of GHG emissions.

In California, climate change impacts have the potential to affect sea-level rise, agriculture, snowpack and water supply, forestry, wildfire risk, public health, frequency of severe weather events, and electricity demand and supply. The primary effect of global climate change has been a rise in average global tropospheric temperature. Reflecting the long-term warming trend since pre-industrial times, observed global mean surface temperature for the decade 2006–2015 was 0.87°C (likely between 0.75°C and 0.99°C) higher than the average over the 1850–1900 period (IPCC 2023). Scientific modeling predicts that continued emissions of GHGs at or above current rates would induce more extreme climate changes during the twenty-first century than were observed during the twentieth century. Human activities are estimated to have caused approximately 1.0°C (1.8 degrees Fahrenheit (°F)) of global warming above pre-industrial levels, with a likely range of 0.8°C to 1.2°C (1.4°F to 2.2°F) (IPCC 2018). Global warming is likely to reach 1.5°C (2.7°F) between 2030 and 2052 if it continues to increase at the current rate (IPCC 2023).

Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting California. The Office of Environmental Health Hazard Assessment identified various indicators of climate change in California, which are scientifically-based measurements that track trends in various aspects of climate change. Many indicators reveal discernable evidence that climate change is occurring in California and is having significant, measurable impacts in the State. Changes in the State's climate have been observed including an increase in annual average air temperature, more frequent extreme heat events, more extreme drought, a decline in winter chill, an increase in cooling degree days and a decrease in heating degree days, and an increase in variability of statewide precipitation (OEHHA 2022).

Warming temperatures and changing precipitation patterns have altered California's physical systems – the ocean, lakes, rivers and snowpack – upon which the State depends. Winter snowpack and spring snowmelt runoff from the Sierra Nevada and southern Cascade Mountains provide approximately one-third of the State's annual water supply. Impacts of climate on physical systems have been observed such as high variability of snow-water content (i.e., amount of water stored in snowpack), decrease in snowmelt runoff, glacier change (loss in area), rise in sea levels, increase in average lake water temperature and coastal ocean temperature, and a decrease in dissolved oxygen in coastal waters (OEHHA 2018).

Impacts of climate change on biological systems, including humans, wildlife, and vegetation, have also been observed including climate change impacts on terrestrial, marine, and freshwater ecosystems. As with global observations, species responses include those consistent with warming: elevational or latitudinal shifts in range, changes in the timing of key plant and animal life cycle events, and changes in the abundance of species and in community composition. Humans are better able to adapt to a changing climate than plants and animals in natural ecosystems. Nevertheless, climate change poses a threat to public health as warming temperatures and changes in precipitation can affect vector-borne pathogen transmission and disease patterns in California as well as the variability of heat-related deaths and illnesses. In addition, since 1950, the area burned by wildfires each year has been increasing.

The California Natural Resources Agency (CNRA) has released four California Climate Change Assessments (2006, 2009, 2012, and 2018), which have addressed the following: acceleration of warming across the State, more intense and frequent heat waves, greater riverine flows, accelerating sea level rise, more intense and frequent drought, more severe and frequent wildfires, more severe storms and extreme weather events, shrinking snowpack

and less overall precipitation, and ocean acidification, hypoxia, and warming. To address local and regional governments need for information to support action in their communities, the Fourth Assessment (2018) includes reports for nine regions of the State, including the Los Angeles Region, which includes Orange County, where the Project is located. Key projected climate changes for the Los Angeles Region include the following (CNRA 2018):

- Continued future warming over the Los Angeles region. Across the region, average maximum temperatures are projected to increase around 4°F to 5°F by the mid-century, and 5°F to 8°F by the late-century.
- Extreme temperatures are also expected to increase. The hottest day of the year may be up to 10°F warmer for many locations across the Los Angeles region by the late-century under certain model scenarios. The number of extremely hot days is also expected to increase across the region.
- Despite small changes in average precipitation, dry and wet extremes are both expected to increase. By the late 21st century, the wettest day of the year is expected to increase across most of the Los Angeles region, with some locations experiencing 25 percent to 30 percent increases under certain model scenarios. Increased frequency and severity of atmospheric river events are also projected to occur for this region. Sea levels are projected to continue to rise in the future, but there is a large range based on emissions scenario and uncertainty in feedbacks in the climate system. Roughly 1 feet to 2 feet of sea level rise is projected by the mid-century, and the most extreme projections lead to 8 feet to 10 feet of sea level rise by the end of the century. Projections indicate that wildfire may increase over southern California, but there remains uncertainty in quantifying future changes of burned area over the Los Angeles region.

4.8.2 Regulatory Requirements

4.8.2.1 Federal

As illustrated below, the federal rubric for GHG emissions is in a state of flux given the priorities of President Donald J. Trump's administration, which differ from those of prior administrations. As a result, as of the publication date of this report, this is uncertainty regarding the changing landscape of federal laws and policies associated with GHG emissions. This uncertainty at the federal level also results in uncertainties at the state level, as discussed further in Section 4.8.2.2 below.

Massachusetts v. U.S. Environmental Protection Agency

On April 2, 2007, in *Massachusetts v. U.S. Environmental Protection Agency*, the U.S. Supreme Court ruled that CO_2 was a pollutant and directed the EPA administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the EPA administrator is required to follow the language of Section 202(a) of the Clean Air Act. On December 7, 2009, the administrator signed a final rule with two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- The elevated concentrations of GHGs—CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations. This is referred to as the "endangerment finding."
- The combined emissions of GHGs—CO_2, CH_4, N_2O, and hydrofluorocarbons—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is referred to as the "cause or contribute finding."

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act.

Notably, President Trump's Executive Order (EO) 14154 issued on January 10, 2025, called for EPA to consider the legality and applicability of the 2009 Endangerment Finding for Greenhouse Gases, which may limit the ability and scope of the State of California to regulate based upon GHG emissions. On August 1, 2025, the EPA proposed rules to implement this Executive Order (OFR 2025). On February 12, 2026, On February 12, 2026, EPA finalized its rescission of the 2009 Greenhouse Gas Endangerment Finding, which served as a prerequisite for regulating emissions from new motor vehicles and new motor vehicle engines (EPA 2026).

Energy Independence and Security Act

The Energy Independence and Security Act of 2007 (EISA) (Public Law 110-140), among other key measures, would do the following in aiding the reduction of national GHG emissions:

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020, and direct National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy-efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

President Trump's EO 14154 may also impact the EISA because it declared a national energy emergency and directed federal agencies to expedite the permitting and production of domestic energy resources. This emphasis on increasing fossil fuel production and reducing regulatory barriers may undermine the EISA's objectives of enhancing energy efficiency and promoting renewable energy sources.

Federal Vehicle Standards

In response to the *Massachusetts v. EPA* U.S. Supreme Court ruling discussed above, the Bush Administration issued EO 13432 in 2007 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. Accordingly, beginning in 2009 and as periodically updated with the passage of time, the EPA and NHTSA adopted numerous rules establishing fuel economy standards (miles per gallon) and emission standards for cars and light-duty tracks for various model years.

As discussed above, however, the EPA's proposed rule (see Vol. 90 Federal Register, No. 146, 36288-36365) published in August 2025 would repeal all GHG emission standards for light-duty, medium-duty, and heavy-duty vehicles and engines, if adopted as proposed. Further, NHTSA published an interpretive rule, titled *Resetting the Corporate Average Fuel Economy Program* (see Vol. 90 Federal Register, No. 111, 24518-24527) in June 2025 setting forth its position that NHTSA cannot consider electric vehicles when setting fuel economy standards. Future rulemaking from NHTSA that establishes looser fuel economy standards for light-duty, medium-duty and heavy-duty vehicles is expected in the coming months. President Trump's Transportation Secretary also has frozen funding to states for electric vehicle (EV) charging.

The Inflation Reduction Act of 2022

The Inflation Reduction Act was signed into law by President Biden in August 2022. The bill includes specific investment in energy and climate reform and is projected to reduce GHG emissions within the United States by 40 percent as compared to 2005 levels by 2030. The Act allocates funds to boost renewable energy infrastructure (e.g., solar panels and wind turbines), includes tax credits for the purchase of electric vehicles, and includes measures that will make homes more energy efficient.

The Inflation Reduction Act authorized the EPA to implement the Greenhouse Gas Reduction Fund program, which is a historic, $27 billion investment to mobilize financing and private capital to combat the climate crisis and ensure American economic competitiveness. The Greenhouse Gas Reduction Fund will be designed to achieve the following program objectives: reduce GHG emissions and other air pollutants; deliver the benefits of GHG- and air-pollution-reducing projects to American communities, particularly low-income and disadvantaged communities; and mobilize financing and private capital to stimulate additional deployment of GHG and air pollution reducing projects (EPA 2025c).

The Inflation Reduction Act confirms that reduction of GHGs is a core goal of the Clean Air Act and that the funding provided should allow the EPA to increase the scope of its Clean Air Act rulemakings. The Act also confirms applicability of the Inflation Reduction Act to GHGs in three specific areas: (1) California's ability to regulate GHG emissions from vehicles; (2) the EPA's authority to regulate CH_4 emissions from oil and gas facilities; and (3) the EPA's authority to regulate GHG emissions from power plants.

On July 4, 2025, President Trump enacted the One Big Beautiful Bill Act (OBBBA), which reduces the scope of the IRA and accelerates the phaseout of multiple IRA clean energy incentives, such as residential energy and electric vehicle credits. The OBBBA also rescinds substantial federal funding for clean energy, environmental justice, and climate resilience programs, including the Greenhouse Gas Reduction Fund. Furthermore, on July 7, 2025, President Trump signed the EO 14315, which reinforces the changes made under the OBBBA, further hindering clean energy programs by eliminating taxpayer subsidies for wind, solar, and other clean energy sources.

4.8.2.2 State

The Statewide GHG emissions regulatory framework is summarized as follows by category: State climate change targets, building energy, renewable energy and energy procurement, mobile sources, solid waste, water, and other State regulations and goals. The following text describes executive orders (EOs), assembly bills (ABs), senate bills (SBs), and other regulations and plans that would directly or indirectly reduce GHG emissions. The State's adoption and implementation of various legislation demonstrates California's leadership in addressing the critical challenge of addressing climate change. Of importance, the proposed Project and/or users of the proposed Project would be required to comply with the various regulatory measures that would reduce GHG emissions, which would reduce the proposed Project's contribution to cumulative GHG emissions and associated climate change impacts.

State Climate Change Targets

The State has taken a number of actions to address climate change. These include EOs, legislation, and CARB plans and requirements. These are summarized as follows.

EO S-3-05

EO S-3-05 (June 2005) established California's GHG emissions reduction targets and laid out responsibilities among the State agencies for implementing the EO and for reporting on progress toward the targets. This EO established the following targets:

- By 2010, reduce GHG emissions to 2000 levels
- By 2020, reduce GHG emissions to 1990 levels
- By 2050, reduce GHG emissions to 80 percent below 1990 levels

EO S-3-05 also directed the California Environmental Protection Agency to report biannually on progress made toward meeting the GHG targets and the impacts to California due to global warming, including impacts to water supply, public health, agriculture, the coastline, and forestry.

AB 32

In furtherance of the goals established in EO S-3-05, the Legislature enacted AB 32 (Núñez and Pavley). The bill is referred to as the California Global Warming Solutions Act of 2006 (California Health and Safety Code Sections 38500–38599). AB 32 provided initial direction on creating a comprehensive multiyear program to limit California's GHG emissions at 1990 levels by 2020 and initiate the transformations required to achieve the State's long-range climate objectives.

EO B-30-15

EO B-30-15 (April 2015) identified an interim GHG-reduction target in support of targets previously identified under S-3-05 and AB 32. EO B-30-15 set an interim target goal of reducing GHG emissions to 40 percent below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80 percent below 1990 levels by 2050, as set forth in S-3-05. To facilitate achieving this goal, EO B-30-15 called for CARB to update the Climate Change Scoping Plan (Scoping Plan) to express the 2030 target in terms of MMT CO_2e. The EO also called for state agencies to continue to develop and implement GHG emission-reduction programs in support of the reduction targets.

SB 32 and AB 197

SB 32 and AB 197 (enacted in 2016) are companion bills. SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that Statewide GHG emissions are reduced to 40 percent below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, to provide ongoing oversight over implementation of the state's climate policies. AB 197 also added two members of the Legislature to the Board as nonvoting members; requires CARB to make available and update (at least annually via its website) emissions data for GHGs, criteria air pollutants, and TACs from reporting facilities; and requires CARB to identify specific information for GHG emissions-reduction measures when updating the Scoping Plan.

EO B-55-18

EO B-55-18 (September 2018) establishes a Statewide policy for California to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net-negative emissions thereafter. The goal is an addition

to the existing Statewide targets of reducing the State's GHG emissions. CARB will work with relevant State agencies to ensure that future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal.

AB 1279

The Legislature enacted AB 1279, the California Climate Crisis Act, in September 2022. The bill declares the policy of the state to achieve net zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter. Additionally, the bill requires that by 2045, statewide anthropogenic GHG emissions be reduced to at least 85 percent below 1990 levels.

Although AB 1279 establishes an overall policy to achieve net zero greenhouse gas emissions as soon as possible, but no later than 2045, recognizing the need to implement CO_2 removal and carbon capture, utilization and storage technologies, the Legislature established a specific target of 85 percent below 1990 levels by 2045 for anthropogenic GHG emissions. Therefore, the net zero target does not directly apply to development projects, but the 2045 target of 85 percent below 1990 levels represents the reductions required to contribute to accomplishing the State's overall net zero policy.

CARB's Climate Change Scoping Plan

One specific requirement of AB 32 is for CARB to prepare a "scoping plan" for achieving the maximum technologically feasible and cost-effective GHG emission reductions by 2020 (Health and Safety Code, Section 38561(a)), and to update the plan at least once every 5 years. In 2008, CARB approved the first scoping plan. The *Climate Change Scoping Plan: A Framework for Change* (*Scoping Plan*) included a mix of recommended strategies that combined direct regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs calculated to meet the 2020 Statewide GHG emission limit and initiate the transformations needed to achieve the State's long-range climate objectives (CARB 2008).

In 2014, CARB approved the first update to the Scoping Plan. The First Update to the Climate Change Scoping Plan: Building on the Framework (First Update) defined the state's GHG emission reduction priorities for the next 5 years and laid the groundwork to start the transition to the post-2020 goals set forth in EO S-3-05 and EO B-16-2012 (CARB 2014). The First Update concluded that California was on track to meet the 2020 target but recommended that a 2030 mid-term GHG reduction target be established to ensure a continuum of action to reduce emissions. The First Update recommended a mix of technologies in key economic sectors to reduce emissions through 2050 including energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies.

In December 2017, CARB released the 2017 Climate Change Scoping Plan Update (Second Update) for public review and comment (CARB 2017a). The Second Update builds on the successful framework established in the initial Scoping Plan and First Update, while identifying new technologically feasible and cost-effective strategies that will serve as the framework to achieve the 2030 GHG target and define the state's climate change priorities to 2030 and beyond. The strategies' known commitments include implementing renewable energy and energy efficiency (including the mandates of SB 350), increased stringency of the Low Carbon Fuel Standard, measures identified in the Mobile Source and Freight Strategies, measures identified in the proposed Short-Lived Climate Pollutant (SLCP) Plan, and increased stringency of SB 375 targets. To fill the gap in additional reductions needed to achieve the 2030 target, the Second Update recommends continuing the Cap-and-Trade Program and a measure to reduce GHGs from refineries by 20 percent. The Second Update was approved by CARB's Governing Board on December 14, 2017.

CARB adopted the 2022 Scoping Plan Update in December 2022. The 2022 Scoping Plan outlines the state's plan to reach carbon neutrality by 2045 or earlier, while also assessing the progress the state is making toward achieving GHG reduction goals by 2030. Per the Legislative Analyst's Office, the 2022 Scoping Plan identifies a more aggressive 2030 GHG goal. As it relates to the 2030 goal, perhaps the most significant change in the 2022 plan (as compared to previous Scoping Plans) is that it identifies a new GHG target of 48 percent below the 1990 level, compared to the current statutory goal of 40 percent below. Current law requires the state to reduce GHG emissions by at least 40 percent below the 1990 level by 2030 but does not specify an alternative goal. According to CARB, a focus on the lower target is needed to put the state on a path to meeting the newly established 2045 goal, consistent with the overall path to 2045 carbon neutrality. The carbon neutrality goal requires CARB to expand proposed actions from only the reduction of anthropogenic sources of GHG emissions to also include those that capture and store carbon (e.g., through natural and working lands, or mechanical technologies). The carbon reduction programs build on and accelerate those currently in place, including moving to zero-emission transportation; phasing out use of fossil gas use for heating homes and buildings; reducing chemical and refrigerants with high GWP; providing communities with sustainable options for walking, biking, and public transit; displacement of fossil-fuel fired electrical generation through use of renewable energy alternatives (e.g., solar arrays and wind turbines); and scaling up new options such as green hydrogen (CARB 2022).

The 2022 Scoping Plan Update also emphasizes that there is no realistic path to carbon neutrality without carbon removal and sequestration, and to achieve the state's carbon neutrality goal, carbon reduction programs must be supplemented by strategies to remove and sequester carbon. Strategies for carbon removal and sequestration include carbon capture and storage from anthropogenic point sources, where CO_2 is captured as it leaves a facility's smokestack and is injected into geologic formations or used in industrial materials (e.g., concrete); and carbon dioxide removal from ambient air, through mechanical (e.g., direct air capture with sequestration) or nature-based (e.g., management of natural and working lands) applications.

The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32, SB 32, and the EOs; it also establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. A project is considered to not conflict with the statutes and EOs if it would meet the general policies in reducing GHG emissions to facilitate the achievement of the state's goals and would not impede attainment of those goals.

Senate Bill 605 and Senate Bill 1383

SB 605 (2014) requires CARB to complete a comprehensive strategy to reduce emissions of SLCPs in the state (California Health and Safety Code Section 39730) and SB 1383 (2016) requires CARB to approve and implement that strategy by January 1, 2018 (California Public Resources Code Sections 42652–43654). SB 1383 also establishes specific targets for the reduction of SLCPs (40 percent below 2013 levels by 2030 for CH_4 and HFCs, and 50 percent below 2013 levels by 2030 for anthropogenic black carbon) and provides direction for reductions from dairy and livestock operations and landfills. Accordingly, and as mentioned above, CARB adopted its SLCP Reduction Strategy in March 2017 (CARB 2017b). The SLCP Reduction Strategy establishes a framework for the statewide reduction of emissions of black carbon, methane, and fluorinated gases (CARB 2017b).

AB 1757

AB 1757 (September 2022) requires the California Natural Resources Agency (CNRA) to determine a range of targets for natural carbon sequestration, and for nature-based climate solutions that reduce GHG emissions for

future years 2030, 2038, and 2045. These targets are to be determined by no later than January 1, 2025, and are established to support the state's goals to achieve carbon neutrality and foster climate adaptation and resilience.

Building Energy

Title 24, Part 6

Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically established Building Energy Efficiency Standards that are designed to ensure new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. These regulations are carefully scrutinized and analyzed for technological and economic feasibility (California Public Resources Code, Section 25402(d)) and cost effectiveness (California Public Resources Code, Sections 25402(b)(2) and (b)(3)). As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

The 2025 Title 24 standards build on prior code cycles by further advancing California's goals for building decarbonization, energy efficiency, and indoor air quality. The California Energy Commission (CEC) formally adopted the 2025 Energy Code (Title 24, Part 6) after a year-long rulemaking process, and the code will apply to all buildings with permit applications submitted on or after January 1, 2026. The 2025 code cycle will remain effective through at least 2031 due to the requirements of Assembly Bill 130 (AB 130), discussed below, which delays future state and local amendments. The California Building Standards Commission updated associated CALGreen provisions (Title 24, Part 11), with voluntary statewide requirements that local jurisdictions may choose to make mandatory.

The 2025 Energy Code focuses on several major areas for newly constructed residential, multifamily, and nonresidential buildings:

- **Accelerated Electrification and Heat Pump Adoption**. The 2025 standards strongly prioritize electric heat pump systems, tightening performance criteria for space conditioning and water heating and further discouraging the use of gas-fired systems.
- **Expanded Electric-Ready Requirements**. Electric-ready infrastructure is expanded beyond residential buildings to include commercial kitchens and additional nonresidential applications, positioning building owners for future all-electric operation.
- **Enhanced Solar PV and Battery Storage Readiness**. The code increases photovoltaic (PV) requirements for more building types and introduces battery storage readiness mandates, supporting grid resiliency and on-site clean energy generation.
- **Strengthened Ventilation and Indoor Air Quality Standards**. Multifamily buildings must meet more rigorous ventilation and filtration requirements to improve indoor air quality and occupant health.
- **New Requirements for Pools and Spas**. All new heating systems for pools and spas must utilize solar heating, heat pumps, or other low-emission systems, significantly reducing natural gas use and greenhouse gas emissions.

Title 24, Part 11

In addition to the CEC's efforts, 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 (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The 2022 CALGreen standards are the current applicable standards. For nonresidential projects, some of the key mandatory CALGreen 2022 standards involve requirements related to bicycle parking, designated parking for clean air vehicles, EV charging stations for passenger vehicles, medium heavy duty and heavy duty trucks , shade trees, water conserving plumbing fixtures and fittings, outdoor potable water use in landscaped areas, recycled water supply systems, construction waste management, excavated soil and land clearing debris, and commissioning (24 CCR, Part 11).

Title 20

Title 20 of the California Code of Regulations requires manufacturers of appliances to meet State and federal standards for energy and water efficiency. The CEC certifies an appliance based on a manufacturer's demonstration that the appliance meets the standards. CEC certifies an appliance based on a manufacturer's demonstration that the appliance meets the standards. New appliances regulated under Title 20 include refrigerators, refrigerator-freezers, and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwaters; clothes washers and dryers; cooking products; electric motors; low voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems.

SB 1

SB 1 (2006) established a $3 billion rebate program to support the goal of the state to install rooftop solar energy systems with a generation capacity of 3,000 megawatts through 2016. SB 1 added sections to the California Public Resources Code, including Chapter 8.8 (California Solar Initiative), that require building projects applying for ratepayer-funded incentives for PV systems to meet minimum energy-efficiency levels and performance requirements (California Public Resources Code Sections 25780–25784). Section 25780 established that it is a goal of the state to establish a self-sufficient solar industry. The goals included establishing solar energy systems as a viable mainstream option for both homes and businesses within 10 years of adoption and placing solar energy systems on 50 percent of new homes within 13 years of adoption. SB 1, also termed "Go Solar California," was previously titled "Million Solar Roofs."

AB 1470

This bill established the Solar Water Heating and Efficiency Act of 2007 (California Public Utilities Code Sections 2851–2869). The bill makes findings and declarations of the Legislature relating to the promotion of solar water heating systems and other technologies that reduce natural gas demand.

AB 1109

Enacted in 2007, AB 1109 required CEC to adopt minimum energy efficiency standards for general-purpose lighting to reduce electricity consumption by 50 percent for indoor residential lighting and by 25 percent for indoor commercial lighting (California Public Resources Code Section 25402.5.4).

AB 130

Signed into law into law on June 2025, AB 130 established a new statutory exemption for qualifying urban infill housing projects. AB 130 also imposed new restrictions on how local governments may adopt building code amendments that are more stringent than state standards. Historically, cities and counties could enact more restrictive local building standards if they made findings demonstrating local climatic, geological, or topographical conditions and filed those amendments with the State Building Standards Commission. Under AB 130, from October 1, 2025, through June 1, 2031, local jurisdictions are prohibited from adopting more restrictive residential building standards, including green building standards unless the amendments also meet at least one of the following conditions:

- The amendments are substantially equivalent to local modifications that were already filed and in effect as of September 30, 2025;
- The California Building Standards Commission determines the amendments are necessary to protect health and safety;
- The amendments pertain to home-hardening requirements; or
- The amendments are needed to implement a local code update that aligns with a general plan adopted on or before June 10, 2025.

Renewable Energy and Energy Procurement

SB 1078, SB 1368, EO-14-08, EO-S-21-09, SBX1-2, SB 350, SB 100, SB 1020

SB 1078 (Sher) (September 2002) established the Renewable Portfolio Standard (RPS) program, which required an annual increase in renewable generation by the utilities equivalent to at least 1 percent of sales, with an aggregate goal of 20 percent by 2017. SB 1368 (2006), required CEC to develop and adopt regulations for GHG emission performance standards for the long-term procurement of electricity by local publicly owned utilities (California Public Utilities Code Section 8340–8341). These standards must be consistent with the standards adopted by the California Public Utilities Commission (CPUC). EO S-14-08 (November 2008) required that all retail suppliers of electricity in California serve 33 percent of their load with renewable energy by 2020. EO S-21-09 (2009) directed CARB to adopt a regulation consistent with the goal of EO S 14-08 by July 31, 2010. CARB was further directed to work with CPUC and CEC to ensure that the regulation builds upon the RPS program and was applicable to investor-owned utilities, publicly owned utilities, direct access providers, and community choice providers. SB X1 2 expanded the RPS by establishing a renewable energy target of 20 percent of the total electricity sold to retail customers in California per year by December 31, 2013, and 33 percent by December 31, 2020, and in subsequent years. SB 350 (October 2015) further expanded the RPS by establishing a goal of 50 percent of the total electricity sold to retail customers in California per year by December 31, 2030. SB 100 (2018) increased the standards set forth in SB 350 establishing that 44 percent of the total electricity sold to retail customers in California per year by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 states that it is the policy of the State that eligible renewable energy resources and zero-carbon resources supply 100 percent of the retail sales of electricity to California. SB 1020 (September 2022) revises the standards from SB 100, requiring the following percentage of retail sales of electricity to California end-use customers to come from eligible renewable energy resources and zero-carbon resources: 90 percent by December 31, 2035; 95 percent by December 31, 2040; and 100 percent by December 31, 2045.

Mobile Sources

State Vehicle Standards (AB1493 and EO B-16-12)

Since the early 2000s, California has advanced a robust rubric of complementary legislation, regulation and policy to achieve the reduction of GHG emissions from mobile sources. Key components of that rubric follow:

- AB 1493's (2002) direction to CARB to establish GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by CARB to be vehicles primarily used for noncommercial personal transportation in the state. CARB has adopted implementing standards for model years 2009 and beyond.
- CARB's adoption of the Advanced Clean Cars I and II regulations (2012 and 2022, respectively), which combined the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package of regulations: the low-emission vehicle regulation for criteria air pollutant and GHG emissions and a technology-forcing regulation for zero-emission vehicles that contributes to both types of emission reductions.
- CARB's adoption of the Advanced Clean Trucks regulation (2022), which is designed to accelerate the market for zero-emission vehicles in the medium- and heavy-duty truck sector through a manufacturer sales requirement and a reporting requirement.

In June 2025, President Trump signed multiple Congressional Review Act resolutions that rescinded the preemption waivers previously granted to California by the EPA for both the Advanced Clean Cars and Advanced Clean Trucks regulations, among other California regulations. The revocation of the preemption waivers undermines California's ability to set its own vehicle emission standards for light-duty, medium-duty and heavy-duty vehicles.

The State of California, in concert with ten other states, filed a federal lawsuit on June 12, 2025 challenging the legal basis for the revocation of the preemption waivers (see *State of California et al. v. United States of America* [Case 3:25-cv-04966]). Governor Newsom simultaneously issued Executive Order N-27-25, which reaffirmed the state's commitment to accelerate the deployment of zero-emission technologies and directed CARB to develop an alternative regulatory framework to achieve that objective, with the alternative serving as a backstop in the event that pending litigation is not resolved in California's favor. The ongoing tension and conflicts between the federal and state regulatory agendas has created uncertainty regarding California's ability to lawfully and effectively pursue its GHG emission reduction objectives in the vehicle sector.

Low Carbon Fuel Standard ES S-1-07

EO S-1-07 (January 2007, implementing regulation adopted in April 2009) sets a declining low carbon fuel standard (LCFS) for GHG emissions measured in CO_2e grams per unit of fuel energy sold in California. The initial target of the LCFS was to reduce the carbon intensity of California passenger vehicle fuels by at least 10 percent by 2020 (17 CCR 95480 et seq.). The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel—including extraction/feedstock production, processing, transportation, and final consumption—per unit of energy delivered. In September 2018, CARB approved amendments for the LCFS that require a 20 percent reduction in carbon intensity by year 2030.

SB 375

SB 375 (Steinberg) (September 2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 requires CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035 and to update those targets every 8 years. SB 375 requires

the State's 18 regional metropolitan planning organizations (MPOs) to prepare a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plan (RTP) that will achieve the GHG reduction targets set by CARB. If an MPO is unable to devise an SCS to achieve the GHG-reduction target, the MPO must prepare an alternative planning strategy demonstrating how the GHG-reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

An SCS does not: (1) regulate the use of land; (2) supersede the land use authority of cities and counties; or (3) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it (California Government Code Section 65080[b][2][K]). Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

Water

SB X7-7

SB X7-7, or the Water Conservation Act of 2009, required that all water suppliers increase their water use efficiency with an overall goal of reducing per capita urban water use by 20 percent by December 31, 2020. Each urban water supplier was required to develop water use targets to meet this goal.

EO B-29-15

In response to the ongoing drought in California, EO B-29-15 (April 2015) set a goal of achieving a Statewide reduction in potable urban water usage of 25 percent relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have become permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the State. In response to EO B-29-15, the California Department of Water Resources has 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.

EO N-10-21

In response to a state of emergency due to severe drought conditions, EO N-10-21 (July 2021) called on all Californians to voluntarily reduce their water use by 15 percent from their 2020 levels. Actions suggested in EO N-10-21 include reducing landscape irrigation, running dishwashers and washing machines only when full, finding and fixing leaks, installing water-efficient showerheads, taking shorter showers, using a shut-off nozzle on hoses, and taking cars to commercial car washes that use recycled water.

Solid Waste

AB 939, AB 341, AB 1826, and SB 1383

In 1989, AB 939, known as the Integrated Waste Management Act (California Public Resources Code, Sections 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board (replaced in 2010 by the California Department of Resources Recycling and Recovery [CalRecycle]), which oversees a disposal reporting system. AB 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all

solid waste through source reduction, recycling, and composting activities of 25 percent by 1995 and 50 percent by the year 2000. AB 341 (Chapter 476, Statutes of 2011) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the State that not less than 75 percent of solid waste generated be source-reduced, recycled, or composted by the year 2020, and annually thereafter. AB 1826 (Chapter 727, Statutes of 2014, effective 2016) requires businesses to recycle their organic waste (i.e., food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste) depending on the amount of waste they generate per week. SB 1383 (Chapter 395, Statutes of 2016) establishes targets to achieve a 50 percent reduction in the level of the Statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025. CalRecycle was granted the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that not less than 20 percent of currently disposed edible food is recovered for human consumption by 2025 (CalRecycle 2019). California is making significant progress toward its SB 1383 goal to recover 20 percent of currently disposed edible food by 2025, with reports suggesting the state is on track.

Other State Actions

SB 97

SB 97 (2007) directed the Governor's Office of Planning and Research and CNRA to develop guidelines under CEQA for the mitigation of GHG emissions. CNRA adopted the CEQA Guidelines amendments in December 2009, which became effective in March 2010.

Under the amended CEQA Guidelines, a lead agency has the discretion to determine whether to use a quantitative or qualitative analysis or apply performance standards to determine the significance of GHG emissions resulting from a particular project (14 CCR 15064.4[a]). The CEQA Guidelines require a lead agency to consider the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]). The CEQA Guidelines also allow a lead agency to consider feasible means of mitigating the significant effects of GHG emissions, including reductions in emissions through the implementation of project features or off-site measures (14 CCR 15126.4[c]). The adopted amendments do not establish a GHG emission threshold, instead allowing a lead agency to develop, adopt, and apply its own thresholds of significance or those developed by other agencies or experts. CNRA also acknowledged that a lead agency could consider compliance with regulations or requirements implementing AB 32 in determining the significance of a project's GHG emissions (CNRA 2009).

With respect to GHG emissions, CEQA Guidelines Section 15064.4(a), as subsequently amended in 2018, states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. The CEQA Guidelines now note that an agency "shall have discretion to determine, in the context of a particular project, whether to: (1) Quantify greenhouse gas emissions resulting from a project; and/or (2) Rely on a qualitative analysis or performance based standards" (14 CCR 15064.4[a]). Section 15064.4(b) states that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment: (1) the extent to which a project may increase or reduce GHG emissions as compared to the existing environmental setting; (2) whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]).

EO-S-13-08

EO-S-13-08 (November 2008) is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. Therefore, the EO directs state agencies to take specified actions to assess and plan for such impacts. The final 2009 California Climate Adaptation Strategy report was issued in December 2009, and an update, Safeguarding California: Reducing Climate Risk, followed in July 2014. To assess the state's vulnerability, the report summarizes key climate change impacts to the state for the following areas: agriculture, biodiversity and habitat, emergency management, energy, forestry, ocean and coastal ecosystems and resources, public health, transportation, and water. Issuance of Safeguarding California: Implementation Action Plans followed in March 2016. In January 2018, CNRA released the Safeguarding California Plan: 2018 Update, which communicates current and needed actions that state government should take to build climate change resiliency.

4.8.2.3 Local

South Coast Air Quality Management District

The Project area is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD). Air districts typically act in an advisory capacity to local governments in establishing the framework for environmental review of air pollution impacts under CEQA. This may include recommendations regarding significance thresholds, analytical tools to estimate emissions and assess impacts, and mitigations for potentially significant impacts. Although air districts will also address some of these issues on a project-specific basis as responsible agencies, they may provide general guidance to local governments on these issues (SCAQMD 2008). As discussed in Section 4.8.3, Thresholds of Significance, below, the SCAQMD has recommended numeric CEQA significance thresholds for GHG emissions for lead agencies to use in assessing GHG impacts of residential and commercial development projects; however, these thresholds have not been adopted. Notably, the use of the SCAQMD's thresholds has been upheld in recent court filings (see *Upland Community First v. City of Upland* (2024) 105 Cal.App.5th 1).

Southern California Association of Governments

As noted above, California's 18 MPOs have been tasked with creating SCSs in an effort to reduce the region's vehicle miles traveled (VMT) in order to help meet AB 32 targets through integrated transportation, land use, housing, and environmental planning. Pursuant to SB 375, CARB set per-capita GHG emissions reduction targets from passenger vehicles for each of the State's 18 MPOs. For the Southern California Association of Governments (SCAG), the State's initial mandated reductions were set at 8 percent by 2020 and 13 percent by 2035. In March 2018, CARB updated the SB 375 targets for SCAG to require 8 percent reduction by 2020 and a 19 percent reduction by 2035 in per-capita passenger vehicle GHG emissions.

Pursuant to Government Code Section 65080(b)(2)(B), the SCS must "set forth forecasted development pattern for the region which when integrated with the transportation network, and other transportation measures and policies, will reduce the GHG emissions from automobiles and light trucks to achieve the GHG reduction targets." To that end, SCAG has developed Connect SoCal, the 2024–2050 RTP/SCS, which complies with CARB's updated emissions reduction targets and meets the requirements of SB 375 by achieving per-capita GHG emission reductions relative to 2005 of 8 percent by 2020 and 19 percent by 2035 (SCAG 2024). The 2024–2050 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals, and charts a path toward a more mobile, sustainable and prosperous region by making connections between transportation networks, between planning strategies, and between the people whose collaboration can improve the quality of life for Southern Californians. Connect SoCal embodies a collective vision

for the region's future and is developed with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The 2024-2050 RTP/SCS states goals (1) Mobility: Build and maintain a robust transportation network; (2) Communities: Develop, connect and sustain communities that are livable and thriving; (3) Environment: Create a healthy region for the people of today and tomorrow; and (4) Economy: support a sustainable, efficient, and productive regional economic environment that provides opportunities for all residents.

Amendment No. 1, approved on September 5, 2024, updates the original 2024–2050 RTP/SCS to incorporate time-sensitive project modifications and ensure consistency with the 2025 Federal Transportation Improvement Program. This amendment maintains compliance with state and federal planning, air quality, and environmental requirements while allowing critical transportation projects to advance on schedule.

The RTP/SCSs do not require that local general plans, specific plans, or zoning be consistent with it but provide incentives for consistency for governments and developers.

City of Costa Mesa Sustainability Initiatives

The City of Costa Mesa implements a comprehensive set of sustainability initiatives aimed at reducing greenhouse gas emissions, improving resource efficiency, and enhancing long-term climate resilience. These efforts are coordinated across City departments and center on environmental stewardship, public health, equity, and community resilience. Key programs include development of the Climate Action and Adaptation Plan (CAAP), which serves as a community-driven framework to lower emissions and prepare for climate impacts; citywide energy efficiency measures, such as replacing 6,150 high-pressure sodium streetlights with energy-efficient LED fixtures to reduce energy use and operating costs; and support for clean transportation, including installation of the City's first electric-vehicle charging stations at City Hall and advancement of zero-emission and low-carbon mobility options. The City also administers programs to expand recycling and organic waste diversion, promote water conservation and green infrastructure, and enhance urban ecology through tree canopy expansion, urban food systems, and environmental education. In addition, Costa Mesa integrates sustainability into economic development by encouraging green jobs, workforce training, and support for environmentally responsible local businesses, all of which contribute to reducing the community's carbon footprint and advancing local climate action goals.

City of Costa Mesa Climate Action and Adaptation Plan (CAAP)

The City of Costa Mesa is actively developing its first CAAP, a community-driven roadmap designed to reduce GHG emissions, prepare for climate impacts, and support a healthier and more resilient city.

City of Costa Mesa 2015-2035 General Plan

The following goals and policies from the City of Costa Mesa's 2015-2035 General Plan may be applicable to the proposed Project specifically regarding GHG emissions or having the co-benefit of reducing GHG emissions (City of Costa Mesa 2016).

Conservation Element

Goal CON-2: **Conserved Natural Resources through Environmental Sustainability.** Reduce the City's carbon footprints and manage resources wisely to meet the needs of a growing population and economy. Base community planning decisions on sustainable practices that reduce environmental

pollutants, conserve resources, and minimize waste. Encourage the design of energy-efficient buildings, use renewable energy, and promote alternative methods of transportation.

Policy CON-2.A.2: Consult with regional agencies and utility companies to pursue energy efficiency goals. Expand renewable energy strategies to reach zero net energy for both residential and commercial new construction.

Policy CON-2.A.4: Encourage new development to take advantage of Costa Mesa's optimal climate in the warming and cooling of buildings, including use of heating, ventilation and air conditioning (HVAC) systems.

Policy CON-2.A.5: Promote environmentally sustainable development principles for buildings, master planned communities, neighborhoods, and infrastructure.

Policy CON-2.A.6: Encourage construction and building development practices that reduce resource expenditures throughout the lifecycle of a structure.

Policy CON-2.A.7: Continue to require all City facilities and services to incorporate energy and resource conservation standards and practices and require that new municipal facilities be built within the LEED Gold standards or equivalent.

Policy CON-2.A.8: Continue City green initiatives in purchases of equipment, and agreements that favor sustainable products and practices.

Policy CON-2.A.9: Encourage waste management programs that promote waste reduction and recycling to minimize materials sent to landfills. Maintain robust programs encourage residents and businesses to reduce, reuse, recycle, and compost.

Policy CON-2.A.10: Support waste management practices that provide recycling programs. Promote organic recycling, landfill diversion, zero waste goals, proper hazardous waste collections, composting, and the continuance of recycling centers.

Policy CON-2.A.11: Continue construction and demolition programs that require recycling and minimize waste in haul trips.

Policy CON-4.A.5: Encourage compact development, infill development, and a mix of uses that are in proximity to transit, pedestrian, and bicycling infrastructures.

Policy CON-4.A.6: Enhance bicycling and walking infrastructure, and support public bus service, pursuant to the Circulation Element's goals, objectives, and policies.

Policy CON-4.A.7: Encourage installation of renewable energy devices for businesses and facilities and strive to reduce communitywide energy consumption.

Policy CON-4.A.8: Develop long-term, community-wide strategies and programs that work at the local level to reduce greenhouse gases and Costa Mesa's "carbon footprint".

Land Use Element

Policy LU-4.6: Incorporate the principles of sustainability into land use planning, infrastructure, and development processes to reduce greenhouse gas emissions consistent with State goals.

Existing Community-Based and Specific Plans

The 19 West Urban Plan, SoBECA Urban Plan, Mesa West Bluffs Urban Plan, Mesa West Residential Ownership Urban Plan/Mixed-Use Overlay, Harbor Mixed-Use Overlay, Residential Incentive Overlay, North Costa Mesa Specific Plan, One Metro West Specific Plan, and the Newport Boulevard Specific Plan are the only existing community-based or specific plans within the city. However, there are no goals or policies pertaining to greenhouse gases within these plans.

4.8.3 Thresholds of Significance

CEQA Guidelines

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

Threshold 4.8-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Threshold 4.8-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. There are currently no established thresholds for assessing whether the GHG emissions of a project, such as the Project, would be considered a cumulatively considerable contribution to global climate change; however, all reasonable efforts should be made to minimize a project's contribution to global climate change. In addition, while GHG impacts are recognized exclusively as cumulative impacts (CAPCOA 2008), GHG emissions impacts must also be evaluated at a project level under CEQA.

With respect to GHG emissions, CEQA Guidelines Section 15064.4(a) states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions resulting from a project. The CEQA Guidelines note that an agency has the discretion to either quantify a project's GHG emissions or rely on a "qualitative analysis or performance-based standards" (14 CCR 15064.4[a]). A lead agency may use a "model or methodology" to estimate GHG emissions and has the discretion to select the model or methodology it considers "most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change" (14 CCR 15064.4[c]). The CEQA Guidelines provide that the lead agency should consider the following when determining the significance of impacts from GHG emissions on the environment (14 CCR 15064.4[b]):

1. The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.

2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

In addition, the CEQA Guidelines specify that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7[c]).

The extent to which a project increases or decreases GHG emissions in the existing environmental setting should be estimated in accordance with CEQA Guidelines Section 15064.4 titled "Determining the Significance of Impacts from Greenhouse Gas Emissions." The CEQA Guidelines indicate that when calculating GHG emissions resulting from a project, lead agencies shall make a good-faith effort based on scientific and factual data (14 CCR 15064.4[a]), and lead agencies have discretion to select the model or methodology deemed most appropriate for enabling decision makers to intelligently assess the project's incremental contribution to climate change (14 CCR 15064.4[c]).

The CEQA Guidelines do not indicate an amount of GHG emissions that constitutes a significant impact on the environment. Instead, they authorize the lead agency to consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence (14 CCR 15064.4[a] and 15064.7[c]).

Governor's Office of Planning and Research Guidance

The Governor's Office of Planning and Research technical advisory titled, "CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review," states that "public agencies are encouraged but not required to adopt thresholds of significance for environmental impacts. Even in the absence of clearly defined thresholds for GHG emissions, the law requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact" (OPR 2008). Furthermore, the advisory document indicates that "in the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a 'significant impact,' individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice" (OPR 2008).

South Coast Air Quality Management District Guidance

In October 2008, the SCAQMD proposed recommended numeric CEQA significance thresholds for GHG emissions for lead agencies to use in assessing GHG impacts of residential and commercial development projects as presented in its *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold* (SCAQMD 2008). This guidance document, which builds on the previous guidance prepared by the California Air Pollution Control Officers Association, explored various approaches for establishing a significance threshold for GHG emissions. The draft interim CEQA thresholds guidance document was not adopted or approved by the Governing Board. However, in December 2008, the SCAQMD adopted an interim 10,000 MT CO_2e per-year screening level threshold for stationary source/industrial projects for which the SCAQMD is the lead agency (see SCAQMD Resolution No. 08-35, December 5, 2008).

SCAQMD formed a GHG CEQA Significance Threshold Working Group to work with SCAQMD staff on developing GHG CEQA significance thresholds until Statewide significance thresholds or guidelines are established. From December 2008 to September 2010, SCAQMD hosted working group meetings and revised the draft threshold proposal several times, although it did not officially provide these proposals in a subsequent document. The SCAQMD has continued to consider adoption of significance thresholds for residential and general land use development projects. The most recent proposal, issued in September 2010, uses the following tiered approach to evaluate potential GHG impacts from various uses (SCAQMD 2010):

Tier 1 Determine if CEQA categorical exemptions are applicable. If not, move to Tier 2.

Tier 2 Consider whether or not the project is consistent with a locally adopted GHG reduction plan that has gone through public hearing and CEQA review, that has an approved inventory, includes monitoring, etc. If not, move to Tier 3.

Tier 3 Consider whether the project generates GHG emissions in excess of screening thresholds for individual land uses. The 10,000 MT CO_2e per year threshold for industrial uses would be recommended for use by all lead agencies. Under option 1, separate screening thresholds are proposed for residential projects (3,500 MT CO_2e per year), commercial projects (1,400 MT CO2e per year), and mixed-use projects (3,000 MT CO_2e per year). Under option 2, a single numerical screening threshold of 3,000 MT CO_2e per year would be used for all non-industrial projects. If the project generates emissions in excess of the applicable screening threshold, move to Tier 4.

Tier 4 Consider whether the project generates GHG emissions in excess of applicable performance standards for the project service population (population plus employment). The efficiency targets were established based on the goal of AB 32 to reduce Statewide GHG emissions to 1990 levels by 2020. The 2020 efficiency targets are 4.8 MT CO_2e per service population (SP) per year (MT CO_2e/SP/year) for project level analyses and 6.6 MT CO_2e/SP/year for plan level analyses. The 2035 efficiency targets are 3.0 MT CO_2e/SP/year for project level analyses and 4.1 MT CO_2e/SP/year for plan level analyses. If the project generates emissions in excess of the applicable efficiency targets, move to Tier 5.

Tier 5 Consider the implementation of CEQA mitigation (including the purchase of GHG offsets) to reduce the project efficiency target to Tier 4 levels.

Approach to Determining Significance

Threshold 4.8-1

Because the proposed Project involves a mix of different land uses, this analysis applies the SCAQMD Option 2 screening threshold of 3,000 MT CO_2e per year for mixed-use projects for Tier 3. Per the SCAQMD guidance, construction emissions should be amortized over the operational life of the project, which is assumed to be 30 years (SCAQMD 2008). This impact analysis, therefore, adds amortized construction emissions to the estimated annual operational emissions and then compares operational emissions to the proposed SCAQMD threshold of 3,000 MT CO_2e per year for the Tier 3 analysis.

The Tier 4 efficiency metric thresholds are not applied because the SCAQMD 2020 service population threshold was tied to AB 32 goals, while the Project would be built post-2020, and the 2035 service population threshold was

tied to the SB 375 target date and an assumption of a 40 percent reduction in GHG emissions, which does not align with the state's current GHG reduction targets established in SB 32 for 2030 and AB 1279 for 2045.

Threshold 4.8-2

For threshold B, the Project is evaluated for its potential to conflict with state, regional, and local GHG reduction plans. The analysis includes a comparison of the Project's potential to conflict with the CARB 2022 Scoping Plan and SCAG's Connect SoCal (2024-2050 RTP/SCS).

The Scoping Plan, approved by CARB in 2008 and updated in 2014, 2017, and 2022 provides a framework for actions to reduce California's GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. As such, the Scoping Plan is not directly applicable to specific projects, nor is it intended to be used for project-level evaluations.[3] Under the Scoping Plan, however, there are several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other state agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage, high-GWP GHGs in consumer products) and changes to the vehicle fleet (i.e., hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., Low-Carbon Fuel Standard), among others. The potential to conflict with the key goals of the 2022 Scoping Plan Update will ensure that projects are 1) addressing the largest sources of their operational emissions, 2) are in alignment with the priority areas defined for Local Climate Action, and 3) are in alignment with the state's climate goals.

The RTP/SCS is a regional growth management strategy, which targets per capita GHG reduction from passenger vehicles and light-duty trucks in the Southern California region pursuant to SB 375. In addition to demonstrating the region's ability to attain the GHG emission reduction targets set forth by CARB, the 2024–2050 RTP/SCS outlines a series of actions and strategies for integrating the transportation network with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands (SCAG 2024). Thus, successful implementation of the 2024–2050 RTP/SCS would result in more complete communities with various transportation and housing choices while reducing automobile use.

4.8.4 Impact Analyses

4.8.4.1 Methodology

Approach

As described in Chapter 3, Project Description, the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation is a policy document that does not include or propose any site-specific development that could directly result in construction or operational impacts to the environment. However, implementation of the Project would facilitate additional future development in the city. Therefore, this Draft PEIR does not assess the site-specific construction and operation details of each future development within the Planning Area. Rather, it assesses the impacts associated with changes to existing land uses and the associated overall effects of buildout of the Project through 2056, where reasonably foreseeable physical changes to the environment could occur. Analysis at a parcel or site-specific level was not conducted because, unless otherwise noted within

[3] The Final Statement of Reasons for the amendments to the CEQA Guidelines reiterates the statement in the Initial Statement of Reasons that "the Scoping Plan may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (CNRA 2009).

this assessment, the actual locations of project development (and its chronologic sequence or concurrence) that may be implemented in the future are speculative.

While no direct development is proposed, the Project would facilitate the zoning required for future development to be constructed across the Planning Area resulting in 21,522 dwelling units and 10,630,361 square feet of non-residential uses. Implementation of the proposed Project would occur over time with a horizon year of 2056 (or 30 years from adoption).

The anticipated development for the Project is categorized by land use type and square footage. However, since specifics for construction and operation of future development under the proposed Project are not yet available, the California Emissions Estimator Model (CalEEMod) default values were assumed based on development land use type and size.

Construction Emissions

CalEEMod Version 2022.1 was used to estimate Project-generated GHG emissions during construction. Construction of the Project would result in GHG emissions primarily associated with use of off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. All details for construction criteria air pollutants discussed in Section 4.3, Air Quality of this Environmental Impact Report (EIR) are also applicable for the estimation of construction related GHG emissions. As such, see Section 4.3, Air Quality for a discussion of construction emissions calculation methodology and assumptions.

Operational Emissions

As with the air quality analysis, GHG emissions from the operational phase of the Project were estimated using CalEEMod Version 2022.1. All details for operational criteria air pollutants discussed in Section 4.3 Air Quality of this EIR, are also applicable for the estimation of operation-related GHG emissions.

Area. Hearths generate GHG emissions through the use of energy to provide localized heat. Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. The emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod.

- Hearths. Default CalEEMod values included wood-burning fireplaces and natural gas fireplaces. Based on SCAQMD Rule 445 no wood-burning fireplaces were assumed. To provide a conservative assumption, 90 percent of the residential units were assumed to include gas fireplaces and 10 percent were assumed not to include any fireplaces. Default CalEEMod values that assumed wood-burning stoves were adjusted to assume zero wood-burning stoves.
- Landscape Equipment. Default CalEEMod values were applied.

Energy. In CalEEMod 2022.1, the default energy use from nonresidential land uses is based on 2019 consumption estimates from the CEC's 2018-2030 Uncalibrated Commercial Sector Forecast (Commercial Forecast), and the energy use from residential land uses is based on the 2019 Residential Appliance Saturation Survey (RASS). The Commercial Forecast and RASS datasets derive energy intensities of different end use categories for different land use subtypes for electricity demand forecast zones (EDFZ) throughout the state. However, the energy use estimates are based on existing buildings and residences and are not representative of those constructed in compliance with

energy efficiency requirements of the latest Title 24 Building Energy Efficiency Standards (e.g., the average residence surveyed in the RASS was constructed in 1974). Therefore, per Appendix D, Technical Source Documentation for Emissions Calculations, of the CalEEMod Version 2022.1 User Guide, "the default energy consumption estimates provided in CalEEMod based on the Commercial Forecast and RASS are very conservative, overestimating expected energy use compared to what would be expected for new buildings subject to the latest Energy Code with more stringent energy efficiency measures" (CAPCOA 2022).

Mobile Sources. All details for criteria air pollutants discussed in Section 4.3.4.1 are also applicable for the estimation of operational mobile-source GHG emissions. Regulatory measures related to mobile sources include AB 1493 (Pavley) and related federal standards. AB 1493 required that CARB establish GHG emission standards for automobiles, light-duty trucks, and other vehicles determined by CARB to be used primarily for noncommercial personal transportation in the State. However, following the Trump administration's 2025 rescission of California's Clean Air Act waivers—implemented through Congressional Review Act resolutions—the State is currently preempted from enforcing its own vehicle GHG emission standards, including those originally adopted under AB 1493, unless and until ongoing litigation restores this authority. In response, CARB has developed off-model adjustment factors to remove the emissions-reduction benefits of regulations. The CARB adjustment factors describe the methodology used to generate these factors by comparing EMFAC scenarios with and without these regulations, enabling consistent calculation of adjusted emissions across vehicle classes, pollutants, and calendar years. Notably, the NHTSA and EPA have established corporate fuel-economy standards and federal GHG-emission standards for automobiles and light-, medium-, and heavy-duty vehicles, which remain applicable nationwide. Implementation of these federal standards, along with natural fleet turnover (replacement of older vehicles with newer ones), will gradually reduce emissions from the Project's motor vehicles. The effectiveness of fuel-economy improvements was evaluated by using the CalEEMod emission factors for motor vehicles in 2050[4] for the Project to the extent that these efficiencies are reflected in EMFAC 2021.

Given the uncertainty surrounding the legality of the federal actions affecting California's vehicle-emission standards, the GHG analysis in the EIR will present adjusted emissions consistent with the documentation and off-model factors released by CARB and approved by EPA, ensuring that the analysis remains aligned with the most current, federally recognized modeling guidance.

Solid Waste. Land uses associated with the Project would generate solid waste to be disposed, and therefore would result in CO_2e emissions associated with landfill off-gassing (e.g., anaerobic breakdown of material). No diversion of solid waste was assumed for the Project; however, this is a conservative assumption as AB 939 had a statewide goal of 50 percent diversion by 2000, AB 341 had a statewide goal of 75 percent diversion by 2020, and both the state and the City continue to strive to reduce or divert landfill material. Default CalEEMod values were applied.

Water and Wastewater Treatment. Supply, conveyance, treatment, and distribution of water for the Project land uses require the use of electricity, which would result in associated indirect GHG emissions. Similarly, wastewater generated by the Project land uses requires the use of electricity for conveyance and treatment, along with GHG emissions generated during wastewater treatment. The indoor and outdoor water use and electricity consumption from water use, and wastewater generation were estimated using CalEEMod default values for the Project.

Refrigerants. Refrigerants are substances used in equipment for air conditioning and refrigeration. Most of the refrigerants used today are HFCs or blends thereof, which can have high GWP values. All equipment that uses refrigerants has a charge size (i.e., quantity of refrigerant the equipment contains) and an operational refrigerant

[4] CalEEMod's latest forecast year for mobile source emissions factors is 2050. Therefore, while the project's buildout year is 2055, 2050 emissions factors for mobile sources were utilized in the analysis.

leak rate, and each refrigerant has a GWP that is specific to that refrigerant. CalEEMod quantifies refrigerant emissions from leaks during regular operation and routine servicing over the equipment lifetime and then derives average annual emissions from the lifetime estimate.

- ***Refrigerants.*** Default CalEEMod values were applied.

Land Use Change (Stored Carbon Loss). Land use development has the potential to result in loss of sequestered carbon in soils due to a change in land use type. The Land Use Change module in CalEEMod (version 2022) estimates changes in CO_2 associated with soil and aboveground and belowground biomass resulting from a project-induced change in land use type. The user must define the initial acreage of each vegetation land use type prior to construction of the project and the final acres after implementation of the project. CalEEMod calculates the stored carbon under both conditions. If the existing land use cover currently includes stored carbon and that value exceeds that of the new land cover type, the land use change would result in GHG emissions. Conversely, if the stored carbon under the final with project conditions exceeds that of initial conditions, the land use change would result in a GHG benefit (i.e., reduction).

As described in Section 3.4.1, Project-Related Growth, in Chapter 3, Project Description of this Draft PEIR, implementation of the Project would support future development consistent with the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation. These updates would enable additional residential, commercial, and mixed-use development throughout the Planning Area, allowing for the construction of approximately 21,522 new dwelling units and 10,630,361 square feet of nonresidential uses through the 2056 horizon year.

As explained in Section 4.4, Biological Resources, the Project area is located within the highly urbanized City of Costa Mesa, surrounded by established residential, commercial, and industrial uses, with scattered parks and recreational spaces. Because these communities have been developed for more than 50 years—removing native vegetation, soils, and hydrologic features that support natural ecosystems—implementation of the Project would not result in the loss of stored carbon.

4.8.4.2 Environmental Analyses

Threshold 4.8-1 Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Significant and Unavoidable Impact. For the reasons discussed below, even with implementation of applicable mitigation measures (i.e., MM-4.8-1 through MM-4.8-5), the Project would generate GHG emissions, either directly or indirectly, that may have a significant effect on the environment, and impacts would be significant and unavoidable.

Construction Emissions

Construction of future development that would be facilitated by the Project would result in GHG emissions, which are primarily associated with use of off-road construction equipment, on-road haul trucks, on-road vendor trucks, and worker vehicles. The SCAQMD has not proposed or adopted relevant quantitative GHG thresholds for construction-generated emissions.

CalEEMod was used to calculate the annual GHG emissions based on the construction scenario discussed in the Construction Emissions subsection in Section 4.3, Air Quality of this PEIR, in order to provide a conservative scenario of potential construction activity as a result of the Project, this analysis assumes that five percent of the future development under the Project would be developed within one year, which was quantified in CalEEMod. Due to the speculative nature of construction, CalEEMod default values were relied on for the assumed land use type and size, with minor exceptions, as explained in Section 4.3, Air Quality and Section 4.8.4.1.

Table 4.8-2 presents the estimated GHG emissions generated during construction of the three percent development scenario. Details of the emission calculations are provided in Appendix D.

Table 4.8-2. Estimated Annual Construction Greenhouse Gas Emissions

Year	CO_2	CH_4	N_2O	R	CO_2e
	Metric Tons per Year				
2027 (one full year)	3,213.68	0.10	0.20	3.17	3,277.86
Total over 30 years	96,410.42	2.95	5.89	95.23	98,335.77
				Amortized 30-Year Construction Emissions	*3,277.86*

Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent.
See Appendix D for complete results.
Amortized construction GHG emissions represent total construction GHG emissions (in MT of CO_2e) divided 30 years, which is the assumed Project operational lifetime consistent with SCAQMD guidance (SCAQMD 2008).
*Totals may not add due to rounding.

As shown in Table 4.8-2, the estimated total GHG emissions during construction of future projects that would be facilitated by the Project would be approximately 98,336 MT CO_2e over the 30-year construction period. Estimated Project-generated construction emissions amortized over 30 years would be approximately 3,278 MT CO_2e per year. Because there is no separate GHG threshold for construction, the evaluation of significance is discussed in the following operational emissions analysis.

Operational Emissions

Operation of the future development that would be facilitated by the Project would generate GHG emissions through motor vehicle trips; landscape equipment operation and hearths (area sources); energy use (natural gas and electricity); solid waste disposal; water supply, treatment, and distribution; and refrigerants. CalEEMod was used to calculate the annual GHG emissions based on the operational assumptions described in Section 4.3, Air Quality and Section 4.8.4.1.

The estimated operational Project-generated GHG emissions from motor vehicles, area sources, energy usage, solid waste generation, water usage and wastewater generation, and refrigerants at full build-out are shown in Table 4.8-3

Table 4.8-3. Estimated Annual Operational Greenhouse Gas Emissions – Full Build-Out – 2056[1] - Unmitigated

Emission Source	CO_2	CH_4	N_2O	R	CO_2e
	Metric tons per year				
Mobile	197,214.81	8.15	8.32	9.92	199,906.70
Area	5,344.87	0.11	0.01	NA	5,351.89
Energy	49,011.13	5.26	0.42	NA	49,267.45
Water	1,989.33	57.83	1.39	NA	3,849.86
Waste	4,047.44	404.53	0.00	NA	14,160.63
Refrigerant	NA	NA	NA	199.25	199.25
				Total	**272,735.77**
				Amortized 30-Year Construction Emissions	*3,277.86*
				Project Operation + Amortized Construction Total	**276,013.63**
				SCAQMD Threshold	3,000
				Exceeds Threshold?	**Yes**

Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; R= refrigerant; CO_2e = carbon dioxide equivalent; NA = not applicable
Columns may not sum due to rounding.

1 CalEEMod's latest forecast year for mobile source emissions factors is 2050. Therefore, while the Project's buildout year is 2056, 2050 emissions factors for mobile sources were utilized.

See Appendix D for complete results.

As shown in Table 4.8-3, estimated annual GHG emissions generated by future development that would be facilitated by the Project would be approximately 272,736 MT CO_2e per year as a result of Project operation. Estimated annual Project-generated operational emissions in 2056 and amortized Project construction emissions would be approximately 276,014 MT CO_2e per year. This would exceed the Tier 3 screening threshold of 3,000 MT CO_2e per year, and the impact would be potentially significant.

As discussed in Section 4.8.4.1 Methodology, Operational Emissions, the State is currently preempted from enforcing its own vehicle GHG emission standards and regulations, as such, CARB provided information on how to adjust the mobile source emissions to reflect the emission without the benefit of affected regulations. Table 4.8-4 presents the adjusted emissions for the proposed Project at build-out.

Table 4.8-4. Estimated Annual Operational Greenhouse Gas Emissions – Full Build-Out – 2056[1] – Unmitigated (CARB Adjustments)[2]

Emission Source[3]	CO_2	CH_4	N_2O	R	CO_2e
	Metric tons per year				
Mobile[2]	215,950.22	9.27	9.90	9.92	219,130.96
Area	5,344.87	0.11	0.01	NA	5,351.89
Energy	49,011.13	5.26	0.42	NA	49,267.45
Water	1,989.33	57.83	1.39	NA	3,849.86
Waste	4,047.44	404.53	0.00	NA	14,160.63
Refrigerant	NA	NA	NA	199.25	199.25
				Total	**291,960.03**
				Amortized 30-Year Construction Emissions	*3,277.86*
				Project Operation + Amortized Construction Total	**295,237.89**
				SCAQMD Threshold	3,000
				Exceeds Threshold?	**Yes**

Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; R= refrigerant; CO_2e = carbon dioxide equivalent; NA = not applicable
Columns may not sum due to rounding.

1 CalEEMod's latest forecast year for mobile source emissions factors is 2050. Therefore, while the Project's buildout year is 2056, 2050 emissions factors for mobile sources were utilized.

2 CARB's EMFAC2021 off-model adjustment factors remove the emissions-reduction benefits of the Advanced Clean Trucks, Zero-Emission Airport Shuttle, Warranty Phase 1, and Heavy-Duty Omnibus regulations by recalculating mobile-source emissions without these regulatory impacts, and for the Rezone Project these factors are applied to ensure the analysis reflects baseline emissions from on-road vehicles as if those regulations were not in place.

See Appendix D for complete results.

As shown in Table 4.8-4, the estimated adjusted annual GHG emissions would be approximately 291,960 MT CO_2e per year as a result of Project operation. Estimated annual Project-generated adjusted operational emissions in 2056 and amortized Project construction emissions would be approximately 295,238 MT CO_2e per year. This represents an increase of approximately 7 percent over the unadjusted emissions and would similarly exceed the Tier 3 screening threshold of 3,000 MT CO_2e per year and the impact would be potentially significant.

Based on the preceding, GHG emissions generated by the Project would have a potentially significant impact on the environment and mitigation is required.

As described previously, the Project consists of a policy document and does not propose any direct development. However, implementation of the Project's proposed land-use changes would allow for more dense development in the Project area than is currently allowed under existing conditions. In considering cumulative impacts from the development allowed for by the Project, the analysis must specifically evaluate a project's contribution to the cumulative increase in GHG emissions.

Due to the programmatic nature of the Project, the reductions of GHG emissions that would be realized from MM-4.8-1 through MM-4.8-5 are not able to be accurately quantified. Further, these mitigation measures do not ensure that all impacts from future development projects would be mitigated to a level of less than significant. Future non-discretionary projects that would be implemented under the Project would be subject to the federal, state and local regulations mentioned above; however, these non-discretionary projects would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. As such, even with

implementation of existing regulations and MM-4.8-1 through MM-4.8-5 as applied to future discretionary projects, potential impacts related to operational emissions would be significant and unavoidable.

Threshold 4.8-2 Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

Significant Unavoidable. Applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions include the SCAG's 2024-2050 RTP/SCS, and CARB's Scoping Plan. The proposed Project's potential to conflict with these plans, policies, and regulations is discussed below.

SCAG's 2024-2050 RTP/SCS

The SCAG 2024–2050 RTP/SCS is a regional growth management strategy that targets per-capita GHG reduction from passenger vehicles and light trucks in the Southern California region pursuant to SB 375. In addition to demonstrating the region's ability to attain the GHG emission-reduction targets set forth by CARB, the 2024–2050 RTP/SCS outlines a series of actions and strategies for integrating the transportation network with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. Thus, successful implementation of the 2024–2050 RTP/SCS would result in more complete communities with a variety of transportation and housing choices, while reducing automobile use.

As stated in the Connect SoCal 2024–2050 RTP/SCS, there is no obligation by a jurisdiction to change its land use policies, General Plan, or regulations to be consistent with the RTP/SCS, and lead agencies have the sole discretion in determining a local project's potential to conflict with the RTP/SCS (SCAG 2024).

The 2024-2050 RTP/SCS contains the following high-level goal categories: mobility, communities, environment, and economy. The Project's potential to conflict with the applicable strategies is presented below.

Mobility. The 2024–2050 RTP/SCS identifies actions to build and maintain a safe, resilient, and integrated multimodal transportation network that improves air quality, reduces GHG emissions, and expands equitable access to reliable travel options for all communities. Consistent with current building code, the Project will incorporate EV charging capabilities and infrastructure.

Furthermore, the Project would implement MM-4.8-3, EV Ready New Construction, which would require installation of EV charging infrastructure that meets or exceeds the voluntary Tier 2 standards to further encourage use of EVs, which would support California's goals for vehicle electrification. In addition, the Project would implement MM-4.3-9 and MM-4.3-11, which would require Commute Trip Reduction programs for large employers and reform parking requirements, respectively. These measures would help to reduce single-occupancy vehicle trips and encourage mobility mode shift in support of the RTP/SCS mobile strategy goals.

Communities. The 2024–2050 RTP/SCS supports actions to develop and connect human-centered communities across urban, suburban, and rural areas by increasing mobility choices, reducing travel distances, and expanding affordable, accessible housing options. The Project would support communities by implementing a vibrant residential and mixed-use community that would foster dynamic, livable neighborhoods including a mix of land uses (residential, mixed-use, commercial/retail, and hotel). The Project would establish a residential and mixed-use community that would provide a diverse range of housing opportunities to accommodate various lifestyles and income levels. In addition, the Project would provide employment opportunities in proximity to housing.

Environment. The 2024–2050 RTP/SCS promotes actions to create a healthy and sustainable region by integrating land use and transportation planning to reduce emissions, conserve resources, and strengthen climate resilience. The Project would employ refined smart growth principles to create more sustainable communities where residents can work and recreate and facilitate new mixed-use development and housing opportunities near existing high-frequency transit, and local destinations and amenities to promote sustainable development.

Economy. The 2024–2050 RTP/SCS advances actions to support a productive and inclusive regional economy by improving access to jobs and education. The Project would integrate mixed-uses, including residences, commercial/retail, and hotel uses to create a vibrant sustainable community that would diversify the City's economy and attract economic development.

The following environmental policies and strategies are intended to be supportive of implementing the 2024–2050 RTP/SCS and reducing GHGs: sustainable development, air quality, clean transportation, natural and agricultural lands preservation, and climate resilience. The Project's potential to conflict with the applicable strategies is presented below.

Sustainable Development. The 2024–2050 RTP/SCS identifies sustainable development, including water and energy-efficient building practices and green infrastructure, as a strategy to reduce GHG emissions. As described above, targeted sustainable design strategies of the Project include providing on-site solar (MM-4.8-4). The Project also would comply with current energy code requirements for battery storage, which—when combined with the on-site solar PV—could help provide the Project with renewable, clean energy. The Project's mixed-use design providing residential, commercial/retail and hotel uses help support a connected, sustainable community and a healthy environment, in addition to supporting the sustainable development goal of the 2024–2050 RTP/SCS. Furthermore, implementation of Tier 2 EV charging infrastructure (MM-4.8-3), installation of energy-efficient appliances (MM-4.8-2), along with VMT-reducing measures (MM-4.3-9 through MM-4.3-11), would further support sustainable development.

Air Quality. The 2024–2050 RTP/SCS identifies air quality as an environmental strategy because the transportation sector is the predominant source of criteria air pollutant emissions in the region. The 2024–2050 RTP/SCS states that a comprehensive and coordinated regional solution with integrated land use and transportation planning from all levels of governments will be required to achieve the needed emission reductions (SCAG 2024). As described above, the Project's mixed-use design and transportation measures would support integrated land use and transportation planning to the extent feasible. Further as discussed in Section 4.17 Transportation of this EIR, the Project would result in a less than significant impact with regard to VMT per service population. Overall, the Project would not conflict with the 2024–2050 RTP/SCS aim to improve air quality throughout the region through sustainable local and regional land use planning and implementation efforts, which can reduce transportation-related criteria air pollutant emissions on a per capita basis.

Clean Transportation. The 2024–2050 RTP/SCS identifies provision of EV charging infrastructure, adoption of zero-emission vehicles, and promotion of clean transit as ways to reduce GHG emissions from mobile sources. The Project would comply with energy code requirements for clean transportation and would not conflict with this goal. Furthermore, the Project would facilitate the promotion of clean transportation by implementing MM-4.8-3, which would encourage EVs and support the transition away from fossil fuel vehicles.

Natural and Agricultural Lands Preservation. The 2024–2050 RTP/SCS promotes the conservation and restoration of natural and agricultural lands through several policies, such as quantifying the carbon sequestration potential of natural and agricultural lands and prioritizing sensitive habitat and wildlife

corridors for permanent protection. The Project area is located within the highly urbanized City of Costa Mesa, surrounded by established residential, commercial, and industrial uses, with scattered parks and recreational spaces. As such, the Project would not result in the loss of natural and agricultural land. Infill development facilitated by the Project reduces pressure to convert natural and working lands, areas that CARB identifies as vital carbon sinks that help offset GHG emissions and buffer against climate extremes, thereby preserving these landscapes and maintaining their essential resilience functions even as growth is accommodated within existing urbanized areas.

Climate Resilience. The 2024–2050 RTP/SCS promotes regional coordination and solutions for effective emergency response for climate-related hazards. Additionally, in the category of climate resilience, SCAG has established the following policies: prioritize the most vulnerable populations and communities subject to climate hazards, support local and regional climate and hazard planning, support nature-based solutions to increase regional resilience, promote sustainable water use planning, and support an integrated planning approach to help jurisdictions meet housing needs in a drier environment.

The Project allows for denser, mixed-use development within an already developed area with access to transit and directly supports climate resiliency by reducing exposure to climate hazards, lowering long-term emissions, and creating land use patterns that are more adaptive to climate stressors. Compact, mixed-use infill development reduces VMT which CARB identifies as a key strategy for meeting statewide climate goals and mitigating future climate-driven hazards. When growth is accommodated within existing urbanized areas rather than outward into wildfire-prone or environmentally sensitive lands it limits expansion of development into high-risk areas and reduces the population exposed to heat, wildfire, and other climate-related threats. CARB emphasizes that local land use decisions that concentrate growth in infill areas with multimodal access are central to achieving both GHG reduction and community resilience objectives, particularly by reducing VMT and avoiding development in natural and working lands that provide climate buffers.

Higher-density, mixed-use neighborhoods also place residents closer to essential services, jobs, schools, and amenities, which strengthens resilience during climate-related disruptions. CARB notes that infill development patterns that improve accessibility rather than automobile mobility enhance long-term resilience by reducing dependence on car travel, enabling residents to meet daily needs even during fuel shortages, road closures, or extreme heat events. Mixed-use development also supports more efficient infrastructure systems, including energy, water, and emergency services, which increases adaptive capacity in a changing climate.

In summary, considering the preceding analysis, the Project's land use pattern, mobility strategies, sustainable building features, clean transportation measures, and infill location collectively advance as opposed to conflict with the goals, policies, and strategies of SCAG's 2024–2050 RTP/SCS. Because the Project supports regional objectives related to mobility, communities, environment, economy, sustainable development, air quality, clean transportation, natural and agricultural land preservation, and climate resilience, it would not impede implementation of the RTP/SCS. Instead, it would facilitate the region's transition toward reduced per-capita VMT, lower GHG emissions, infill housing production, improved multimodal access, and more climate-resilient development patterns. Accordingly, the Project would result in a less than significant impact with respect to consistency with the 2024–2050 RTP/SCS.

CARB Scoping Plan, SB 32, and AB 1279

As discussed above, the California State Legislature passed AB 32 to provide initial direction to initiate the state's long-range climate objectives. Since the passage of AB 32, the state has adopted GHG emission reduction targets

for future years beyond the initial 2020 horizon year. CARB is required to develop the Scoping Plan, which provides the framework for actions to achieve the state's GHG emission reduction targets. The Scoping Plan is the official framework for the measures and regulations that will be implemented to reduce California's GHG emissions in alignment with the state's adopted GHG reduction targets. Therefore, a project would be found to not conflict with the state's climate goals set forth in statutes and regulations if it would meet the Scoping Plan policies and would not impede attainment of the goals therein.

For the Project, the relevant GHG emission reduction targets include those established by SB 32 and AB 1279, which require GHG emissions be reduced to 40 percent below 1990 levels by 2030 and 85 percent below 1990 levels by 2045, respectively. In addition, AB 1279 requires that the state achieve net zero GHG emissions by no later than 2045 and achieve and maintain net negative GHG emissions thereafter. CARB's 2017 Scoping Plan Update was the first to address the state's strategy for achieving the 2030 GHG reduction target set forth in SB 32 (CARB 2017a), and the most recent CARB 2022 Scoping Plan Update outlines the state's plan to reduce emissions and achieve carbon neutrality by 2045 in alignment with AB 1279 and assesses progress toward the 2030 SB 32 target (CARB 2022). As such, given that SB 32 and AB 1279 are the relevant GHG emission targets, the CARB 2017 and 2022 Scoping Plan Updates that outline the strategy to achieve those targets are the most applicable to the Project.

The 2017 Scoping Plan Update included measures to promote renewable energy and energy efficiency (including the mandates of SB 350) and increase stringency of the LCFS, measures identified in the Mobile Source and Freight Strategies, measures identified in the proposed Short-Lived Climate Pollutant Plan, and measures to increase stringency of SB 375 targets. The 2022 Scoping Plan Update builds upon and accelerates programs currently in place, including moving to zero-emission transportation; phasing out use of fossil gas for heating homes and buildings; reducing chemical and refrigerants with high GWP; providing communities with sustainable options for walking, biking, and public transit; and displacing fossil-fuel fired electrical generation through use of renewable energy alternatives (e.g., solar arrays and wind turbines) (CARB 2022).

Many of the measures and programs included in the Scoping Plan would result in the reduction of Project-related GHG emissions with no action required at the project-level, including GHG emission reductions through increased energy efficiency and renewable energy production (SB 350), reduction in carbon intensity of transportation fuels (LCFS), and the accelerated efficiency and electrification of the statewide vehicle fleet (Mobile Source Strategy).

The 2045 carbon neutrality goal required CARB to expand proposed actions in the 2022 Scoping Plan Update to include those that capture and store carbon in addition to those that reduce only anthropogenic sources of GHG emissions. The 2022 Scoping Plan Update emphasizes that reliance on carbon sequestration in the state's natural and working lands will not be sufficient to address residual GHG emissions, and achieving carbon neutrality will require research, development, and deployment of additional methods to capture atmospheric GHG emissions (e.g., mechanical direct air capture). Given that the specific path to neutrality will require development of technologies and programs that are not currently known or available, the Project's role in supporting the statewide goal would be speculative and cannot be wholly identified at this time.

The CARB 2022 Scoping Plan includes the Scoping Plan Scenario, which serves as a framework in guiding policies and actions to reduce GHG emissions to keep California on track to achieve the SB 32 GHG reduction target for 2030 and become carbon neutral no later than 2045. The Scoping Plan Scenario provides a more drastic reduction of GHG emissions compared to the Reference Scenario identified within the 2017 Scoping Plan. Table 2-1 of the 2022 Scoping Plan lists implementable actions to achieve the reductions in the Scoping Plan Scenario. The measurable actions are categorized by AB 32 GHG Inventory Sectors and are accompanied by statutes and

executive orders that work to achieve the same or similar goals. The Project would not be relevant to, nor would it conflict with or obstruct the implementation of, the majority of the actions within the 2022 Scoping Plan AB 32 GHG Inventory, including the state's ability to implement the sale of zero-emission light-duty vehicles and trucks, and the manufacturing of electric construction equipment.

The following summarizes the Project's potential to conflict with key strategies of the 2022 Scoping Plan:

Infill, Smart Growth & VMT: The Project's compact, mixed-use enabling framework supports reduced trip lengths, multimodal access, and lower per-capita VMT consistent with CARB 2022 Scoping Plan Appendix D local actions and SCAG RTP/SCS. In addition, the Transportation analysis finds VMT per service population impacts less than significant.

Building Decarbonization: California is steadily advancing regulations that accelerate the transition away from fossil fuels toward clean energy, with a strong emphasis on decarbonizing buildings through electrification and other zero-emission technologies. The Project would not impede the State's ability to implement decarbonization strategies and would not conflict with this Scoping Plan strategy.

Clean Electricity & Distributed Energy Resources: On-site solar readiness and installation (MM-4.8-7) and EV-ready infrastructure (MM-4.8-6) complement California's increasingly stringent clean-energy standards—such as Title 24 requirements mandating solar photovoltaic systems on new residential and certain nonresidential buildings and CALGreen provisions requiring EV-capable and EV-ready parking spaces—and these measures further support the State's transition toward a decarbonized building and transportation sector by meeting or exceeding the regulatory baseline.

Natural & Working Lands: The Project areas are located entirely within a highly urbanized city, and because the action is limited to zoning and code updates with no expansion of the urban footprint, no conversion of natural or working lands is anticipated. This infill pattern directly aligns with California's long-term climate strategy, which identifies the preservation of natural and working lands as essential carbon sinks and emphasizes focusing growth within established urban areas to avoid sprawl. By facilitating increased density near existing infrastructure and transit, the Project supports the smart-growth and land-use efficiency strategies outlined in the CARB Scoping Plan, strategies designed to reduce pressure on undeveloped landscapes, maintain and enhance carbon sequestration potential, and concentrate development in locations that reduce vehicle travel and associated emissions.

Table 4.8-5 further evaluates the Project's potential to conflict with the 2022 Scoping Plan actions that are the most applicable to the proposed Project, or more specifically, actions to achieve the GHG emissions targets set forth by SB 32 and AB 1279 that are relevant to the Project.[5]

[5] Table 4.8-5 is not intended to provide exhaustive list of the 2022 Scoping Plan actions set forth to help the state reach its long-range climate objectives. Only the most relevant actions to the Project pertaining to SB 32 and AB 1279 are analyzed in Table 4.8-5. The 2022 Scoping Plan, inclusive of all actions, is available for review on CARB's website (CARB 2022).

Table 4.8-5. Project Potential to Conflict with 2022 Scoping Plan

Sector	Action	Potential to Conflict
GHG Emissions Reductions Relative to the SB 32 Target	40 percent below 1990 levels by 2030	***No conflict.*** While the SB 32 GHG emissions reduction target is not an Action that is analyzed independently, it is included in Table 2-1 of the 2022 Scoping Plan for reference. The Project would not obstruct or interfere with agency efforts to meet the SB 32 reduction goal.
Smart Growth / VMT	VMT per capita reduced 25 percent below 2019 levels by 2030, and 30 percent below 2019 levels by 2045	***No conflict.*** The Project would not obstruct or interfere with regional efforts to achieve per-capita VMT reduction under SB 375 and is consistent with the goals and policies of SCAG's regional RTP/SCS, which integrates land use and transportation planning to reduce GHG emissions from passenger vehicles. By facilitating higher-density housing and mixed-use opportunities within an already urbanized area and in locations with access to existing transit, services, and employment the Project supports shorter trip lengths and enables increased use of alternative modes such as transit, walking, and biking. This infill development pattern aligns with the smart-growth strategies envisioned in the RTP/SCS and helps reduce reliance on single-occupancy vehicle travel
Light-duty Vehicle (LDV) Zero Emission Vehicles (ZEVs)	100 percent of LDV sales are ZEV by 2035	***No conflict.*** As this action pertains to LDV sales within California, the Project would not obstruct or interfere with its implementation. Furthermore, the Project would support the transition from fossil fuel LDV to ZEV through MM-4.8-3.
Truck ZEVs	100 percent of medium-duty vehicle (MDV)/ heavy-duty vehicle (HDV) sales are ZEV by 2040	***No conflict.*** As this action pertains to MDV and HDV sales within California, the Project would not obstruct or interfere with its implementation.
Electricity Generation	Sector GHG target of 38 million metric tons of carbon dioxide equivalent ($MMTCO_2e$) in 2030 and 30 $MMTCO_2e$ in 2035 Retail sales load coverage[1] 20 gigawatts (GW) of offshore wind by 2045 Meet increased demand for electrification without new fossil gas-fired resources	***No conflict***. As this Action pertains to the statewide procurement of renewably generated electricity, the Project would not obstruct or interfere with its implementation.
New Residential and Commercial Buildings	All electric appliances beginning 2026 (residential) and 2029 (commercial), contributing to 6 million heat pumps installed statewide by 2030	**Potential conflict.** The Project would not require all-electric appliances in new residential and commercial buildings. Therefore, the Project would potentially obstruct or interfere with CARB's efforts to meet the all-electric appliance and heat pump goals.

Table 4.8-5. Project Potential to Conflict with 2022 Scoping Plan

Sector	Action	Potential to Conflict
Construction Equipment	25 percent of energy demand electrified by 2030 and 75 percent electrified by 2045	***No conflict.*** As this Action pertains to the electrification of off-road equipment across California, the Project would not obstruct or interfere with its implementation. Further MM-4.8-1 would encourage the use of electric or alternative-fueled construction equipment.
Chemicals and Allied Products; Pulp and Paper	Electrify 0 percent of boilers by 2030 and 100 percent of boilers by 2045. Hydrogen for 25 percent of process heat by 2035 and 100 percent by 2045 Electrify 100 percent of other energy demand by 2045.	***No conflict.*** As this Action pertains to the electrification of industrial processes, the Project would not obstruct or interfere with its implementation.
Other Industrial Manufacturing	0 percent energy demand electrified by 2030 and 50 percent by 2045	***No conflict.*** As this Action pertains to the electrification of industrial processes, the Project would not obstruct or interfere with its implementation.
Low Carbon Fuels for Transportation	Biomass supply is used to produce conventional and advanced biofuels, as well as hydrogen	***No conflict***. The Project would not obstruct or interfere with CARB's efforts to increase the provision of low carbon fuels for transportation.
Low Carbon Fuels for Buildings and Industry	In 2030s biomethane blended in pipeline Renewable hydrogen blended in fossil gas pipeline at 7 percent energy (~20 percent by volume), ramping up between 2030 and 2040 In 2030s, dedicated hydrogen pipelines constructed to serve certain industrial clusters	***No conflict.*** The Project would not obstruct or interfere with CARB's efforts to increase the provision of low carbon fuels for use in buildings and industry.
High GWP Potential Emissions	Low GWP refrigerants introduced as building electrification increases, mitigating HFC emissions	***No conflict.*** The Project would not obstruct or interfere with agency efforts to introduce low GWP refrigerants.

Source: CARB 2022.

Based on the preceding, implementation of the Project would have potential to conflict with relevant measures of the 2022 Scoping Plan and would result in a potentially significant impact.

Summary

The Project would not conflict with SCAG's 2024–2050 RTP/SCS, but the Project would have the potential to conflict with the 2022 Scoping Plan, resulting in potentially significant impact.

4.8.5 Cumulative Impact Analyses

Where a lead agency concludes that the cumulative effects of a project, taken together with the impacts of other closely related past, present, and reasonably foreseeable future projects are significant, the lead agency then must determine whether the project's incremental contribution to such significant cumulative impact is "cumulatively considerable" (and thus significant in and of itself). The cumulative study area used to assess potential cumulative greenhouse gas emissions impacts includes the entire planet and is not limited to any particular region. The full list of related plans applicable to the Project's cumulative analyses is provided in Section 2.5, Cumulative Impact Analysis, in Chapter 2, Environmental Setting of this Draft PEIR.

As previously discussed above and in Section 4.8.1. Existing Conditions, global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. Thus, GHG evaluations under CEQA are inherently a cumulative study (See *Center for Biological Diversity v. California Department of Fish and Wildlife* [2015] 62 Cal.4th 204). Therefore, the significance conclusions reached above in Section 4.8.4, Impact Analysis, with regard to potential Project-related GHG impacts also constitute this Draft PEIR's significance conclusions with regard to cumulative GHG emissions impacts.

Threshold 4.8-1. As discussed above, GHG emissions inherently contribute to cumulative impacts, and thus, any additional GHG emissions would result in a cumulative impact. As shown in Tables 4.8-3 and Table 4.8-4, future development facilitated by the proposed Project is expected to exceed the GHG threshold established in Section 4.8.3, Thresholds of Significance, and cumulative impacts related to GHG emissions would be significant and unavoidable, even after implementation of required mitigation measures. Therefore, the Project's incremental contribution to impacts regarding generation of GHG emissions would be cumulatively considerable.

Threshold 4.8-2. GHG emissions inherently contribute to cumulative impacts, and thus, any potential to conflict with plans, policies, or regulations adopted for the purpose of reducing GHG emissions would result in a cumulative impact. As discussed in response to Threshold 4.8-2 above, the proposed Project would conflict with applicable plans, policies, or regulations and impacts and even after implementation of required mitigation measures, impacts would be significant and unavoidable. Thus, as GHG emissions inherently contribute to cumulative impacts, Project impacts would also be cumulatively considerable.

4.8.6 Mitigation Measures

Construction

MM-4.8-1 Electrify Temporary and Portable Sources. Prior to the issuance of a building permit for future development projects subject to the MUOD within the Planning Area, the applicant shall require, through the construction contractor's contract specifications, that grid power connections for construction trailers and lighting are utilized where power is available.

Operation

MM-4.8-2 Energy Conservation. Prior to the issuance of building permits for future development projects subject to the MUOD within the Planning Area, the applicant shall require, through construction contractor's contract specifications, that buildings have been designed to include the following energy conservation measures unless determined to be not applicable or infeasible:

a) Install Energy Star rated heating, cooling, lighting, and appliances.

b) Outdoor lighting shall be light emitting diodes (LED) or other high-efficiency lightbulbs.

c) Provide information on energy efficiency, energy efficient lighting and lighting control systems, energy management, and existing energy incentive programs to future tenants of the proposed Project.

d) Non-residential and residential structures shall demonstrate that roofing materials meet or exceed enhanced cool roof performance standards of the California Building Energy Efficiency Standards (Title 24, Part 6). This is defined as achieving a 3-year solar reflective index (SRI) of 82 for a low-sloped roof (≤2:12 pitch) and 32 for a high-sloped (>2:12) roof.

e) Outdoor pavement, such as walkways and patios, shall include paving materials with 3-year SRI of 0.28 or initial SRI of 0.33.

f) Install all-electric, high-efficiency water heating systems. Residential and non-residential development shall utilize electric water heating systems, such as heat pump water heaters (HPWHs) or equivalent high-efficiency electric systems.

g) Encourage passive solar cooling/heating.

h) Strategically plant trees to provide shade.

MM-4.8-3 Electric Vehicle Ready New Construction. Prior to the issuance of building permits, applicants for future development projects subject to the MUOD within the Planning Area shall provide evidence to the City that the design plans include electric vehicle charging infrastructure that meets or exceeds the voluntary standards (Tier 1 or Tier 2) in the California Green Building Standards Code at the time of project approval is incorporated into the development and that adequate charging equipment, capacity, and design features are provided to support effective long-term operation.

MM-4.8-4 On-site Solar. Prior to the issuance of building permits, applicants of future development projects subject to the MUOD in the Planning Area shall provide evidence to the City that building designs include a rooftop photovoltaic (PV) system that meets or exceeds the current mandatory photovoltaic requirements of the California Green Building Standards Code (CALGreen) in effect at the time of project approval by maximizing feasible rooftop coverage and minimizing exemptions.

MM-4.8-5 Water Conservation. Prior to the issuance of building permits for future development projects subject to the MUOD within the Planning Area, the applicant shall require, through construction contractor's contract specifications, the project design plans include water conservation measures that meet or exceed requirements of the California Green Building Standards Code (CALGreen).

Water conservation measures shall demonstrate enhanced indoor and outdoor water efficiency and shall include one or more of the following, as applicable:

a) Installation of high-efficiency plumbing fixtures and appliances.

b) Water-efficient landscape design consistent with the Model Water Efficient Landscape Ordinance (MWELO), including the use of drought-tolerant and native plant species, reduced turf areas, and soil amendment practices.

c) Efficient irrigation systems, such as drip irrigation, smart controllers, and weather-based irrigation scheduling, designed to minimize potable water use.

d) Site design strategies that reduce potable water demand and improve water retention, including water-sensitive urban design practices (e.g., permeable paving, bioretention areas, or stormwater capture features).

e) Where feasible, installation of alternative water supply systems, such as rainwater harvesting or graywater reuse systems for non-potable uses.

4.8.7 Level of Significance Conclusion

Threshold 4.8-1 MM-4.8-1 through MM-4.8-5 would reduce GHG emissions; however, due to the lack of project-specific information, the effectiveness in reducing GHG emissions cannot be accurately quantified. Therefore, the potential for future development under the proposed Project to generate GHG emissions that would have an impact on the environment is considered **significant and unavoidable** and cumulatively considerable.

Threshold 4.8-2 MM-4.8-1 through MM-4.8-5 would assist the Project in not conflicting with relevant GHG reduction plans; however, due to the lack of project-specific information, the effectiveness in consistency with the applicable GHG reduction plans cannot be ensured and impacts would be **significant and unavoidable** and cumulatively considerable.

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4.9 Hazards and Hazardous Materials

This section of the Draft Program Environmental Impact Report (PEIR) analyzes the potential impacts from the implementation of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation (Project) on hazards and hazardous materials, including the potential for hazardous releases through routine transport, use or disposal of hazardous materials, significant hazards through upset conditions, emission of hazards near sensitive land uses, location of properties on a list of hazardous sites, location within proximity to an airport, and potential for interference with an emergency evacuation plan. A discussion of the existing hazards and hazardous materials conditions in the Planning Area and surrounding areas is included in this section. The analysis is based, in part, on information obtained from the Cortese List (databases maintained in accordance with California Government Code Section 65962.5), the National Pipeline Mapping System online database, the California Geologic Energy Management (CalGEM) Well Finder database, Environmental Protection Agency (EPA) Superfund online database, the State Water Resources Control Board (SWRCB) Groundwater Ambient Monitoring and Assessment Program online database, and the Department of Toxic Substances Control's (DTSC) EnviroStor and SWRCB's GeoTracker online databases. Additional resources are included in Section 4.9.8, References of this Draft EIR.

4.9.1 Existing Conditions

This section describes the existing hazardous materials conditions of the Planning Area (Figure 2-2, Planning Area). Information utilized for this section includes the publicly available database searches and documents that are cited within the text below.

For the purpose of this Draft PEIR, the term "hazardous waste" refers to any waste material that exhibits ignitability, corrosivity, reactivity, and/or toxicity, meeting certain criteria as defined in 22 California Code of Regulations (CCR), Section 66261.20. A "hazardous material" is defined in California Health and Safety Code Section 25501(n)(1), which states that a material could be hazardous "because of its quantity, concentrations, 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."

4.9.1.1 Cortese List Sites

California Government Code Section 65962.5 requires that information regarding environmental impacts of hazardous substances and wastes be maintained and provided at least annually to the Secretary for Environmental Protection. Commonly referred to as the Cortese List, this information must include the following: sites impacted by hazardous wastes, public drinking water wells that contain detectable levels of contamination, underground storage tanks with unauthorized releases, solid waste disposal facilities from which there is migration of hazardous wastes, and all cease and desist and cleanup and abatement orders. While the Cortese List is no longer maintained as a single list, the following databases provide information that meet the Cortese List requirements (CalEPA 2026):

1. List of Hazardous Waste and Substances sites from DTSC's EnviroStor database (Health and Safety Codes 25220, 25242, 25356, and 116395);
2. List of Leaking Underground Storage Tank (LUST) Sites from the SWRCB's GeoTracker database (Health and Safety Code 25295);
3. List of solid waste disposal sites identified by the SWRCB with waste constituents above hazardous waste levels outside the waste management unit (Water Code Section 13273 subdivision (e) and California Code of Regulations Title 14 Section 18051));

4. List of "active" Cease and Desist Orders and Cleanup and Abatement Orders from the SWRCB (Water Code Sections 13301 and 13304); and
5. List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC.

A search of the online databases that provide information on Cortese List sites was conducted for the Planning Area (CalEPA 2026; DTSC 2026; SWRCB 2026a). The findings of the searches are shown on Figure 4.9-1, Cortese List Sites. Two hundred fifty six Cortese List sites were identified on or within 0.25 miles of the Planning Area. While numerous Cortese List sites have received regulatory closure, this may not indicate the site is suitable for residential redevelopment. For example, LUST sites may undergo closure under the Low-Risk Closure Program, which allows contamination to remain in place so long as it meets a series of criteria based on the site conditions at the time of closure. Additionally, sites may receive conditional closure, indicating land use restrictions or other covenants may be placed on the property. For a property to be suitable for residential development, the site must meet residential development standards applicable at the time of redevelopment; i.e. contamination may not be present above risk-based cleanup standards applicable at the time of redevelopment.

4.9.1.2 Superfund Sites

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) provides funding for EPA to clean up contaminated sites. The contaminated sites under CERCLA are called Superfund sites. The EPA maintains an online database of Superfund sites (EPA 2026a). No sites were identified on or within 1 mile of the Planning Area.

4.9.1.3 Non-Cortese List Sites

In addition to the Cortese List, there are other online databases that provide environmental information on release and cleanup cases in the State of California. While these databases are not included in the Cortese List, they may provide additional information regarding potential environmental contamination within the Planning Area. Table 4.9-1 provides a summary of the databases searched.

Table 4.9-1. Non-Cortese Hazardous Material Online Database Listings

Database	Details
California Environmental Protection Agency (CalEPA)* https://siteportal.calepa.ca.gov/nsite/	The CalEPA Regulated Site Portal is a website that combines data about environmentally regulated sites and facilities in California into a single, searchable database and interactive map. Data sources include California Environmental Reporting System, EnviroStor, GeoTracker, California Integrated Water Quality System, and Toxics Release Inventory.
Department of Toxic Substance Control (DTSC) EnviroStor https://www.envirostor.dtsc.ca.gov/	The DTSC's data management system for tracking cleanup, permitting, enforcement, and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons for further investigation.
Regional Water Quality Control Board (RWQCB) GeoTracker http://geotracker.waterboards.ca.gov/	The California RWQCB's data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater. GeoTracker contains records for sites that require cleanup, various unregulated projects, and permitted facilities. Sites include LUSTs, Department of Defense, Cleanup Program, Irrigated Lands, Oil and Gas Production, Permitted USTs, and Land Disposal Sites.
CalRecycle Solid Waste Information System (SWIS) https://www2.calrecycle.ca.gov/SolidWaste/Site/Search	The SWIS database contains information on solid waste facilities, operations, and disposal sites throughout California.

Note:
* The CalEPA Regulated Site Portal contains data from multiple databases, including LUST and Cleanup Program Sites from the GeoTracker database, and State Response Sites from EnviroStor. Sites shown on both the GeoTracker and CalEPA Regulated Site Portal databases are reported as GeoTracker sites.

A search of the online databases listed in Table 4.9-1 was conducted for the Planning Area. The findings of the searches are shown on Figure 4.9-2, Non-Cortese List Sites. Over 1,000 sites were identified in these hazardous material databases. While not all sites have documented releases of hazardous materials, all sites currently or have historically handled, used, generated, and/or stored hazardous materials and/or hazardous wastes. Sites with documented contamination include, but are not limited to, voluntary cleanup sites, military cleanup sites, and corrective action sites. As with Cortese List sites, regulatory closure of a hazardous material release site may not indicate the site is suitable for residential redevelopment.

4.9.1.4 National Pipeline Mapping System

The National Pipeline Mapping System online database provides a public map viewer application that displays data related to gas transmission and hazardous liquid pipelines, liquefied natural gas plants, and breakout tanks under Department of Transportation Pipeline and Hazardous Material Safety Administration jurisdiction (PHMSA 2026). As shown on Figure 4.9-3, Oil and Gas, three pipelines are located within proximity to the Planning Area. This includes one natural gas and one liquid petroleum pipeline along Red Hill Avenue west of the John Wayne Municipal Airport, and an interplant digester gas pipeline that runs parallel to the Santa Ana River from Orange County Sanitation District's Fountain Valley Treatment Plant to the Huntington Beach Treatment Plant. The natural gas line along Red Hill Avenue adjoins the Planning Area but is present only within public rights-of-way and does not cross through any Planning Area parcels.

4.9.1.5 Oil Well Operations

CalGEM maintains a database of all registered oil and gas wells within the State of California (CalGEM 2026). Over 200 oil and gas wells were identified within 0.25 miles of the Planning Area, and the southern portion of the Planning Area overlaps the Newport Oil Field (see Figure 4.9-3, Oil and Gas). All identified wells are either idle or plugged. Multiple wells are located on Planning Area parcels. CalGEM has the authority under California Public Resources Code (PRC) Section 3208.1 to require re-abandonment of a well where there is reason to question the integrity of the previous abandonment. As such, CalGEM advises against building over, or in any way impeding access to oil, gas, or geothermal wells. CalGEM also advises all wells identified within a parcel to be tested for liquid or gas leakage prior to or during development.

4.9.1.6 SWRCB Groundwater Ambient Monitoring and Assessment Program

The SWRCB maintains an online database presenting groundwater quality data from several sources in California. Sources include groundwater production wells, which are wells that are typically screened in a deeper aquifer for water supply, and groundwater monitoring wells, which are typically shallower wells associated with assessment of near-surface chemical releases. Groundwater quality data associated with groundwater monitoring wells that have been uploaded by responsible parties to the SWRCB's Groundwater Ambient Monitoring and Assessment database were reviewed to understand groundwater quality in the Project areas (SWRCB 2026b). Groundwater data for common contaminants (trichloroethylene, tetrachloroethylene, 1,4-dioxane, hexavalent chromium, and benzene) detected in the past 5 years at concentrations above drinking water maximum contaminant levels (MCLs) were evaluated. While these do not represent all possible contaminants of concern in groundwater, they represent five common chemicals associated with groundwater cleanup. In general, contaminated groundwater identified overlapping the Planning Area is associated with open and active cleanup sites (Figures 4.9-1 and 4.9-2). Table 4.9-2 provides a summary of known areas of groundwater contamination within the Planning Area, focusing on groundwater contamination directly beneath Planning Area parcels associated with the five common chemicals listed above.

Table 4.9-2. Contaminated Groundwater within Planning Area

Location	Contaminant of Concern (MCL)	Maximum Recent Concentration (Date)	Associated Cleanup Site
Northeast of intersection of Bristol Street and Paularino Avenue	Benzene (1 µg/L)	1,900 µg/L (9/17/2025)	Hilton Costa Mesa 3050 Bristol Street LUST Cleanup T10000010923
Southwest of intersection of Baker Street and Randolph Avenue	TCE (5 µg/L) Benzene (1 µg/L)	490 µg/L (6/19/2025) <7.3 µg/L (6/19/2025)	Thrifty Oil #151 751 Baker Street LUST Cleanup T0605900509
Southwest of intersection of Baker Street and Bristol Avenue	Benzene (1 µg/L)	177 µg/L (1/27/2021)	G&M Oil #21 2995 Bristol Avenue LUST Cleanup T0605901918
North of East 17th Street, between Superior Avenue and Highway 55	TCE (5 µg/L)	2,830 µg/L (9/22/2025)	Walgreens Store No. 11652 1726 Superior Avenue Cleanup Program T10000004759

Notes: µg/L = milligrams per liter. All addresses are located within Costa Mesa, California.

4.9.1.7 Hazardous Building Materials

The Costa Mesa area has been developed since the late 1800s, beginning with rural residential and farming properties and the Southern Pacific Railroad running along present-day Highway 55. The City was incorporated in 1953, and the area continued to expand with both residential and commercial properties since that time. Buildings constructed prior to the 1980s often contain hazardous building materials, such as asbestos, lead-based paints, polychlorinated biphenyls (PCBs), and universal wastes. Based on the age and commercial nature of many of the buildings within the Planning Area, there is a potential for hazardous building materials to be present, as described below.

Asbestos. Many building materials commonly contained asbestos until the late 1970s, and a smaller list of building materials contained asbestos in the 1980s, such as drywall, joint compounds, vinyl flooring, roofing, asbestos-cement products, and stucco. Asbestos can also be found in subsurface transite piping. The EPA released a partial ban on asbestos-containing materials in 1989, but a full ban on the use and marketing of asbestos-containing materials did not occur until April 2019.

Lead-based Paints. Paint manufacturers frequently used lead as a primary paint ingredient through the 1940s and gradually decreased its use in the 1950s and 1960s. The federal department of Housing and Urban Development estimates 30 percent of homes built in the United States before 1978 contain some lead-based paint (HUD 2011). The Consumer Product Safety Commission prohibited the use of lead-based paints in residential buildings in 1978; however, the use of lead-based paints in commercial and industrial buildings is not prohibited.

PCBs. PCBs were domestically manufactured from 1929 until manufacturing was banned under the Toxic Substances Control Act (TSCA) in 1979. Due to their non-flammability, chemical stability, high boiling point, and electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications such as plasticizers in paints and rubbers, dyes and pigments, and electrical and hydraulic equipment (EPA 2026b).

Universal Wastes. The EPA has created universal waste regulations to streamline hazardous waste management and promote collection and recycling of universal wastes. Under 40 CFR Part 273 (further discussed in Section 4.9.2), universal wastes include batteries, pesticides, mercury-containing equipment, lamps, and aerosol cans. These are materials deemed unfit to be disposed of as municipal solid waste, and should be handled in such a way as to prevent releases to the environment.

4.9.1.8 Schools

Numerous schools are located throughout the city, including multiple within 0.25 miles of the Planning Area, which is defined as the “study area” on Figure 4.9-4, Schools within Quarter Mile of Planning Area. No K-12 schools are located on Planning Area parcels. Sofia University, a private higher education facility at 3333 Harbor Boulevard, is located within the Planning Area.

4.9.1.9 Airports

The John Wayne Municipal Airport is located less than 0.25 miles east of the Planning Area. As such, portions of the Planning Area are located within the John Wayne Airport Environs Land Use Plan (AELUP) (ALUC 2008). As shown on Figure 4.9-5, Airport Hazards, the Planning Area overlaps the following zones. Descriptions of each zone are provided in the AELUP (ALUC 2008).

60 Community Noise Equivalent Level (CNEL) and 65 CNEL noise contours. The 60 and 65 CNEL zones represent moderate and high noise impact areas, respectively. Noise impact in these areas is sufficient to require sound attenuation as required by California Noise Insulation Standards, CCR Title 25. The Orange County Airport Land Use Commission (ALUC) restricts residential uses in the 65 CNEL zone unless it can be conclusively shown that sufficient sound attenuation is present, and strongly recommends that residential units be limited or excluded from the 60 CNEL zone unless sufficient sound attenuation is provided (ALUC 2008). Interior residential noise levels cannot exceed 45 decibels (dB), and residences in the 65 CNEL zone are also required an accompanying dedication of an avigation easement for noise to the airport applicable to all single-family residences, multi-family residences, and mobile homes.

Federal Aviation Regulations (FAR) Part 77 Notification. The majority of the Planning Area is located within the FAR Part 77 Notification Area, which implements height restrictions for air travel and navigation. As further discussed in Section 4.9.2.1, notification to the Federal Aviation Administration (FAA) is required dependent upon the location and height of new construction within this zone. The FAA may limit structure heights based upon air travel and navigation needs.

Safety Zones. Safety Zones 3 and 6 overlap portions of the Planning Area. Safety Zone 3 is an Inner Turning Zone, representing an area where aircraft are typically turning from the base to final approach legs and departing aircraft normally complete the transition from takeoff mode to climb mode. Residential uses in these areas should be limited[1] to very low densities, and land uses should avoid[2] high use intensities (such as major shopping, fast food, theaters) and prohibit[3] schools, day care centers, hospitals, and nursing homes. Safety Zone 6 is a Traffic Pattern Zone, representing the outermost safety zone with a low likelihood of accident occurrence, and includes all other traffic patterns not included in other safety zones (Zones 1 through 5). Residential uses are compatible in this area; land uses to avoid include high intensity outdoor uses (such as stadiums), schools, day care centers, hospitals, and nursing homes.

4.9.1.10 Fire Hazard Zones

California Government Code section 51178 requires California Department of Forestry and Fire Protection (CAL FIRE) to identify and map "Fire Hazard Severity Zones" using consistent statewide criteria. On March 24, 2025, CAL FIRE released an updated version of the map from the director of CAL FIRE for an updated Fire Hazard Severity Zone map in the unincorporated areas of the County of Orange (CAL FIRE 2025). These maps use the latest climate data, fire history, topography, and wildfire modeling to classify areas as Very High, High, or Moderate Fire Hazard Zones. The Fire Hazard Severity Zones map has been reviewed and adopted by the Board of Supervisors via Ordinance No. 25-015 on August 26, 2025 (OCPW 2026).

Two moderate and one high fire hazard severity zones are present within the city. One parcel within the Planning Area is located approximately 0.1 miles east of a moderate fire hazard severity zone, Assessor's Parcel Number (APN) 424-321-17, located south of West 19th Street and east of Whittier Avenue. The remaining Planning Area is not on nor within 0.25 miles of a fire hazard severity zone.

1 "limit": "use is acceptable only if density/intensity restrictions are met" (ALUC 2008).
2 "avoid": "use generally should not be permitted unless no feasible alternative is available" (ALUC 2008).
3 "prohibit": "use should not be permitted under any circumstances" (ALUC 2008).

4.9.2 Regulatory Requirements

4.9.2.1 Federal

Resource Conservation and Recovery Act of 1976, with Hazardous and Solid Waste Amendments of 1984

Federal hazardous waste laws are generally promulgated under the Resource Conservation and Recovery Act (RCRA). These laws provide for the "cradle to grave" regulation of hazardous wastes. Any business, institution, or other entity that generates hazardous waste is required to identify and track its hazardous waste from the point of generation until it is recycled, reused, or disposed. DTSC is responsible for implementing the RCRA program and California's own hazardous waste laws, which are collectively known as the Hazardous Waste Control Law. Under the Certified Unified Program Agency (CUPA) program, California Environmental Protection Agency (Cal/EPA) has in turn delegated enforcement authority to the County for state law regulating hazardous waste producers or generators. The 1986 amendments to RCRA enabled the United States EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. Some of the other mandates of this law include increased enforcement authority for EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program.

Comprehensive Environmental Response, Compensation, and Liability Act and the Superfund Amendments and Reauthorization Act of 1986

Congress enacted CERCLA, commonly known as Superfund, on December 11, 1980. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified. The Superfund Amendments and Reauthorization Act (SARA) amended CERCLA on October 17, 1986. SARA stressed the importance of permanent remedies and innovative treatment technologies in cleaning up hazardous waste sites, required Superfund actions to consider the standards and requirements found in other state and federal environmental laws and regulations, provided new enforcement authorities and settlement tools, increased state involvement in every phase of the Superfund program, increased the focus on human health problems posed by hazardous waste sites, encouraged greater citizen participation in making decisions on how sites should be cleaned up, and increased the size of the trust fund to $8.5 billion.

Emergency Planning Community Right-to-Know Act

The Emergency Planning Community Right-to-Know Act, also known as SARA Title III, was enacted in October 1986. This law requires any infrastructure at the state and local levels to plan for chemical emergencies. Reported information is then made publicly available so that interested parties may become informed about potentially dangerous chemicals in their community. Sections 301 through 312 of the Act are administered by EPA's Office of Emergency Management. EPA's Office of Information Analysis and Access implements the Emergency Planning Community Right-to-Know Act Section 313 program. In California, SARA Title III is implemented through the California Accidental Release Prevention Program.

Hazardous Materials Transportation Act

Transportation of hazardous materials is regulated by the U.S. Department of Transportation's Office of Hazardous Materials Safety. The office formulates, issues, and revises hazardous materials regulations under the Federal Hazardous Materials Transportation Law. The hazardous materials regulations cover hazardous materials definitions and classifications, hazard communications, shipper and carrier operations, training and security requirements, and packaging and container specifications. The hazardous materials transportation regulations are codified in 49 Code of Federal Regulations (CFR) Parts 100–185.

The hazardous materials transportation regulations require carriers transporting hazardous materials to receive training in the handling and transportation of hazardous materials. Training requirements include pre-trip safety inspections, use of vehicle controls and equipment including emergency equipment, procedures for safe operation of the transport vehicle, training on the properties of the hazardous material being transported, and loading and unloading procedures. All drivers must possess a commercial driver's license as required by 49 CFR Part 383. Vehicles transporting hazardous materials must be properly placarded. In addition, the carrier is responsible for the safe unloading of hazardous materials at the site, and operators must follow specific procedures during unloading to minimize the potential for an accidental release of hazardous materials.

Toxic Substances Control Act

The Toxic Substances Control Act of 1976 provides EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from TSCA, including, among others, food, drugs, cosmetics and pesticides. TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon and lead-based paint.

PCBs. The EPA prohibited the use of polychlorinated biphenyls (PCBs) in the majority of new electrical equipment starting in 1979 and initiated a phase-out for much of the existing PCB-containing equipment. The inclusion of PCBs in electrical equipment and the handling of those PCBs are regulated by the provisions of the Toxic Substances Control Act (15 US Code Section 2601 et seq.). Relevant regulations include labeling and periodic inspection requirements for certain types of PCB-containing equipment and highly specific safety procedures for their disposal. The state likewise regulates PCB-laden electrical equipment and materials contaminated above a certain threshold as hazardous waste; these regulations require that such materials be treated, transported, and disposed accordingly. At lower concentrations for non-liquids, Regional Water Quality Control Boards may exercise discretion over the classification of such wastes.

Asbestos. In 1989 EPA released a partial ban on the manufacture, import, processing, and distribution of some asbestos-containing products, and banned new uses of asbestos which prevented new asbestos products to enter the US marketplace after August 1989. In April 2019, EPA implemented restrictions on discontinued uses of asbestos to ensure asbestos products no longer on the market could not return to commerce. From December 2020 through November 2024, EPA released various risk evaluations and proposed bans for ongoing use of asbestos, including restrictions for chrysolite use.

Lead-Based Paint. The EPA has released various regulations, policies, and guidance associated with the use of lead-based products, including lead in paint, dust, and soil; lead in water, lead in air, lead waste cleanup, lead wheel weights, and lead release reporting. Title IV of the TSCA, as well as other authorities in the Residential Lead-Based Paint Hazard Reduction Act of 1992, direct EPA to regulate lead-based paint hazards. These rules, under 40 CFR

Part 745 include the Lead Renovation, Repair, and Painting Program Rule; the Lead Abatement Program; Residential Lead-Based Paint Disclosure Program; and Residential Hazard Standards and Clearance Levels for Lead in Paint, Dust, and Soil.

Occupational and Safety Health Act

The Occupational Safety and Health Administration (OSHA) is responsible at the federal level for ensuring worker safety. OSHA sets federal standards for implementing workplace training, exposure limits, and safety procedures for the handling of hazardous substances and hazardous materials (as well as other hazards). OSHA also establishes criteria by which each state can implement its own health and safety program.

Federal Response Plan

The Federal Response Plan of 1999, as amended in 2003 is a signed agreement among 27 federal departments and agencies, including the American Red Cross, that (1) provides the mechanism for coordinating delivery of federal assistance and resources to augment efforts of state and local governments overwhelmed by a major disaster or emergency; (2) supports implementation of the Robert T. Stafford Disaster Relief and Emergency Act, as well as individual agency statutory authorities; and (3) supplements other federal emergency operations plans developed to address specific hazards. The Federal Response Plan is implemented in anticipation of a significant event likely to result in a need for federal assistance or in response to an actual event requiring federal assistance under a presidential declaration of a major disaster or emergency.

International Fire Code

The International Fire Code (IFC), created by the International Code Council, is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The IFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The IFC and the International Building Code use a hazard classification system to determine what measures are required to protect against structural fires. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, IFC employs a permit system based on hazard classification. The IFC is updated every 3 years.

Code of Federal Regulations – Title 40

Title 40 CFR Part 273 governs the collection and management of universal wastes, including batteries, pesticides, mercury-containing equipment, and light bulbs. This regulation streamlines the hazardous waste management standards and ensures that such waste is diverted to the appropriate treatment or recycling facility.

Title 40 CFR Part 112 requires the preparation of a Spill Prevention, Control, and Countermeasure (SPCC) Plan if oil is stored in excess of 1,320 gallons in aboveground storage (or have a buried capacity of 42,000 gallons). SPCC regulations place restrictions on the management of petroleum materials and, therefore, have some bearing on hazardous materials management.

Title 40 CFR Part 61 established National Emission Standards for Hazardous Air Pollutants and names asbestos-containing material (ACM) as one of these materials. ACM use, removal, and disposal are regulated by USEPA under this law. In addition, notification of friable ACM removal prior to a proposed demolition Project is required by this law.

Regional Screening Levels (RSLs)

The federal EPA provides regional screening levels for chemical contaminants to provide comparison values for residential and commercial/industrial exposures to soil, air, and tap water (drinking water). RSLs are available on the EPA's website and provide a screening level calculation tool to assist risk assessors, remediation Project managers, and others involved with risk assessment and decision-making. RSLs are also used when a site is initially investigated to determine if potentially significant levels of contamination are present to warrant further investigation. In California, the DTSC Human and Ecological Risk Office (HERO) incorporated the EPA RSLs into the HERO human health risk assessment. HERO created Human Health Risk Assessment Note 3, which incorporates HERO recommendations and DTSC-modified screening levels (DTSC-SLs) based on review of the EPA RSLs. The DTSC-SL should be used in conjunction with the EPA RSLs to evaluate chemical concentrations in environmental media at California sites and facilities.

Federal Aviation Administration

Title 14 CFR Part 77 establishes requirements for notifying the FAA of certain construction activities and alterations to existing structures, in order to ensure there are no obstructions to navigable airspace.

FAR Part 77. The following height restrictions are defined below in Section 77.13(a):

77.13 Construction or Alteration Requiring Notice***.***

(1) Any construction or alteration of more than 200 feet in height above the ground level at its site.

(2) Any construction or alteration of greater height than an imaginary surface extending outward and upward at one of the following slopes:

(i) 100 to 1 for a horizontal distance of 20,000 feet from the nearest point of the nearest runway of each airport specified in paragraph (a)(5) of this section with at least one runway more than 3,200 feet in actual length, excluding heliports.

(ii) 50 to 1 for a horizontal distance of 10,000 feet from the nearest point of the nearest runway of each airport specified in paragraph (a)(5) of this section with its longest runway no more than 3,200 feet in actual length, excluding heliports.

(iii) 5 to 1 for a horizontal distance of 5,000 feet from the nearest point of the nearest landing and takeoff area of each heliport specified in paragraph (a)(5) of this section.

77.19 Civil airport imaginary surfaces***.***

The maximum allowable building height for the subject parcels is determined pursuant to FAR Part 77, which establishes standards for the protection of navigable airspace surrounding public-use airports. These regulations define a series of imaginary surfaces around airports that are used to evaluate whether proposed structures would constitute an obstruction to air navigation.

Under 14 CFR §77.19, the following imaginary surfaces are relevant:

- Primary Surface

- Approach Surface
- Transitional Surface
- Horizontal Surface
- Conical Surface

For any given location, multiple surfaces may overlap. The applicable maximum height is determined by the lowest (most restrictive) imaginary surface at the project site.

4.9.2.2 State

California Health and Safety Code and Code of Regulations

Under the California Environmental Protection Agency, the DTSC and Enforcement and Emergency Response Program administer the technical implementation of California's Unified Program, which consolidates the administration, permit, inspection, and enforcement activities of several environmental and emergency management programs at the local level. CUPAs implement hazardous waste and materials standards. The CUPA for Orange County is the Orange County Health Care Agency (OCHCA). This program was established under the amendments to the California Health and Safety Code made by Senate Bill 1082 in 1994. The following programs make up the Unified Program:

- Aboveground Petroleum Storage Act Program
- Area Plans for Hazardous Materials Emergencies
- California Accidental Release Prevention (CalARP) Program
- Hazardous Materials Release Response Plans and Inventories (HMBPs)
- Hazardous Material Management Plans and Hazardous Material Inventory Statements
- Hazardous Waste Generator and On-Site Hazardous Waste Treatment (Tiered Permitting) Program
- Underground Storage Tank Program

California Health and Safety Code (HSC) Sections 25500-25520 require the preparation of an HMBP by facility operators. The HMBP identifies the hazards, storage locations, and storage quantities for each hazardous chemical stored on site. The HMBP also includes emergency response procedures in the event of releases or threat of releases to hazardous materials. The HMBP is submitted to the CUPA for emergency planning purposes and subjects the site to regular compliance inspections by the CUPA.

HSC Section 25501 states that a "hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment. Hazardous materials refer generally to hazardous substances that exhibit corrosive, poisonous, flammable, and/or reactive properties and have the potential to harm human health and/or the environment.

The transport of hazardous waste materials is further governed by California Health and Safety Code Section 25163 and Title 22, Chapter 13, of the CCR. Specifically, Section 25163 of the Health and Safety Code requires transporters of hazardous waste to hold a valid registration issued by the DTSC in his/her possession while transporting hazardous waste. Additionally, Title 22, Chapter 13, of the CCR includes a number of requirements,

which include, but are not limited to, the requirement to receive an identification number and a registration certificate from DTSC; requirement to obtain a Uniform Hazardous Waste Manifest that has been properly completed and signed by generator and transporter prior to accepting hazardous wastes; and delivery of hazardous waste to authorized facilities only.

California Environmental Protection Agency

Cal/EPA was created in 1991 by the Governor's Executive Order W-5-91. Several state regulatory boards, departments, and offices were placed under the Cal/EPA umbrella to create a cabinet-level voice for the protection of human health and the environment and to assure the coordinated deployment of state resources. Among those responsible for hazardous materials and waste management are DTSC, Department of Pesticide Regulation, and Office of Environmental Health Hazard Assessment. Cal/EPA also oversees the unified hazardous waste and hazardous materials management regulatory program (Unified Program).

California Department of Toxic Substances Control

The California DTSC, which is a department of Cal/EPA, is authorized to carry out the federal RCRA hazardous waste program in California to protect people from exposure to hazardous wastes. The department regulates hazardous waste, cleans up existing contamination, and looks for ways to control and reduce the hazardous waste produced in California, primarily under the authority of RCRA and in accordance with the California Hazardous Waste Control Law (California Health and Safety Code Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (22 California Code of Regulations [CCR] Divisions 4 and 4.5). Permitting, inspection, compliance, and corrective action programs ensure that people who manage hazardous waste follow state and federal requirements and other laws that affect hazardous waste specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

California Geologic Energy Management Division

The California Geologic Energy Management Division (CalGEM) provides oversight of the oil, natural gas, and geothermal industries in California. CalGEM requires that prior to commencing any work to abandon any oil/gas well, the owner or operator must request approval from CalGEM. Inactive and deserted oil and gas wells that are not maintained (i.e., "idle wells") can pose threats to groundwater and public safety (CDOC 2026).[4]

CalGEM has the authority under PRC Section 3208.1 to require re-abandonment of a well where there is reason to question the integrity of the previous abandonment. As such, CalGEM advises against building over, or in any way impeding access to oil, gas, or geothermal wells. CalGEM also advises all wells identified within a parcel to be tested for liquid or gas leakage prior to or during development. Surveys of the well would be submitted to CalGEM for review, and any identified leaks should be reported to CalGEM.

[4] According to the California Public Resources Code, an idle well is defined as "…any well that for a period of 24 consecutive months has not either produced oil or natural gas, produced water to be used in production stimulation, or been used for enhanced oil recovery, reservoir pressure management, or injection. For the purpose of determining whether a well is an idle well, production or injection is subject to verification by the division" (CDOC 2026).

Pipeline Safety

California Government Code Section 51014.6

Section 51014.6 of the California Government Code states the following:

> (a) Effective January 1, 1987, no person, other than the pipeline operator, shall do any of the following with respect to any pipeline easement: (1) Build, erect, or create a structure or improvement within the pipeline easement or permit the building, erection, or creation thereof. (2) Build, erect, or create a structure, fence, wall, or obstruction adjacent to any pipeline easement which would prevent complete and unimpaired surface access to the easement, or permit the building, erection, or creation thereof. (b) No shrubbery or shielding shall be installed on the pipeline easement which would impair aerial observation of the pipeline easement. This subdivision does not prevent the revegetation of any landscape disturbed within a pipeline easement as a result of constructing the pipeline and does not prevent the holder of the underlying fee interest or the holder's tenant from planting and harvesting seasonal agricultural crops on a pipeline easement. (c) This section does not prohibit a pipeline operator from performing any necessary activities within a pipeline easement, including, but not limited to, the construction, replacement, relocation, repair, or operation of the pipeline.

As stated in the Office of the State Fire Marshal, Pipeline Safety Division Information Sheet (CAL FIRE 2015), it is the position of the State Fire Marshal that nothing may encroach into or upon the pipeline easement that would impede the pipeline operator from complete and unobstructed surface access along the pipeline right-of-way, nor may there be any obstructions that would shield the pipeline right-of-way from observation. In the interest of public safety and the protection of the environment, it is imperative that the pipeline operator visually assesses the conditions along the easement to ensure the integrity of the pipeline.

It is the responsibility of the pipeline operator to ensure that they have unimpeded surface access and to be able to physically observe all portions of their pipeline rights-of-way. In cases where this is not possible, the pipeline operator must inform the State Fire Marshal. The State Fire Marshal will, in collaboration with the pipeline operator, resolve the issue.

California Dig Alert

In accordance with CA Government Code 4216.2, an excavator planning to conduct an excavation shall notify the appropriate regional notification center of the intent to excavate between 2 and 14 calendar days prior to excavation activities. When the excavation is proposed within 10 feet of a "high priority subsurface installation", which includes high pressure natural gas and petroleum pipelines, the operator of the high priority subsurface installation shall notify the excavator of the existing of the installation and set up an onsite meeting to determine actions required to verify location and prevent damage to the installation. The excavator shall not begin excavating until the onsite meeting is complete.

California Building Code

The State of California provides a minimum standard for building design through the 2025 California Building Code (CBC) (also referred to as the 2025 Triennial Edition of Title 24), which is located in Part 2 of Title 24 of the California Code of Regulations. Part 2 of the 2025 CBC is a fully integrated code based on the 2022 International Building Code. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local

conditions. Commercial and residential buildings are plan-checked by local city or county building officials for compliance with the CBC. Typical fire safety requirements of the CBC include the installation of sprinklers in all high-rise buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildlife hazard areas.

California Accidental Release Prevention Program (CalARP)

The CalARP Program (19 CCR 2735.1 et seq.) regulates facilities that use or store regulated substances, such as toxic or flammable chemicals, in quantities that exceed established thresholds. Under the regulations, industrial facilities that handle hazardous materials above threshold quantities are required to prepare and submit a Risk Management Plan to the local CUPA. The overall purpose of CalARP is to prevent accidental releases of regulated substances and reduce the severity of releases that may occur. The CalARP program requires businesses to have planning activities that are intended to minimize the possibility of an accidental release by encouraging engineering and administrative controls. It is further intended to mitigate the consequences of an accidental release, by requiring owners or operators of facilities to develop and implement an accident prevention program. The CalARP Program meets the requirements of the EPA Risk Management Program, which was established pursuant to the Clean Air Act amendments.

California Division of Occupational Safety and Health (Cal/OSHA)

Cal/OSHA is responsible for developing and enforcing workplace safety standards and ensuring worker safety in the handling and use of hazardous materials (8 CCR, Section 1529). Among other requirements, Cal/OSHA requires entities handling specified amounts of certain hazardous chemicals to prepare injury and illness prevention plans and chemical hygiene plans and provides specific regulations to limit exposure of construction workers to lead.

California Fire Code (2022)

Part 9 of Title 24 of the California Code of Regulations refers to the California Fire Code, which contains regulations consistent with nationally recognized and accepted practices for safeguarding life and property from the hazards of the following: fire and explosion; dangerous conditions arising from the storage, handling, and use of hazardous materials and devices; and hazardous conditions in the use or occupancy of buildings or premises. The Fire Code also contains provisions to assist emergency response personnel. The Fire Code also establishes requirements intended to provide safety and assistance to firefighters and emergency responders during emergency operations. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout the State of California. The Fire Code includes regulations regarding fire-resistance-rate construction, fire protection systems such as alarm and sprinkler systems, fire service features such as fire apparatus access roads, means of egress fire safety during construction and demolition, and wildland-urban interface areas. There are fire-safety-related building standards referenced in other parts of Title 24.

California Emergency Services Act

Under the Emergency Services Act (California Government Code, Section 8550 et seq.), the State of California developed an emergency response plan to coordinate emergency services provided by federal, state, and local agencies. Rapid response to incidents involving hazardous materials or hazardous waste is an integral part of the plan, which is administered by the Governor's Office of Emergency Services. The Office of Emergency Services

coordinates the responses of other agencies, including the EPA, California Highway Patrol, Regional Water Quality Control Boards, air quality management districts, and county disaster response offices.

Asbestos-Containing Materials Regulations

State-level agencies, in conjunction with EPA and the Occupational Safety and Health Administration, regulate removal, abatement, and transport procedures for asbestos-containing materials. Releases of asbestos from industrial, demolition, or construction activities are prohibited by these regulations and medical evaluation and monitoring is required for employees performing activities that could expose them to asbestos. Additionally, the regulations include warnings that must be heeded and practices that must be followed to reduce the risk for asbestos emissions and exposure. Finally, federal, state, and local agencies must be notified prior to the onset of demolition or construction activities with the potential to release asbestos.

South Coast Air Quality Management District is responsible for asbestos rules and regulations in Orange County (see Section 4.9.2.3).

Lead-Based Paint

California Occupational Safety and Health Administration's Lead in Construction Standard is contained in Title 8, Section 1532.1, of the California Code of Regulations. The regulations address all of the following areas: permissible exposure limits; exposure assessment; compliance methods; respiratory protection; protective clothing and equipment; housekeeping; medical surveillance; medical removal protection; employee information, training, and certification; signage; record keeping; monitoring; and agency notification.

California Department of Public Health established the Childhood Lead Poisoning Prevention Branch under multiple statutes and regulations, including the Childhood Lead Poisoning Prevention Acts of 1986 and 1989, Childhood Lead Poisoning Prevention Act of 1991, Laboratory Blood Lead Reporting Requirements, Lead Safe Housing Standards, Real Estate Disclosure, and rules for lead in consumer goods (toys, candy, jewelry, plumbing, etc.). Safety work practices, both in industry and construction, were also established under Title 17, California Lead Poisoning Prevention Regulations, and Title 8, Lead Construction Safety Orders.

Environmental Screening Levels

Environmental Screening Levels (ESLs) provide conservative screening levels for over 100 chemicals found at sites with contaminated soil and groundwater. They are intended to help expedite the identification and evaluation of potential environmental concerns at contaminated sites. The ESLs were developed by San Francisco Bay Regional Water Quality Control Board (RWQCB); however, they are used throughout the state. While ESLs are not intended to establish policy or regulation, they can be used as a conservative screening level for sites with contamination.

DTSC Human and Ecological Risk Office Screening Levels

DTSC screening levels were derived from the EPA RSLs using DTSC-modified exposure and toxicity factors for constituents in soil, tap water, and ambient air. The DTSC screening levels should be used in conjunction with the EPA RSLs and RWQCB ESLs to evaluate chemical concentrations in environmental media at California sites and facilities.

Low-Threat Underground Storage Tank Case Closure Policy

This policy applies to petroleum UST sites subject to Chapter 6.7 of the California Health and Safety Code. This policy establishes both general and media-specific criteria. If both the general and applicable media-specific criteria are satisfied, then the LUST case is generally considered to present a low threat to human health, safety, and the environment. This policy recognizes, however, that even if all of the specified criteria in the policy are met, there may be unique attributes of the case or site-specific conditions that increase the risk associated with the residual petroleum constituents. In these cases, the regulatory agency overseeing corrective action at the site must identify the conditions that make case closure under the policy inappropriate.

Regional water boards and local agencies have been directed to review all cases in the petroleum UST cleanup program using the framework provided in this policy. These case reviews shall, at a minimum, include the following for each UST case:

1. Determination of whether or not each UST case meets the criteria in this policy or is otherwise appropriate for closure based on a site-specific analysis.
2. If the case does not satisfy the criteria in this policy or does not present a low-risk based upon a site-specific analysis, impediments to closure shall be identified.
3. Each case review shall be made publicly available on the State Water Resources Control Board's GeoTracker website in a format acceptable to the Executive Director.

4.9.2.3 Local

Orange County Health Care Agency – Environmental Health

The OCHCA is the CUPA designated for the County of Orange by the Secretary for Environmental Protection. The CUPA is the local administrator for hazardous materials, business emergency plans, hazardous waste, USTs, aboveground petroleum storage tanks, and the CalARP Program. Additional information on the CUPA is discussed in this section under the subheading California Unified Program for Management of Hazardous Waste and Materials.

Orange County Codified Ordinance, Section 7-9-146.4 – Waste Management and Hazardous Materials

The County of Orange has specific requirements, in addition to the requirements of each district, for procedures and principles applicable to the use, storage, management, and disposal of hazardous materials. These procedures include disclosure prior to issuance of certificate of occupancy for commercial uses, waste management, and underground storage tanks.

South Coast Air Quality Management District (SCAQMD)

SCAQMD Rule 1403, Asbestos Emissions from Renovation/Demolition Activities, regulates asbestos as a toxic material and controls the emissions of asbestos from demolition and renovation activities by specifying agency notifications, appropriate removal procedures, and handling and clean up procedures. Rule 1403 applies to owners and operators involved in the demolition or renovation of structures with ACMs, asbestos storage facilities, and waste disposal sites.

SCAQMD Rule 1466, Control of Particular Emissions from Soils with Toxic Air Contaminants, regulates certain contaminants when an owner or operator conducts earth-moving activities of soil. The provisions in Rule 1466 include ambient PM10 monitoring, dust control measures, notification, signage, and recordkeeping requirements.

SCAQMD Rule 1166, Volatile Organic Compound Emissions from Decontamination of Soil, regulates emissions of volatile organic compounds (VOCs) when and owner or operator conducts earth-moving activities of soil. The provisions in Rule 1166 include air monitoring for volatile organics, soil management procedures, notification, and reporting requirements.

SCAQMD Rule 403, Fugitive Dust, intends to reduce the amount of particulate matter entrained in ambient air as a result of manmade fugitive dust sources, such as active construction and demolition projects. Under this rule, no person shall allow emissions of fugitive dust from any active operation, open storage pile, or disturbed surface that impedes on air quality.

Orange County Codified Ordinance, Title 3, Division 1 – Emergency Services

An emergency management council and emergency management manager are responsible for ensuring development of the Orange County Emergency Plan, which provides effective mobilization of resources in the county, both public and private, to meet conditions constituting a local or state emergency.

Costa Mesa General Plan – Safety Element

Goals and policies have been established for the City to reduce impacts associated with hazardous materials and natural disasters which could result in hazardous events. Goals and policies that are applicable to the Project are provided below and an analysis of the potential to conflict with these policies is included in Table 4.11-1 of Section 4.11, Land Use and Planning, of this Draft PEIR.

Hazardous Materials Policies

Goal S-1 **Risk Management of Natural and Human-Caused Disasters.** Minimize the risk of injury, loss of life, property damage, and environmental degradation from seismic activity, geologic hazards, flooding, fire, and hazardous materials. Promote a sustainable approach to reduce impacts of natural disasters, such as flooding and fire.

Policy S-1.17 Utilize the John Wayne Airport Environs Land Use Plan (AELUP) as a planning resource for evaluation of land use compatibility and land use intensity in areas affected by airport operations. In particular, future land use decisions within the Safety/Runway Protection Zone will be evaluated in light of the risk to life and property associated with aircraft operations.

Policy S-1.18 Comply with Federal Aviation Regulations (FAR) and the John Wayne AELUP requirements relative to Objects Affecting Navigable Airspace.

Policy S-1.19 Use the Federal Aviation Regulations as a guideline to establish the ultimate height of structures as defined in FAR Part 77.

Policy S-2.7 Require development to contribute its fair share toward funding the provision of appropriate fire and emergency medical services as determined necessary to adequately serve the project.

Policy S-2.9 Emphasize prevention and awareness of fire safety guidelines to minimize risk and potential damage to life, property, and the environment. In areas designated by the Costa Mesa Fire Department as having a high fire hazard, ensure adequate fire equipment, personnel, firebreaks, facilities, water, and access for a quick and efficient response in any area.

Policy S-2.12 Continue to maintain adequate police and fire staffing, facilities, equipment, and maintenance sufficient to protect the community.

Policy S-2.16 Require the safe production, transportation, handling, use, and disposal of hazardous materials that may cause air, water, or soil contamination.

Policy S-2.17 Encourage best practices in hazardous waste management, and ensure consistency with City, County, and federal guidelines, standards, and requirements.

Policy S-2.18 Consult with federal, State, and local agencies and law enforcement to prevent the illegal transportation and disposal of hazardous waste.

Local Hazard Mitigation Plan

The Costa Mesa Local Hazard Mitigation Plan (LHMP) identifies the natural and human-caused hazards that could affect the area and outlines strategies to reduce their impacts. It provides useful information and resources to help community members, City staff, and local officials understand risks and make informed decisions. The LHMP helps strengthen coordination and collaboration among the City, public agencies, local businesses, service providers, and the community (City of Costa Mesa 2022).

Emergency Response and Evacuation

The Emergency Operations Plan (EOP) provides guidance during emergency situations and natural disasters. The EOP identifies key personnel and agencies that are organized to protect life and property in the community during large scale disasters, such as those requiring emergency evacuation activities and orders based on information gathered by emergency experts (City of Costa Mesa 2013).

Emergency evacuation routes have been established throughout the city, and include the following (City of Costa Mesa 2016):

- Northbound and southbound Harbor Boulevard
- Northbound Fairview Road
- Northbound Bear Street
- Northbound Bristol Street
- Southbound Placentia Avenue south of 19th Street
- Westbound and eastbound Interstate 405
- Westbound Adams Avenue

- Eastbound Fair Drive
- Westbound 19th Street between Harbor Boulevard and Placentia Avenue (to facilitate southbound Harbor Boulevard traffic)
- Eastbound Highway 73

4.9.3 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 California Environmental Quality Act (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:

Threshold 4.9-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Threshold 4.9-2: 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.

Threshold 4.9-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

Threshold 4.9-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65762.5 and, as result, would it create a significant hazard to the public or the environment.

Threshold 4.9-5: 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.

Threshold 4.9-6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

The following threshold question for this topic required in accordance with Appendix G of the CEQA Guidelines was scoped out of this Draft PEIR, having been adequately addressed in the Initial Study, wherein it was determined that the Project would have no impact or a less than significant impact on the environment:

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

Thus, an analysis of this threshold is included in Appendix A-1, NOP and Initial Study, of this Draft PEIR.

4.9.4 Impact Analyses

4.9.4.1 Methodology

As described in Chapter 3, Project Description, the Project is a policy document that does not include or propose any site-specific development that could directly result in construction or operational impacts to the environment.

However, implementation of the Project would facilitate additional future development in the city. Therefore, this Draft PEIR does not assess the site-specific construction and operation details of each future development within the Planning Area. Rather, it assesses the impacts associated with changes to existing land uses and the associated overall effects of buildout of the Project through 2056, where reasonably foreseeable physical changes to the environment could occur. Analysis at a parcel or site-specific level was not conducted because, unless otherwise noted within this assessment, the actual locations of development (and its chronological sequence or concurrence) that may be implemented in the future are speculative. If parcel-specific hazards (i.e. a hazard that exists only at one or a specific number of parcels) is identified, then that parcel-specific hazard will be noted and discussed herein.

4.9.4.2 Environmental Analyses

Threshold 4.9-1 ***Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?***

Significant and Unavoidable Impact. Any material may be considered hazardous if it is specifically listed by statute or if the material or waste is considered toxic, ignitable, corrosive, and/or reactive. Hazardous materials are used in various commercially available products (e.g., household cleaners, industrial solvents, paint, pesticides), used in the manufacturing of various products, and can include petroleum and natural gas. The land uses types that could be developed under the Project include new residential uses on existing industrial and commercial properties, including mixed-use development on commercial properties. Both construction and operation of future development projects would likely require the use of hazardous materials. Implementation of the Project would not involve the direct impacts related to the routine transport, use or disposal of any hazardous materials; however, future development projects implemented under the Project have the potential to routinely transport, use and/or dispose of hazardous materials.

Construction

Hazardous Material Transport, Use, Storage, and Disposal

Demolition, earthwork, and construction activities for future projects implemented under the Project would require the use of heavy equipment and machinery and various building materials, which would require temporary and limited use of hazardous substances. The temporary transport, storage, and use of commonly used hazardous substances, such as gasoline, diesel fuel, lubricating oils, paint, grease, adhesives, welding gases, solvents, and vehicle and equipment-maintenance related materials, is anticipated to be required for future projects. All hazardous materials must be used and stored in accordance with manufacturers' instructions and handled in compliance with federal, local and state requirements as summarized in Section 4.9.2 of this Draft PEIR. Such requirements include compliance with the federal Hazardous Materials Transportation Act. The transport of hazardous waste materials is further governed by HSC Section 25163, which requires transporters of hazardous waste to hold a valid registration issued by the DTSC while transporting hazardous waste, and CCR Title 22, Chapter 13, which requires haulers to have an identification number and a registration certificate from DTSC; obtain a Uniform Hazardous Waste Manifest signed by the generator and transporter prior to accepting hazardous wastes; and delivery of hazardous waste to authorized facilities only.

For hazardous material and waste use and storage on future construction sites developed after implementation of the Project, California Health and Safety Code Division 20 Chapter 6.95 requires hazardous materials business plan (HMBP) for any site that stores greater than 55 gallons of liquid, 500 pounds of solid, or 200 cubic feet of compressed gas that is classified as a hazardous material. The HMBP requires reporting to a local regulator,

preparation of emergency response and spill response plans, and subjects the site to regular inspections by the local regulator. For the entire Planning Area, the local HMBP regulator is OCHCA. Storage of petroleum products over 1,320 gallons aboveground or 42,000 gallons belowground are subject to Spill Prevention, Control, and Countermeasure (SPCC) regulations under 40 CFR 112, which require secondary containment, spill response, and training procedures for each site with petroleum storage over the applicable quantity. Aboveground petroleum storage is also subject to California's Aboveground Petroleum Storage Act, which further regulates petroleum storage and subjects' sites to regular inspections by the local CUPA. Appropriate transportation of hazardous materials is required by state and federal law, such as licensing and certification of transportation companies, Safety Data Sheets (SDS) requirements (Title 8 CCR 5194, Hazard Communication Standard), and manifest requirements. Appropriate hazardous waste disposal is required by state and federal law, including RCRA on the federal level and Hazardous Waste Control Laws on the state level.

During construction activities, commonly used hazardous substances must be transported from construction sites and disposed of at a contracted solid waste disposal provider in accordance with all federal, state, and local regulations, including the HSC, Hazardous Materials Transportation Act, Cal/OSHA, and LACoFD requirements. The proposed Project would not result in new or different methods for future construction activities that are not already allowed within the Planning Area or otherwise result in changes to existing requirements for the transport, use or disposal of hazardous materials. Consequently, with compliance with applicable regulations, the future use of construction-related hazardous materials would not pose a significant risk to the public or environment through the temporary routine transport and limited use or disposal of hazardous materials.

Contaminated Sites

As shown on Figures 4.9-1 and 4.9-2, there are numerous hazardous material release sites located within the Planning Area. These are sites that have documented releases of hazardous materials which have impacted soil, soil vapor, and/or groundwater beneath the release site. Known groundwater impacts are also summarized in Table 4.9-2; these groundwater impacts are associated with contaminated sites identified on Figures 4.9-1 and 4.9-2. As the Planning Area is includes commercial and industrial properties that are proposed for rezoning to support future residential and mixed-use development, there is also potential for contamination to be present that has not yet been identified, such as due to historical industrial uses before regulatory enforcement of environmental laws.[5] In addition to these currently existing contaminated, contaminated sites are identified on a continuous basis by regulatory agencies, and more or different sites could be present at the time of future development projects within the Planning Area.

Should future projects be completed on contaminated sites within the Planning Area, construction could result in a significant hazard due to excavation and construction activities within contamination soil, soil vapor or groundwater. Redevelopment of commercial/industrial properties would require appropriate due diligence to ensure site conditions would not impact human health or the environment, both for construction and for future occupancy (further discussed below), and as such, this impact would be potentially significant prior to implementation of mitigation. As stated in Section 3.3.2, Project Components of this Draft PEIR, all MUOD projects would be subject to a Phase I Environmental Assessment (ESA) pursuant to MUOD provisions. The requirement for a Phase I ESA is therefore a requirement of implementation of all future projects under the MUOD; however, mitigation is required

[5] The US EPA was established in the 1970s, which numerous environmental rules and regulations enacted in the 1970s and 1980s. Industrial and commercial operations prior to enforcement of these rules and regulations are likely to have resulted in releases of hazardous materials to the environment, as operations of that time did not meet present day operational standards.

to provide detailed and proscriptive guidance about the required steps to ensure full mitigation with performance standards.

Thus, in accordance with MM-4.9-1, and the Phase I ESA shall be prepared and if necessary, a Phase II ESA shall be prepared to quantify impacts that could result in release of hazardous materials during routine construction or operations. Should contaminated soil, soil vapor, or groundwater be present above risk-based screening levels applicable at the time of Project development, protective measures shall be required as outlined in MM-4.9-1. With the identification and quantification of hazardous material impacts to sites that will be redeveloped within the Planning Area, and protective measures in place during construction, the future construction of contaminated sites that are subject to discretionary actions would not pose a significant risk to the public or environment through the temporary routine transport and limited use or disposal of hazardous materials. However, future non-discretionary projects that would be implemented under the Project would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. As such, even with implementation of existing regulations and MM-4.9-1 as applied to future discretionary projects, potential impacts related to significant hazards from contaminated sites to the public or environment through the routine transport, use, or disposal of hazards materials would be significant and unavoidable because it is not possible to ensure the successful avoidance of all hazards associated with routine use, transport, or disposal of hazardous materials where new development may occur.

Hazardous Building Materials

Construction of future residential developments would occur on properties zoned for commercial or industrial uses, and thus would likely require demolition and removal of existing buildings if the properties have been previously developed. Based on the age of the structure scheduled for demolition, hazardous building materials could be present, such as asbestos, lead-based paints, and universal wastes. Without appropriate identification and abatement, routine demolition and disposal could result in releases of hazardous materials if not properly identified and managed, which would result in a potentially significant impact prior to mitigation . Thus, prior to any demolition or construction activities for future development under the Project, each building proposed for demolition must undergo a hazardous materials assessment as described in MM-4.9-2 to identify hazardous building materials. Once identified, MM-4.9-2 also requires the construction contractor to follow appropriate abatement procedures to remove hazardous materials as part of construction. With the identification and abatement of hazardous building materials that could be encountered during demolition activities within the Planning Area, and protective measures in place during construction, future construction of projects subject to CEQA and discretionary actions would not pose a significant risk to the public or environment through the temporary routine transport and limited use or disposal of hazardous materials. However, future non-discretionary projects that would be implemented under the Project would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. As such, even with implementation of existing regulations and MM-4.9-2 as applied to future discretionary projects, potential impacts related to significant hazards from hazardous building materials to the public or environment through the routine transport, use, or disposal of hazards materials would be significant and unavoidable because it is not possible to ensure the successful avoidance of all hazards associated with routine use, transport, or disposal of hazardous materials where new development may occur.

Operation

Long-term operations would, over time, change current commercial/industrial land uses to residential or mixed use land uses. These anticipated changes in land use would ultimately reduce the use of large quantities of hazardous materials typically seen in industrial operations, as residential and mixed-use land uses do not typically use the

same volumes of hazardous materials. Future residential and mixed-use land uses would use typical household and commercially available hazardous materials, and the Project does not propose industrial uses or new land uses that are not already allowed within the residential and commercial zones in the Project area. Redesignating the currently commercial and industrial land uses to mixed-use to allow for residential development would not expand or increase risks associated with hazardous materials or otherwise result in changes to existing requirements for the transport, use or disposal of hazardous materials. Moreover, the Project would not result in any new industrial uses and no expansion of industrially-zoned land area would occur beyond the existing condition with Project implementation. Regulations that would be required of those transporting, using, or disposing of hazardous materials include RCRA, which provides the cradle-to-grave regulation of hazardous wastes; CERCLA, which regulates closed and abandoned hazardous waste sites; the Hazardous Materials Transportation Act, which governs hazardous materials transportation on U.S. roadways; IFC, which creates procedures and mechanisms to ensure the safe handling and storage of hazardous materials; Title 22, which regulates the generation, transportation, treatment, storage and disposal of hazardous waste; and Title 27, which regulates the treatment, storage and disposal of solid wastes. For development within the State of California, Government Code Section 65850.2 requires that no final certificate of occupancy or its substantial equivalent be issued unless there is verification that the owner or authorized agent has met, or is meeting, the applicable requirements of the HSC, Division 20, Chapter 6.95, Article 2, Sections 25500 through 25520.

While the development of residential and mixed-use properties would ultimately reduce the likely volume of hazardous materials present within the Planning Area, the Project could result in residential or mixed-use development to occur adjoining existing manufacturing or industrial operations. The Project does not include setback modifications or propose that other existing industrial uses decrease in the event new residential development occurs on adjoining land. This could result in incompatible land uses as well as exposure of new occupants of residential properties to significant hazards during routine use, transportation, and disposal of hazardous materials at these preexisting operations, including emissions, hazardous material storage, and industrial water discharges. As there are no requirements for reductions or limitations of hazardous material use, storage, or emissions when new developments are occupied, impacts would be significant and unavoidable.

Overall, with regulatory compliance and implementation of proposed mitigation measures, future development projects subject to CEQA are not anticipated to create a significant hazard to the public or the environment due to the routine use, transport, or disposal of hazardous materials. However, as noted above, future non-discretionary projects that would be implemented under the Project would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. Additionally, land use incompatibility could occur if residential development is placed adjoining existing industrial land uses, as industrial emissions and hazardous material risk modifications are not included as part of the proposed Project. As such, even with implementation of existing regulations and MM-4.9-1 and MM-4.9-2 as applied to future discretionary projects, potential impacts related to the creation of a significant hazard to the public or the environment due to hazards associated with contaminated sites would be significant and unavoidable because it is not possible to ensure the successful avoidance of all hazards associated with routine use, transport, or disposal of hazardous materials where new development may occur.

Threshold 4.9-2 ***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 or waste into the environment?***

Significant and Unavoidable Impact. The following impact analysis discusses the proposed Project's potential to create a significant hazard to the public or the environment through reasonably foreseeable upset and

accident conditions involving the release of hazardous materials or waste into the environment. The following hazardous materials or waste are considered: hazardous building materials (asbestos, lead-based paint, and universal wastes); industrial operations; oil and gas hazards (oil wells, pipelines, and landfills) and soil, soil vapor, and groundwater contamination. As discussed herein, implementation of the Project would not involve the direct impacts related to reasonably foreseeable upset and accident conditions; however, future development projects implemented under the Project have the potential to release hazardous materials or wastes in an upset/accident condition.

Hazardous Material Use, Storage, and Transportation

As discussed under Threshold 4.9-1, construction and operation of future proposed projects within the Planning Area would likely require the use of hazardous materials. Construction and demolition efforts would require temporary and limited use of hazardous substances, while future mixed-use operations could require long-term use and storage of hazardous materials. Materials are not anticipated to be acutely hazardous, and the rezoning from commercial/industrial uses to residential and mixed-use land uses would ultimately reduce the likelihood that large quantities of hazardous materials or waste are used or generated, respectively. Nevertheless, the potential future storage, use, and transportation of hazardous materials could result in an upset/accident condition due to the release of hazardous materials, but to prevent upset and accident conditions, rules and regulations in place for use and storage of hazardous materials and generation of hazardous wastes include spill prevention and control features. For example, HMBPs required under HSC Division 20 Chapter 6.95 include emergency response, spill prevention, and employee training procedures as part of the submittal, and the sites are inspected at regular intervals by the overseeing CUPA Agency (OCHCA). SPCC Plans required under 40 CFR 112 include spill prevention, secondary containment, and employee training procedures explicitly to reduce the likelihood of releases of petroleum products to the environment. SDS requirements (Title 8 CCR 5194, Hazard Communication Standard) also include emergency response procedures within each SDS for quick response to a potential release.

While the development of residential and mixed-use properties would ultimately reduce the likely volume of hazardous materials present within the community, the Project could result in residential or mixed-use development to occur adjoining existing manufacturing or industrial operations. The proposed Project does not include setback modifications or other existing industrial uses to decrease in the event new residential development occurs on adjoining land. This could result in incompatible land uses as well as exposure of new occupants of residential properties to significant hazards due to potential upset or accidental releases of hazardous materials. Industrial facilities by design handle and store large and significant quantities of hazardous materials, and therefore upset and accident potential increases. Typically, these types of facilities are set back from residential development by zoning such that potential accidental releases would not directly impact adjoining residences or sensitive receptors. However, as stated previously, as the proposed Project does not include setbacks or land use modifications for existing manufacturing or industrial properties in the event residential or mixed-use properties are constructed on adjoining lands, this would increase new occupants risk of significant hazard due to potential upset or accident conditions. While compliance to applicable regulations would reduce the potential for accidental release of hazardous materials to the environment, the future development and occupation of residential properties adjoining existing industrial and manufacturing facilities would result in increased risk of exposure to new residents in the event a hazardous material release occurs. As such, impacts regarding the potential to create a significant hazards to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials or waste into the environment (through usage, storage, or transportation) would be significant and unavoidable.

Hazardous Building Materials

As discussed in Section 4.9.4.1, construction of future residential developments would occur on potentially developed commercially or industrially zoned, which may require demolition and removal of existing buildings. Based on the age of the structure scheduled for demolition, hazardous building materials could be present, such as asbestos, lead-based paints, and universal wastes. Without appropriate identification and abatement, accidental releases of hazardous materials could occur. Prior to any demolition or construction activities for projects subject to CEQA, each building proposed for demolition must undergo a hazardous materials assessment as described in MM-4.9-2 to identify hazardous building materials. Once identified, MM-4.9-2 also requires the construction contractor to follow appropriate abatement procedures to remove hazardous materials as part of construction. With the identification and abatement of hazardous building materials that could be encountered during demolition activities within the Planning Area, and protective measures in place during construction, future construction would not pose a significant risk to the public or environment through the potential release of hazardous materials from a foreseeable upset/accident condition. However, as noted above, future non-discretionary projects that would be implemented under the Project would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. Additionally, land use incompatibility could occur if residential development is placed adjoining existing industrial land uses, as industrial emissions and hazardous material risk modifications are not included as part of the proposed Project. As such, even with implementation of existing regulations and MM-4.9-2 as applied to future discretionary projects, potential impacts would be significant and unavoidable because it is not possible to ensure the successful avoidance of all hazards associated with reasonably foreseeable upset and accident conditions.

Contaminated Sites

As discussed in Section 4.9.1, Existing Conditions, there are multiple contaminated sites within the Planning Area that have documented soil, soil vapor, and groundwater impacts (see Figures 4.9-1 and 4.9-2, and Table 4.9-2). Even sites that have received regulatory closure may either 1) have been given closure for specific/restricted land use (commercial only); 2) have remaining contamination that was determined to not be a significant risk to the existing land use; or 3) the site met agency closure requirements at the time of closure, but those requirements have changed over time. Additionally, also discussed under Threshold 4.9-1, ongoing and historical industrial uses may have resulted in contamination that has not yet been identified. Thus, future development at these sites has the potential to result in a significant upset or accident condition if contamination is not properly identified, characterized, and managed. Thus, preliminary due diligence will be required for any property that is redeveloped as residential or mixed use within the Planning Area, which would be required with implementation of MM-4.9-1. The due diligence will identify potential releases of hazardous materials (Phase I ESA) and shall quantify impacts that could result in release of hazardous materials during routine construction (Phase II ESA). Should contaminated soil, soil vapor, or groundwater be present above risk-based screening levels applicable at the time of Project development, protective measures will be required as outlined in MM-4.9-1, Pre-Construction Due Diligence. With the identification and quantification of hazardous material impacts to sites that will be redeveloped within the Planning Area, and protective measures in place during construction, the future construction of contaminated sites would not pose a significant risk to the public or environment through the temporary routine transport and limited use or disposal of hazardous materials.

While investigations into potential contamination and subsequent site remediation are common requirements for infill development and redevelopment of industrial properties, these measures do not ensure that all impacts from future projects would be mitigated to a level of less than significant. Future non-discretionary projects that would be implemented under the Project would be subject to the federal, state and local regulations mentioned above;

however, these non-discretionary projects would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. As such, even with implementation of existing regulations and mitigation measures applied to future discretionary projects, potential impacts related to the creation of a significant hazard to the public or the environment due to hazards associated with contaminated sites would be significant and unavoidable because it is not possible to ensure the successful avoidance of all hazards associated with upset or accidental conditions where new development may occur.

Oil, Gas, and Methane

As identified on Figure 4.9-3, there are numerous oil and gas wells both on and within proximity to the Planning Area. While all the oil and gas wells are plugged or idle (non-operational), the presence of oil and gas wells can cause subsurface methane gas. Construction activities, including excavation of soil, near oil and gas wells could result in the release of methane gas to the environment, which could create both an exposure and explosion hazard for construction workers and the general public. This could result in an upset or accident condition involving hazardous material (methane) releases to the environment, which would result in a potentially significant impact. At the time of this analysis, the City does not have mitigation standards or requirements for potential methane impacts associated with oil and gas wells, fields, or landfills. Thus, in order to reduce the potential for methane impacts to the environment, MM-4.9-3 requires protective measures for all future building projects within the Planning Area that avoid or reduce potential impacts associated with methane to a less than significant condition.

For future potential construction on an abandoned oil/gas well, as discussed in Section 4.9.2.2, CalGEM has the authority under PRC Section 3208.1 to require re-abandonment of a well where there is reason to question the integrity of the previous abandonment. As such, CalGEM advises against building over, or in any way impeding access to oil, gas, or geothermal wells. CalGEM also advises all wells identified within a parcel to be tested for liquid or gas leakage prior to or during development. Surveys of the well would be submitted to CalGEM for review, and any identified leaks should be reported to CalGEM.

With regard to hazardous material pipelines, under California Government Code Section 51014.6 (see Section 4.9.2), buildings and associated structures (fences, walls, other obstructions) cannot be constructed on pipeline easements. The State Fire Marshal also has authority to limit construction that encroaches on pipeline easements. Any future project that requires excavation or earthmoving activities is required to do so in compliance with California Government Code 4216. Under this regulation, a contractor must contact DigAlert (also known as Underground Service Alert or 811) at least two days prior to initiating any excavations. The DigAlert notification would prompt all underground utility operators (i.e., gas, electric, water, telecommunication) to physically mark the location of their utilities to avoid disrupting and/or damaging the utilities during construction. As part of this process, hazardous material pipelines would be identified on the ground surface with markers such as flags, paint, and stakes. Additionally, if the excavation is proposed within 10 feet of a high priority utility,[6] California Government Code Section 4216.2(c) requires the owner/operator of a high priority utility to notify the excavator of the existence of the high priority line and set up an onsite meeting to determine actions or activities required. If the utility owner does not contact the excavator, the excavator will reach out to contact the utility owner.

While permitting and regulatory requirements require protection from potential hazards associated with construction on or near oil and gas wells or fields, survey for and identification of these features would be required

[6] "High priority subsurface installation" is defined in Section 4216(j) as high-pressure natural gas pipelines with normal operating pressures greater than 415kPA gauge (60psig), petroleum pipelines, pressurized sewage pipelines, high-voltage electric supply lines, conductors, or cables that have a potential to ground of greater than or equal to 60kv, or hazardous materials pipelines that are potentially hazardous to workers or the public if damaged.

under MM-4.9-3, and mitigative measures outlined in MM-4.9-3 would be implemented. Adherence to applicable laws, rules, and regulations, as well as MM-4.9-3, would limit reasonably foreseeable accident or incident conditions related to oil and gas features, resulting in a less than significant impact with mitigation.

Overall, with regulatory compliance and implementation of proposed mitigation measures, future development projects are not anticipated to create a significant hazard to the public or the environment due to upset or accident conditions that would result in a release of hazardous materials. However, as noted above, future non-discretionary projects that would be implemented under the Project would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. Additionally, land use incompatibility could occur if residential development is placed adjoining existing industrial land uses, as industrial emissions and hazardous material risk modifications are not included as part of the proposed Project. As such, even with implementation of existing regulations and MM-4.9-1, MM-4.9-2, and MM-4.9-3 as applied to future discretionary projects, potential impacts related to the creation of a significant hazard to the public or the environment due to hazards associated with contaminated sites would be significant and unavoidable because it is not possible to ensure the successful avoidance of all hazards associated with upset or accidental conditions where new development may occur.

Threshold 4.9-3 ***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?***

Significant and Unavoidable Impact. As shown on Figure 4.9-4, Schools within Quarter Mile of Planning Area, parcels included in the Planning Area are located within one-quarter mile of existing or proposed schools; however, none of the parcels included in the Planning Area are currently developed as schools. Future development projects that would be implemented under the proposed Project are anticipated to result in the redevelopment of existing land uses, including residential and mixed-use. The residential and mixed-use development that is anticipated to be facilitated by the implementation of the proposed Project would not result in emissions or handling of acutely hazardous materials, substances, or hazardous wastes. Moreover, as discussed previously, long-term operations of future residential and mixed-use development implemented under the proposed Project would be generally associated with typical household and commercial materials (e.g., paints, solvents, cleaning supplies, refrigerants, landscaping products, and petroleum products). The proposed land use changes would not expand or increase risks associated with hazardous materials. Moreover, the Project would not result in new industrial uses on properties that are not already zoned for industrial, and no expansion of industrially zoned land area would occur with implementation of the Project. The Project would not introduce industrial land uses into areas that were previously residential/commercial or other uses, and would therefore not expose new sensitive receptors to industrial uses which could have the potential to emit hazardous emissions.

While redevelopment of contaminated sites could result in emissions of hazardous materials, such as contaminated dust during construction, contamination would be identified during preliminary due diligence as outlined in MM-4.9-1. Additionally, existing air quality rules and regulations prohibit the emission of fugitive dusts and volatile chemicals under SCAQMD rules outlined in Section 4.9.2.3. Hazardous building materials, such as lead-based paints and asbestos, which could become airborne during demolition of existing facilities, would be identified and abated under MM-4.9-2. Finally, development would ultimately require remediation or mitigation of contaminated soil, soil vapor, or groundwater as a requirement of MM-4.9-1, ultimately reducing the potential for contamination near existing or future schools. As such, impacts would ultimately be reduced during implementation of the proposed Project.

Any new residential and mixed-use operations in proximity to existing schools would be required to comply with regulations related to the routine use, storage, and transport of hazardous materials described under Threshold 4.9-1, as well as mitigation measures outlined under Threshold 4.9-1 and 4.9-2. Overall, with regulatory compliance and implementation of proposed mitigation measures, future development projects subject to CEQA are not anticipated to create a significant hazard associated with emissions near existing or proposed schools. However, as noted above, future non-discretionary projects that would be implemented under the Project would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. Therefore, construction on contaminated sites could occur, resulting in emissions near schools. Additionally, land use incompatibility could occur if a new school or other sensitive receptor, such as a daycare, is placed adjoining existing industrial land uses, as industrial emissions and hazardous material risk modifications are not included as part of the proposed Project. As such, even with implementation of existing regulations and MM-4.9-1 and MM-4.9-2 as applied to future discretionary projects, potential impacts related to the emissions or handling hazardous materials within 0.25 miles of a school would be significant and unavoidable because it is not possible to ensure the successful avoidance of all hazards associated with upset or accidental conditions where new development may occur.

Threshold 4.9-4 ***Would the project be located on a site which is included on a list of hazardous materials compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment?***

Significant and Unavoidable Impact. As discussed under Thresholds 4.9-1 and 4.9-2 and depicted on Figure 4.9-1, there are numerous contaminated sites within the Planning Area, including sites listed pursuant to Government Code Section 65962.5 (Cortese List Sites). Even sites that have received regulatory closure could still have remaining contamination for reasons outlined under Threshold 4.9-2. Development of these Cortese List sites, especially for residential development, could result in a potentially significant hazard to future occupants and construction workers prior to implementation of mitigation measures. In addition to these currently existing Cortese List sites, contaminated sites are identified on a continuous basis by regulatory agencies, and more or different sites could be present at the time of future development projects within the Planning Area.

As outlined under Thresholds 4.9-1 and 4.9-2, mitigation measure MM-4.9-1 requires the investigation and characterization of all sites proposed for development within the Planning Area. If contamination is identified that exceeds screening levels protective of the proposed development applicable at the time of construction and operation, protective measures would be required. Additionally, MM-4.9-1 requires that sites that are either under cleanup overseen by a regulatory agency or have conditional closure by a regulatory agency must be reviewed by said agency for the proposed redevelopment. These actions would ultimately identify, characterize, and mitigate potential impacts associated with contamination related to Cortese List sites for projects subject to discretionary actions, and therefore, CEQA.

However, as also noted under Threshold 4.9-2, future non-discretionary projects that would be implemented under the Project would be subject to the federal, state and local regulations mentioned above; however, these non-discretionary projects would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. As such, even with implementation of existing regulations and mitigation measures applied to future discretionary projects, potential impacts related to the creation of a significant hazard to the public or the environment due to hazards associated with contaminated sites would be significant and unavoidable because it is not possible to ensure the successful avoidance of all hazards associated with upset or accidental conditions where new development may occur.

Threshold 4.9-5 ***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 result in a safety hazard for people residing or working in the Project area?***

Less Than Significant Impact. As outlined in Section 4.9.1 and shown on Figure 4.9-5, portions of the Planning Area overlap the John Wayne AELUP, including noise contours, notification zones, and safety zones. A total of 9 parcels[7] are located within John Wayne Airport Safety Zone 3, as shown in Figure 4.9-5. Project implementation via the amended MUOD would require noise and safety requirements, including height and land use restrictions, to be consistent with the AELUP for John Wayne Airport, including the following:

- Residential development cannot occur within the 65 CNEL zone unless it can be conclusively shown that sufficient sound attenuation is present (interior residential noise levels cannot exceed 45 dB).
- Residential development should be limited in the 60 CNEL zone unless sufficient sound attenuation is provided (interior residential noise levels cannot exceed 45 dB).
- Development within the Notification zone must notify the FAA if structures exceed heigh restrictions outlined in FAR Part 77.
- Residential uses in Safety Zone 3 should be limited[8] to very low densities, and land uses should avoid[9] high use intensities (such as major shopping, fast food, theaters) and prohibit[10] schools, day care centers, hospitals, and nursing homes.
- Residential uses are compatible in Safety Zone 6; land uses to avoid include high intensity outdoor uses (such as stadiums), schools, day care centers, hospitals, and nursing homes.

Implementation of the proposed rezoning would allow for a future maximum residential density of 30 du/ac. However, future development on these 9 parcels would be limited to residential uses with "very low densities (if not deemed unacceptable because of noise)" (ALUC 2008). Given that the lowest maximum residential density in the city is 8 du/ac for Low-Density Residential (City of Costa Mesa 2025), future development projects would likely exceed the "very low density" policy, and would be required to modify the density through a reduction of units and occupancy terms and/or reduce the intensity of land uses in order to be consistent with the AELUP for John Wayne Airport. In addition, building heights of future development projects would be analyzed in accordance with FAR Part 77 guidelines. Project implementation via the amended MUOD would require future development projects to modify building heights in in order to be consistent with the AELUP for John Wayne Airport. As a result, building height may be reduced during Project implementation.

Under Public Utilities Code Section 21670, the ALUC reviews land use proposals near civilian and military airports and other land use issues which have the potential to impact airport operations. With review by the ALUC through standard permitting processes, future development projects within the Planning Area would be required to meet requirements for noise and safety within airport influence areas, consistent with the MUOD amendments. Thus, requirements to confirm that future project-level developments are in compliance with the AELUP and associated regulations would ensure the implementation of the proposed Project would not result in a safety hazard or be exposed to safety hazards related to the operation of an airport. Therefore, impacts would be less than significant, and no mitigation measures are required.

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7 For the purposes of this analysis, the 9 parcels are identified as APNs 119-200-14, 119-200-36, 119-401-01, 119-401-02, 119-401-03, 119-401-04, 119-401-05, 119-401-06, and 427-165-07.

8 "limit": "use is acceptable only if density/intensity restrictions are met" (ALUC 2008).

9 "avoid": "use generally should not be permitted unless no feasible alternative is available" (ALUC 2008).

10 "prohibit": "use should not be permitted under any circumstances" (ALUC 2008).

Threshold 4.9-6 ***Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?***

Less Than Significant Impact. The emergency response plan for the Project area is the Costa Mesa Disaster Plan, which serves as the Emergency Operations Plan (EOP) for the community. The EOP identifies the Police Chief as coordinator for all emergency evacuation activities and issues evacuation orders based on information gathered by emergency experts. Emergency evacuation routes have been established throughout the city, and are summarized in Section 4.9.2.3 of this section.

Implementation of the Project is not anticipated to result in future development that would alter roadways or otherwise facilitate changes that would result in inadequate emergency access. It is possible that construction activities associated with future projects that may be developed under the proposed Project may result in the presence of construction equipment and materials adjacent to roadways could temporarily impede emergency access to and within the Planning Area. Construction projects that result in roadway modifications, improvements, or encroachments onto public transportation corridors (both pedestrian and vehicular) would be required to submit construction traffic management plans to City for review and approval. Further, future development would need to comply with all applicable building code requirements in the California Building Code, Fire Code, and County Code, and City Codes and Ordinances related to access and design requirements to allow for emergency services to access all structures. Compliance with any requirements deemed necessary for approval of the Traffic and Lighting Division, impacts to emergency access would be less than significant and no mitigation is required.

4.9.5 Cumulative Impact Analyses

Where a lead agency concludes that the cumulative effects of a project, as defined by CEQA, taken together with the impacts of other closely related past, present, and reasonably foreseeable future projects are significant, the lead agency then must determine whether the project's incremental contribution to such significant cumulative impact is "cumulatively considerable" (and thus significant in and of itself). The cumulative impact analysis contained in this Draft PEIR considers projections used in the City's Climate Action and Adaptation Plan (CAAP) as well as one current project (specifically, the Fairview Developmental Center Specific Plan, for which a Notice of Preparation was released in October 2025). A summary of the cumulative buildout projections for the City (including the Project) is provided in Table 2-9, City of Costa Mesa Cumulative Build Projections, of Chapter 2, Environmental Setting.

Threshold 4.9-1. The Office of Environmental Health Hazard Assessment has developed the CalEnviroScreen tool to assist with the evaluation of cumulative impacts related to environmental hazards, including release of hazardous material or waste into the environment through the routine transport, use, or disposal of hazardous materials. The CalEnviroScreen tool does this by combining the multiple stressors that a community is exposed into a combined score. These stressors include exposure to ozone, particulate matter, toxic releases, traffic, pesticides, drinking water contaminants, and lead in housing. The tool also considers environmental effects from cleanup sites, groundwater threats, hazardous waste, impaired waters, and solid waste, as well as sensitive populations and socioeconomic factors within the community. The CalEnviroScreen scores for the Planning Area ranged from 33 to 82 (OEHHA 2026). The Planning Area north of Victoria Street had scores at 50 or below, while south of Victoria Street has scores between 51 and 82, with the highest score (82) south of West 19th Street, north of West 16th Street, east of Placentia Avenue, and west of Newport Boulevard. This indicates that this area is already subject to a high environmental burden associated with pollution and other hazardous conditions. Through unchecked transport, use, or disposal of hazardous materials, future development projects implemented under the proposed Project could potentially contribute to this existing burden, leading to potentially-cumulatively considerable impacts. However, compliance with applicable

federal, state, and local regulations would protect residents, workers, and the environment from significant hazards associated with hazardous materials, and implementation of MM-4.9-1 and MM-4.9-2 would reduce cumulative impacts. However, as described above, although implementation of MM-4.9-1 and MM-4.9-2 would reduce impacts, not all development projects would be subject to mitigation measures, as some projects may not include discretionary actions that would be subject to CEQA, and thus would require implementation of mitigation measures. Thus, the Project's incremental contribution to significant hazards to the public or environment through the routine transport, use, or disposal of hazardous materials would be cumulatively considerable.

Impacts related to the creation of a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials are generally site-specific. Future concurrent construction activities under the Project would necessitate the temporary transport, storage, and use of hazardous substances like fuel, lubricants, paint, solvents, and maintenance materials. Compliance with federal, local, and state regulations, including the Hazardous Materials Transportation Act and HSC Section 25163, among others, would be mandatory to ensure safety. Despite the potential risks associated with these hazardous materials, the application of strict regulations ensures that the materials' transport, use, and disposal would not pose a significant threat to the public or the environment. Consequently, the Project's incremental effects would not be cumulatively considerable, and no cumulatively significant construction impact would occur.

Long-term operations of future land uses under the proposed Project would involve the routine transport, use, and disposal of household and commercial hazardous materials, but the Project would not involve the creation of new industrial uses that could create new hazards. The Project would not introduce new industrial uses not already zoned or expand industrially-zoned land area beyond the existing condition. Thus, the use of residential and commercial-grade hazardous materials from the Project would be addressed through regulatory compliance and proposed Project's policies would not result in significant hazard to the public or environment. As such, the Project's incremental operational effects regarding the routine transport, use, and disposal of hazardous materials would not be cumulatively considerable, and no cumulatively significant impacts would occur. Nevertheless, overall, the Project's incremental contribution to significant hazards to the public or environment through the routine transport, use, or disposal of hazardous materials would be cumulatively considerable.

Threshold 4.9-2. As discussed above under cumulative Threshold 4.9.1, only a small portion of the Planning Area is subject to a high environmental burden associated with pollution and other hazardous conditions associated with reasonably foreseeable accident or upset conditions. In addition, impacts related to potential upset and accident conditions involving the release of hazardous materials or waste into the environment are generally site-specific. Given the existing conditions and generally site-specific conditions associated with potential upset and accident conditions, incremental effects are not likely to be cumulatively considerable.

Compliance with the City's permitting process and other applicable federal, state, and local regulations would protect existing future residents and workers, as well as the environment, within the Planning Area from exposure to significant hazards associated with known contamination conditions (e.g. properties near oil wells or properties with documented hazardous material releases). Proposed mitigation for development within the Planning Area requires due diligence activities to investigate, characterize, and mitigate hazardous material impacts associated with past releases of hazardous materials and wastes (MM-4.9-1), survey and abatement of hazardous building materials (MM-4.9-2), and methane surveys and protective measures for sites within proximity to methane sources (MM-4.9-3). As described above, although implementation of these mitigative measures would reduce impacts, not all development projects would be subject to this requirement and the Project's incremental contribution to significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials or waste into the environment would be cumulatively considerable.

Threshold 4.9-3. Regarding impacts related to hazardous emissions or handling of hazardous or acutely hazardous materials, substance, or waste within one-quarter mile of a school, implementation of the Project would likely result in additional future development throughout the Planning Area, including within one-quarter mile of schools. As discussed above, the CalEnviroScreen scores indicate the majority of the Planning Area is not already subject to a high pollution burden related to hazardous emissions and/or acutely hazardous materials, sources, and waste. Hazardous emissions sites within the Planning Area and at other projects outside of the Planning Area and within the city would each be required to comply with existing federal, state, and City regulations. Further, the Project would not involve the construction of new industrial uses that could increase the potential for emissions of hazardous materials or substances. Compliance with existing regulations would reduce impacts in the Planning Area to a less than significant level for projects subject to CEQA under the Project, and thus, impacts related to hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of sensitive land uses would not be cumulatively considerable. However, as described above, although implementation of mitigation measures would reduce impacts, not all development projects would be subject to this requirement and the Project's incremental contribution to emissions of hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school would be cumulatively considerable.

Threshold 4.9-4. Impacts related to projects being located on a site which is included on a list of hazardous materials compiled pursuant to Government Code Section 65962.5 are generally site-specific. As discussed above, cumulative development projects would be required to comply with applicable local, state and federal regulations regarding contamination, which would reduce individual effects. Additionally, mitigation required under MM-4.9-1 would require evaluation for and ultimately result in identification of proposed development to occur on or be impacted by Cortese List sites. Mitigation and protective measures required under MM-4.9-1 would also often result in reduced contamination, as development would require protective measures for residential or mixed-use development, which have lower contamination thresholds than existing commercial/industrial uses. Therefore, future development under the proposed Project would not contribute to cumulative development within the Planning Area on properties compiled pursuant to Government Code Section 65962.5. As described above, although implementation of MM-4.9-1 would reduce impacts, not all development projects would be subject to this requirement, as some projects may not include discretionary actions that would be subject to CEQA, and thus would require implementation of mitigation measures. Thus, the Project's incremental contribution to significant hazards to the public or the environment through development of sites on a list of hazardous materials compiled pursuant to Government Code Section 65962.5 would be cumulatively considerable.

Threshold 4.9-5. Impacts related to potential safety hazards to residents or workers created as a result of projects being located within two miles of a public airport or public use airport, or within an airport land use plan, are generally site specific. Cumulative development projects in the Planning Area must follow Federal FAA Regulation 14 CFR 77.9, which requires filing with FAA for proposed structures based on several factors such as distance from runways and structure height. The Project proposes land use changes located within the John Wayne Airport Influence Area and is thus subject to the development conditions of the John Wayne AELUP and the ALUC, which would restrict residential development in certain areas. Because the Project (without mitigation) would have a less than significant impact to safety hazards created as a result of projects located within two miles of an airport or within an airport land use plan and all development in the cumulative study area would be similarly subject to existing FAA and ALUC regulations, the Project's impacts related to safety hazards resulting from airport-project-adjacency would not be cumulatively considerable.

Threshold 4.9-6. The emergency response plan for the Project area and the cumulative study area is the City of Costa Mesa Disaster Plan. Any future development in the city would be included within the Disaster Plan area, and

would be required to comply with applicable federal, state and local regulations related to emergency response, such as emergency evacuations and adhering to fire/sheriff mandates for evacuations, in support of the response plan. Required compliance with applicable regulations throughout the city would help ensure cumulative Project impacts related to emergency response in the city would be less than significant. Although the Project would increase the service population within the city, as discussed in Section 4.15, Public Services, of this Draft PEIR, the Project's cumulative impacts to emergency services would be less than significant, which suggests that the City has adequate resources to respond to citywide emergencies, if a regional disaster were to occur, necessitating emergency response actions outlined in an adopted emergency response or evacuation plan. All new development must adhere to the City's Building Code and Fire Code requirements for access and design features that can accommodate emergency response. Project-level compliance with applicable federal/state/local regulations and continued implementation of General Plan goals and policies would ensure the risk of impaired implementation or physical interference with an adopted emergency response plan or emergency evacuation plan would be less than significant, and Project impacts would not be cumulatively considerable.

4.9.6 Mitigation Measures

MM-4.9-1 Pre-Construction Due Diligence.

Step A: Phase I Environmental Site Assessment. During subsequent project-level permitting as required by the MOUD, a Phase I Environmental Site Assessment (ESA) shall be required for each property to be redeveloped within the Planning Area. The Phase I ESA shall be completed by an Environmental Professional as defined in 40 Code of Federal Regulations 312.10 in accordance with American Society for Testing Materials (ASTM) Standard E-1527-21 or any updated standard applicable at the time of the investigation. The Phase I ESA shall be submitted to the City as part of the permitting process. The City of Costa Mesa (City) shall review the Phase I ESA or shall have third-party review (peer review) of the Phase I ESA to validate the content and findings are in compliance with the applicable standards (ASTM E1527-21 or relevant) and the report is viable for the proposed development.

Step B: Phase II Environmental Site Assessment. Any and all recognized environmental conditions (RECs), environmental concerns, or business environmental risks (BERs) identified in the Phase I ESA (see Step A) shall be investigated through completion of a Phase II ESA in accordance with ASTM Standard 1903-19 or any updated standard applicable at the time of the investigation. The Phase II ESA shall compare sampling results to regulatory screening levels current at the time of the investigation/redevelopment and applicable for the proposed development (residential). Sampling results must consider exposure of future construction and excavation workers as well as future occupants. The City shall review the Phase II ESA, or shall have third-party review (peer review) of the Phase II ESA, to validate the content and findings are in compliance with the applicable standards (ASTM E1903-19 or relevant).

Step C: Regulatory Oversight of Cleanup Sites. If the Phase I ESA identifies the proposed development site on an open cleanup site or a closed cleanup site that either has conditional closure or was closed with remaining contamination that does not meet regulatory screening levels current at the time of development for the proposed type of development (residential or mixed use), the Applicant shall contact the regulatory agency that overseeing the cleanup for guidance on future development. The regulatory agency (Department of Toxic Substance Control [DTSC], State Water Resource Control Board [SWRCB], or Orange County Health Care Agency [OCHCA]) shall

provide guidance on requirements for further remediation or protective measures required for redevelopment. The Applicant must submit those requirements to the City for review as part of the permit package and must follow those requirements prior to or during redevelopment as outlined by the regulatory agency.

Step D: Avoidance. As a primary alternative, if contamination is identified above regulatory screening levels applicable to site development, development plans shall be prepared to avoid construction on or within contaminated areas, near contaminated areas such that contamination could impact future development (e.g. soil vapor intrusion into future buildings), or where grading/excavation may result in disturbance of contaminated soils. If contamination is identified above regulatory screening levels, Project plans shall be designed to avoid placement of buildings on identified contaminated areas.

Step E: Contaminated Media Management. If contamination cannot be avoided during future construction, a qualified environmental consultant shall be contracted to determine appropriate protective measures required for the proposed development. Protective measures may include, but are not limited to, removal of contaminated media (soil excavation, groundwater dewatering, or similar), remediation of contaminated media (soil vapor extraction or similar), or protective construction measures to avoid exposure of hazardous materials to future occupants (soil vapor barrier or similar).

Step E.1: Construction Management Plan. If contaminated soil, soil vapor, and/or groundwater cannot be avoided during construction, or if there is a chance that previously unidentified contaminated soils may be encountered, a management plan shall be prepared by a qualified environmental consultant that outlines the proper screening, handling, characterization, transportation, and disposal procedures for contaminated soils on site, dewatering procedures for contaminated groundwater, and protective measures for contaminated soil vapor. It is recommended the management plan include, as appropriate, avoidance measures to allow construction of the Project site to be completed without encountering contaminated soil, soil vapor, or groundwater. The management plan shall include health and safety and training procedures for workers who may come in contact with contaminated media. The management plan shall be implemented by the Applicant or their designated contractor for all sites with confirmed and suspected contaminated media, as identified in the Phase I and/or Phase II ESA. If the Phase I ESA or Phase II ESAs (MM-4.9-1 A and B, above) identified the potential for underground storage tanks, water wells (such as monitoring wells), or other subsurface features, the management plan shall also include procedures for the identification and proper abandonment of these features, as applicable, should any be identified during demolition and construction activities. The management plan shall include all applicable federal, state, and local regulations (including OCHCA and South Coast Air Quality Management District [SCAQMD]) associated with handling, excavating, and disposing of contaminated soils; the proposed disposal facility that will accept the contaminated soils; and appropriate procedures, notifications, permitting requirements, handling, and disposal requirements for decommissioning any underground storage tanks, wells, or other subsurface features. The City shall review the management plan, or shall have third-party review (peer review) of the management plan to validate the content and findings are in compliance with the applicable standards.

Step E.2. Protective Measures and Remediation. If contamination will not be removed during construction, construction design plans must include protective measures to avoid exposure of future users and occupants of the proposed site to contaminated soil, soil vapor, and/or groundwater. Protective measures must be designed by a licensed engineer, geologist, or hydrogeologist, experienced in the type of design (e.g. soil vapor barrier systems) and must meet regulatory guidance applicable to the type of protective system (e.g. DTSC's Soil Vapor Mitigation Advisory) and current at the time of site development. Protective measures must be designed to eliminate exposure pathways or reduce concentrations to regulatory screening levels acceptable for proposed site use at the time of development. All protective measures or remediation shall include operations and maintenance procedures to be implemented following occupation of the Project site to ensure protective measures are adequate and shall continue to be protective for the lifetime of the Project (e.g. vapor monitoring probes, groundwater monitoring wells, regular cap inspections). Protective measures shall be identified on the site plans for review and approval through the City's plan check process.

MM-4.9-2 Hazardous Materials Building Survey and Abatement. Prior to issuance of a demolition permit and/or building permit for renovation activities for projects under the MUOD within the Planning Area, the applicant shall require, through the construction contractor's contract specifications, that a hazardous building materials survey is conducted by a California Department of Public Health (DPH) Certified Asbestos Consultant and/or Certified Site Surveillance Technician and a California DPH Certified Lead Inspector/Risk Assessor or Sampling Technician. The survey shall include asbestos, lead-based paint, and universal wastes (including, but not limited to, mercury components in electrical equipment, polychlorinated biphenyls, treated wood wastes, and fluorescent light bulbs). A report documenting material types, conditions and general quantities shall be provided, along with documentation of positive materials and diagrams. Demolition and construction plans and contract specifications shall incorporate any abatement procedures for the removal of material containing hazardous materials. As mandated through the construction contractor's specifications, all abatement work shall be done in accordance with federal, state, and local regulations, including those of the Environmental Protection Agency (which regulates disposal), Department of Toxic Substances Control, Occupational Safety and Health Administration and California Occupational Safety and Health Administration (which regulates employee exposure), and the South Coast Air Quality Management District.

MM-4.9-3 Methane Mitigation. If methane mitigation standards are not established for development within the City of Costa Mesa at the time of development for sites subject to the MUOD within the Planning Area, the following mitigation shall be implemented. If methane mitigation standards are established as regulation, code, or ordinance at the time of development, the following measures shall not apply, and instead, the Applicant shall follow the City's methane mitigation standards. Future development projects in Costa Mesa shall comply with applicable local, County. State, and Federal requirements for appropriate methane mitigation.

Step A. Survey for Methane Sources. Prior to issuance of a construction permit, the applicant shall require, through the construction contractor's contract specifications, that a survey must be completed at the proposed development site(s) that identifies the following:

- Any oil/gas well field, as defined by California Geologic Energy Management Division (CalGEM), encompassing the proposed development site or within 100 feet of the proposed development site.
- Any oil/gas well, either active, idle, abandoned, or plugged, within 100 feet of the proposed development site.
- Any gas seepage zone within 300 feet of the proposed development site.
- Any landfills, as identified by CalRecycle, with a refuse footprint within 1,000 feet of the proposed development site.

If the survey positively identifies any of the above criteria, a soil gas investigation must be completed by a licensed/registered professional engineer that evaluates methane concentrations on the proposed development site. The soil gas investigation report shall include methodology and data collection techniques, as well as an evaluation of identified methane levels.

Step B. Protective Measures. The following protective measures shall be submitted to the City for review and approval. The City shall review, or shall have third-party review (peer review), of protective measures to validate the designs are in compliance with the applicable standards. All protective measures, with the exception of source removal, shall include operations and maintenance (O&M) plans and procedures to be implemented and maintained by the property owner.

Step B.1. If the investigation outlined in Step A identifies methane (or other combustible soil gas) concentrations in excess of 5,000 parts per million (ppm) in any location on the proposed development site, the following protective measures shall be implemented for any building(s) within 300 feet of the identified location.

- Remove potential sources of combustible soil gases, such as petroleum-impacted soils or sumps, if present.
- Subslab passive venting of all slabs or foundations, the design of which is reviewed and approved by a registered/licensed professional engineer, geologist, or hydrogeologist, and is in accordance with California Building, Mechanical, and Plumbing Codes.
- If subslab passive venting is not practicable due to building design, active methane detection and forced air venting shall be implemented, the design of which is reviewed and approved by a registered/licensed professional engineer, geologist, or hydrogeologist, and is in accordance with California Building, Mechanical, and Plumbing Codes.

Step B.2. If the investigation identifies methane (or other combustible soil gas) concentrations in excess of 12,500 ppm in any location on the proposed development site, a soil gas mitigation plan shall be prepared and approved by a registered/licensed professional engineer, geologist, or hydrogeologist.

Step B.3. If a proposed building will be placed within 25 feet of any abandoned oil/gas well, within 300 feet of an abandoned oil/gas well that is also beneath an impervious surface (such as a parking lot or road), within 25 feet of an impervious surface that covers an abandoned oil/gas well less than 300 feet from the building, or within 300 feet of an active gas seep zone, subslab passive venting shall be implemented as outlined in Step B.1. Gas membrane barriers may also be required as determined by the designing engineer specified in Step B.1.

Step B.4. If a building will be placed on top of an abandoned oil/gas well and the ground floor is not naturally vented, an active interior methane detection system and forced air venting must be implemented as outlined in Step B.1.

Step B.5. If a proposed building will be placed within 10 feet of an abandoned oil/gas well, a gas membrane barrier is required. The membrane shall be designed by a registered/licensed professional engineer, geologist, or hydrogeologist.

4.9.7 Level of Significance Conclusion

Threshold 4.9-1 Even with implementation of MM-4.9-1 and MM-4.9-2, the Project would have **significant and unavoidable impacts** related to creation of a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials and would be cumulatively considerable.

Threshold 4.9-2. Even with implementation of MM-4.9-1 through MM-4.9-3, the Project would result in a **significant and unavoidable impact** related to creation of a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials or waste into the environment and a cumulatively considerable impact.

Threshold 4.9-3 Even with implementation of MM-4.9-1 and MM-4.9-2, the Project would have **significant and unavoidable impacts** related to emitting hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of existing or proposed schools and would be cumulatively considerable.

Threshold 4.9-4 Even with implementation of MM-4.9-1, the Project would have **significant and unavoidable** impacts related to creation of a significant hazard to the public or the environment as a result of being located on sites included on a list of sites with hazardous materials compiled pursuant to Government Code Section 65962.5 and a cumulatively considerable impact.

Threshold 4.9-5 The Project would have **less than significant** impacts related to locations 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, which would result in a safety hazard for people residing or working in the Project area and would not be cumulatively considerable.

Threshold 4.9-6 The Project would have **less than significant** impacts related to impaired implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan and would not be cumulatively considerable.

4.9.8 References

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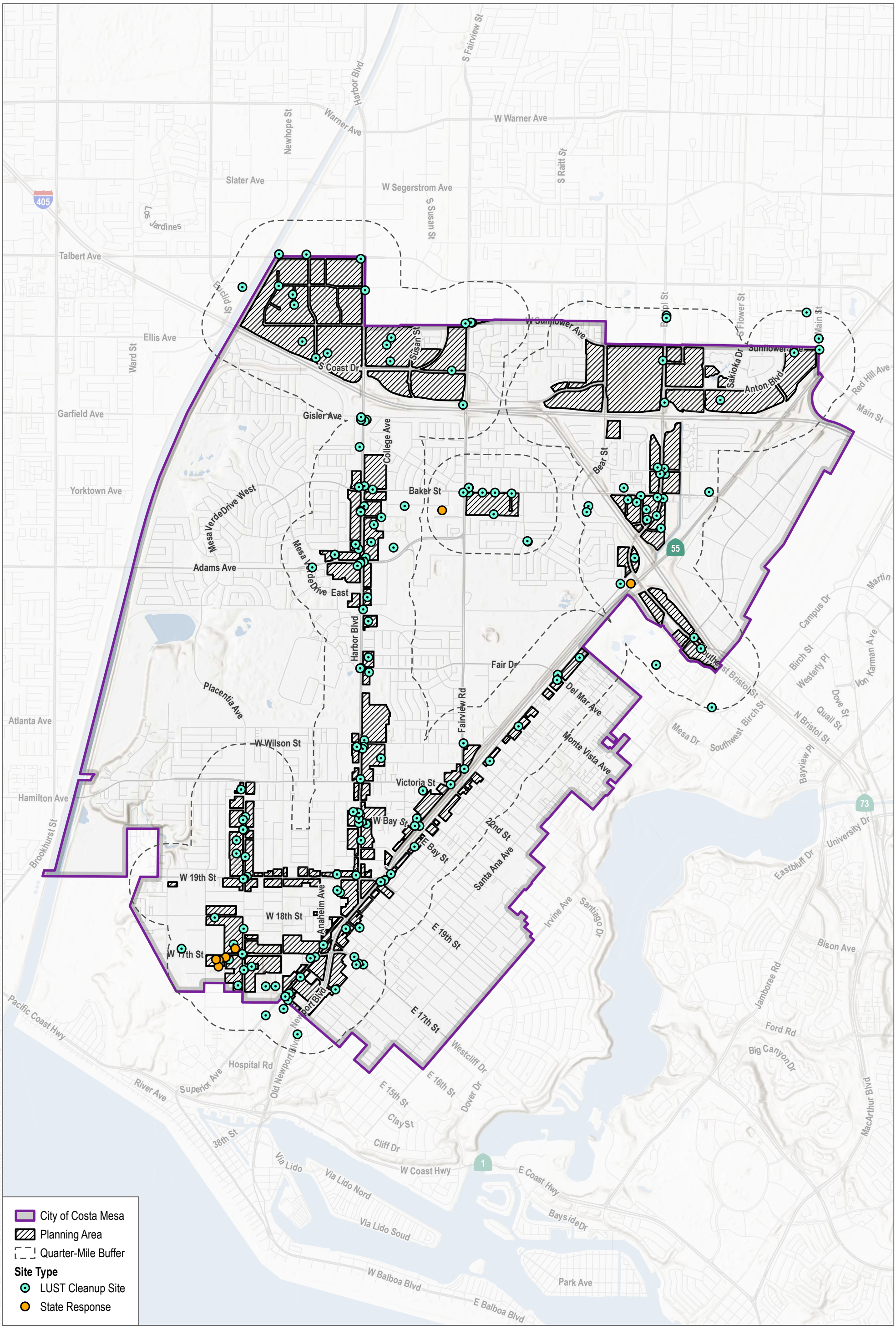

SOURCE: Esri, Open Street Map

Figure 4.9-1

Cortese List Sites

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Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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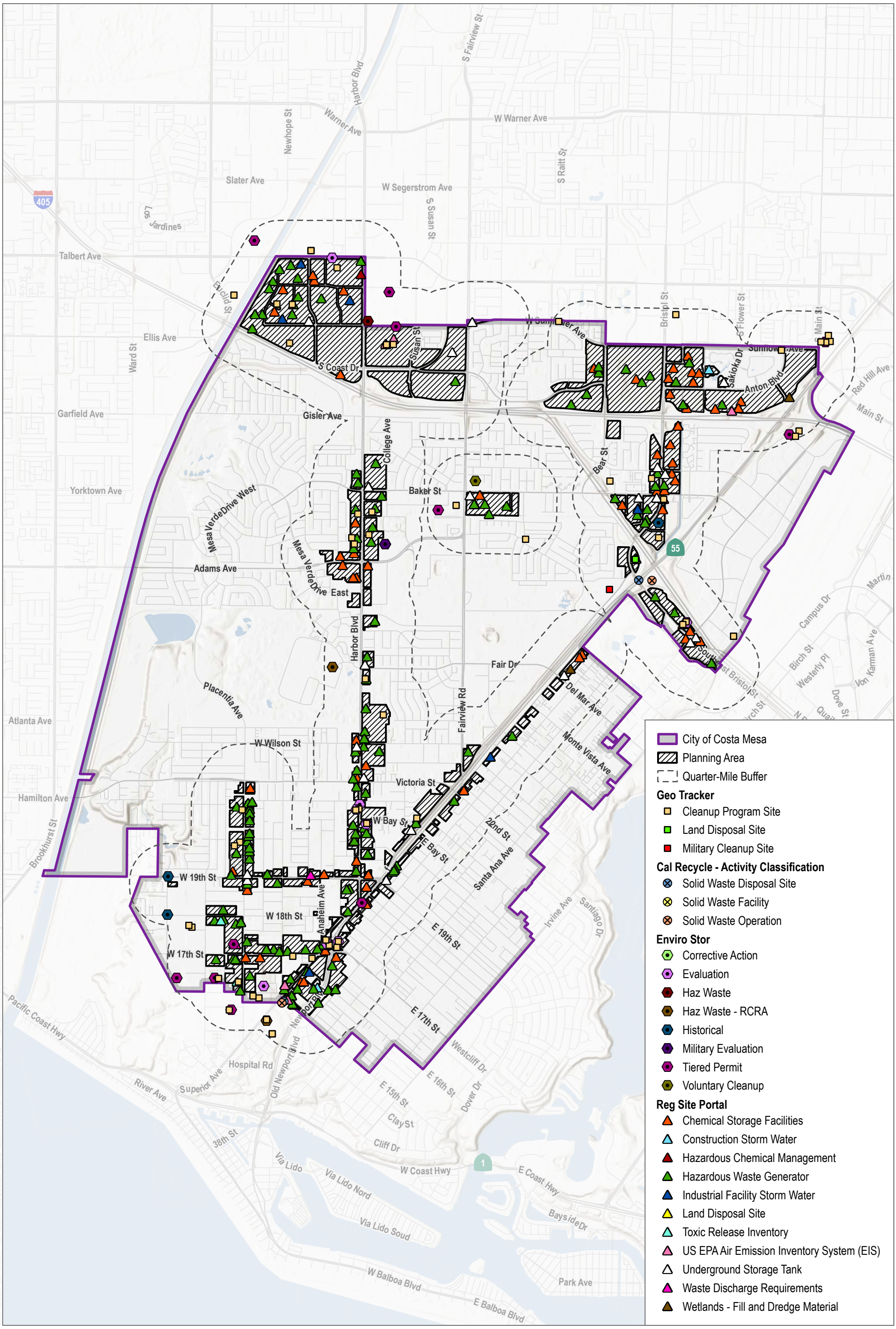

SOURCE: Esri, Open Street Map

Figure 4.9-2

Non-Cortese List Sites

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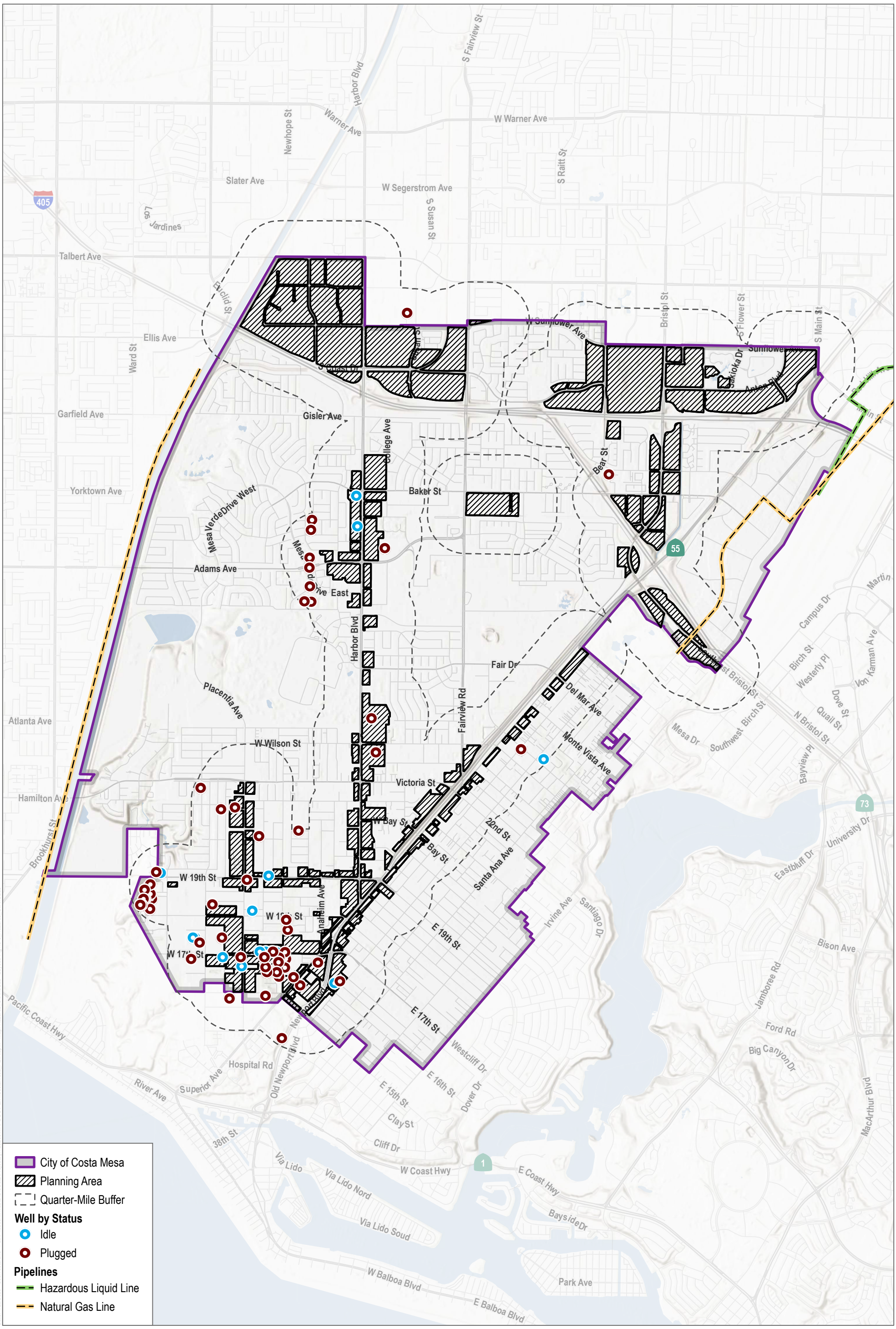

SOURCE: Esri, Open Street Map

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Figure 4.9-3

Oil and Gas

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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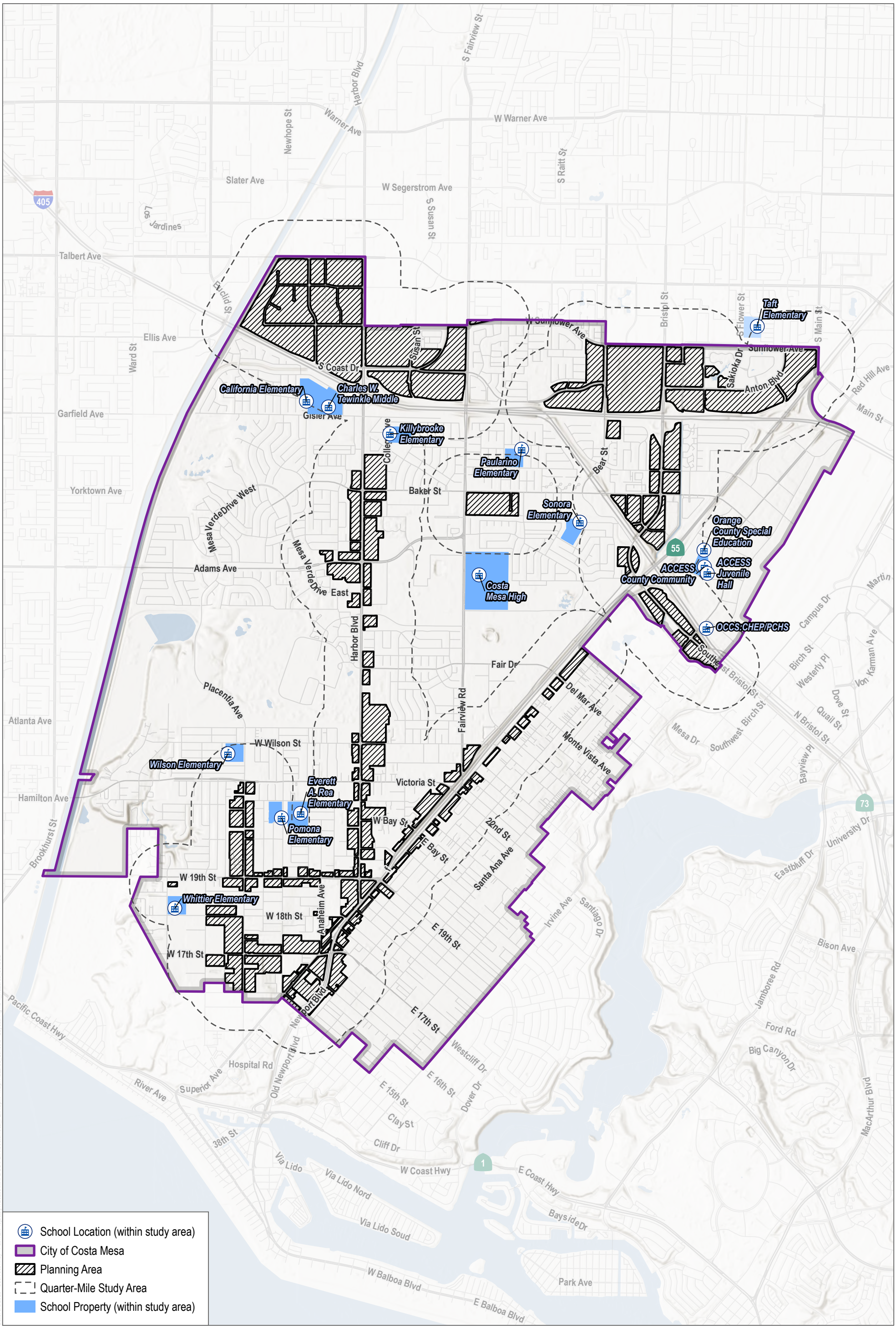

SOURCE: Esri, Open Street Map

Figure 4.9-4

Schools Within Quarter Mile of Planning Area

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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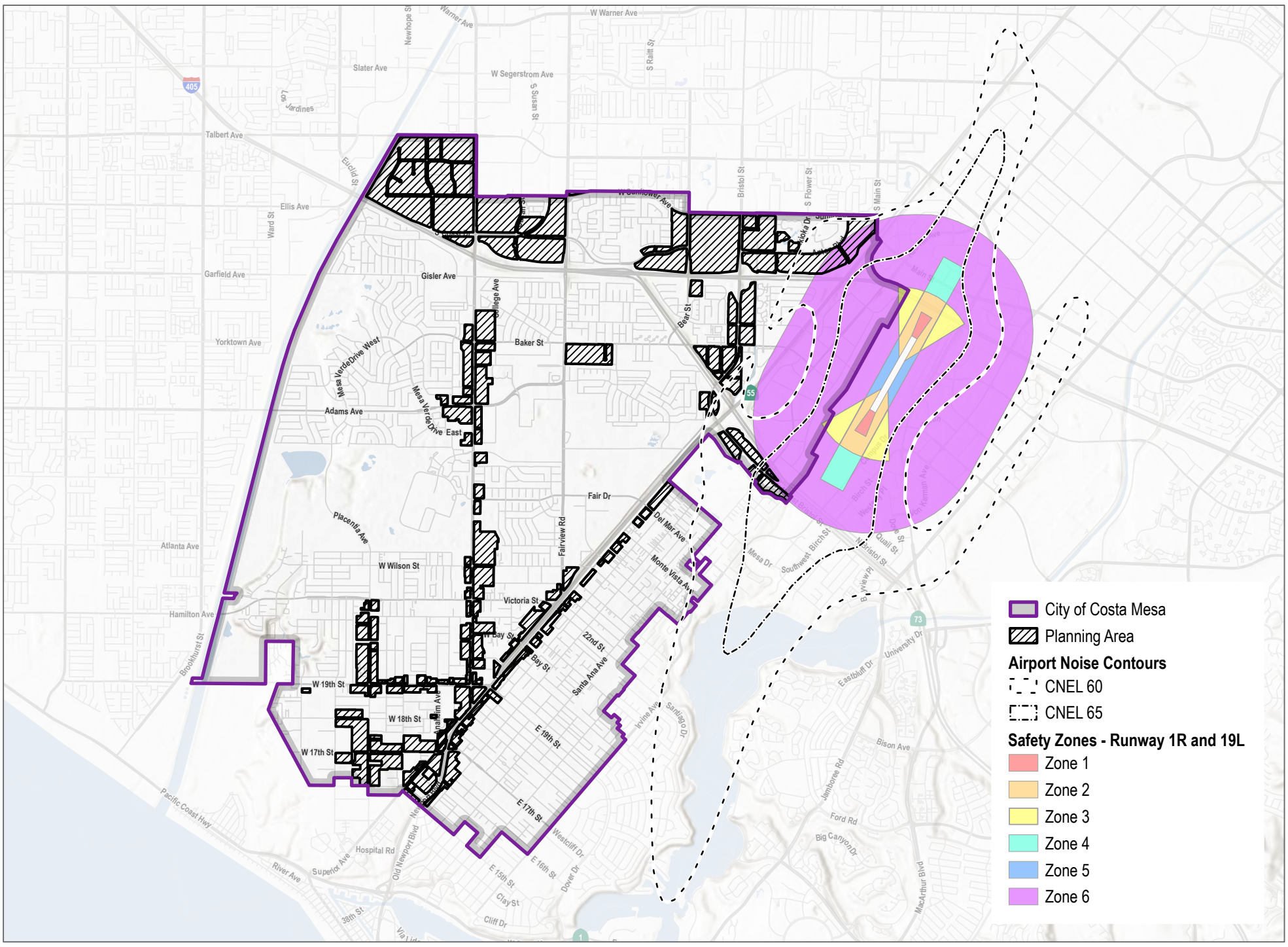

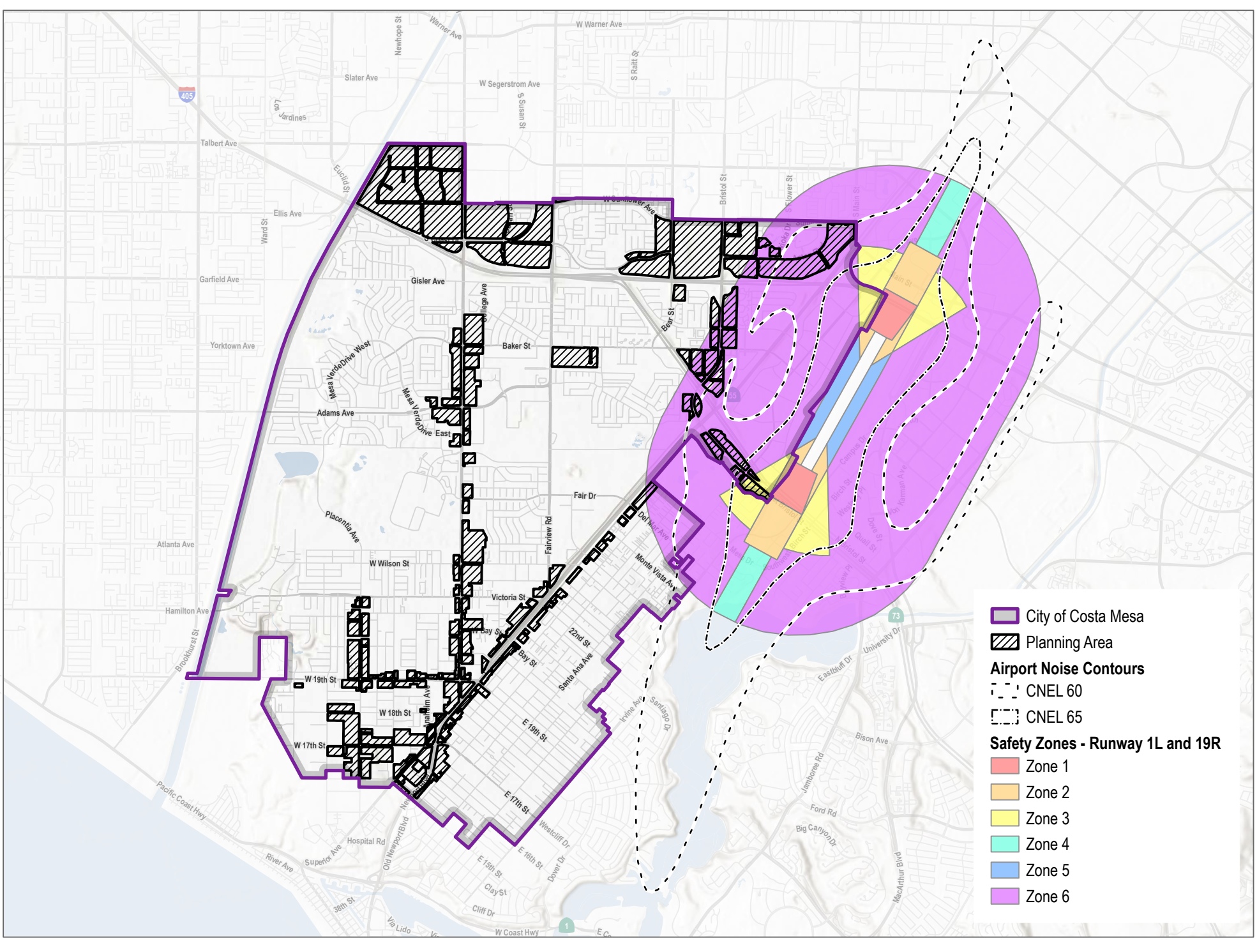

SOURCE: Esri, Open Street Map, Open Street Map 2019

FIGURE 4.9-5

Airport Hazards

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4.10 Hydrology and Water Quality

This section of the Draft PEIR analyzes the potential impacts from the implementation of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation (Project) on hydrology and water quality, including impacts related to water quality and quantity of stormwater runoff associated with changes to drainage patterns, groundwater supply, groundwater recharge, and flooding, on a programmatic level. A discussion of the existing hydrology and water quality in and around the Planning Area is also included in this section. The analysis is based, in part, on City of Costa Mesa (City) and County of Orange (County) planning documents, as well as publicly available information from the State Water Resources Control Board (SWRCB), Santa Ana Regional Water Quality Control Board (Santa Ana Water Board), Mesa Water District, Orange County Water District, Orange County Flood Control District, and the Federal Emergency Management Agency (FEMA). Other sources consulted are listed in Section 4.10.8, References.

4.10.1 Existing Conditions

4.10.1.1 Surface Hydrology and Drainage

Local and Regional Surface Hydrology

The City is entirely within the Santa Ana River Hydrologic Unit. This unit covers an area of approximately 2,700 square miles, or the majority of the Santa Ana Water Board's jurisdictional area, which includes portions of Orange, Los Angeles, Riverside, and San Bernardino counties (City of Costa Mesa 2016). Within the Santa Ana River Hydrologic Unit, the Planning Area is split between the Santa Ana Subbasin and the Newport Bay Subbasin (USGS 2026). Surface hydrology in the vicinity of the Planning Area, including the subbasin boundaries and local surface flows, is illustrated in Figure 4.10-1, Surface Hydrology.

The Santa Ana subbasin encompasses approximately 4,388 square miles, most which are developed with urban or suburban uses (USGS 2026). Within this subbasin, concrete-lined segments of the Santa Ana River and Greenville Banning Channel (which flows into the Santa Ana River) both flow within or adjacent to the Planning Area. The Santa Ana River flows adjacent to and west of the northwestern portion of the Planning Area before continuing southwest and draining into the Pacific Ocean at the boundary between the cities of Newport Beach and Huntington Beach (USGS 2025).

The Newport Bay subbasin encompasses approximately 503 square miles, with overland flows draining toward the coast into Newport Bay in the City of Newport Beach. The principal watercourse of the Newport Bay Watershed is San Diego Creek, with a drainage area that covers approximately 122 square miles, which drains into Upper Newport Bay, then Newport Bay before discharging to the Pacific Ocean (City of Costa Mesa 2016). Upper Newport Bay is approximately 0.8 miles southwest of the Planning Area at its nearest point (USGS 2025). Several concrete-lined drainages flowing within or adjacent to the Planning Area eventually drain into Upper Newport Bay, including the Santa Ana-Delhi Channel and Paularino Channel (USGS 2025).

Municipal Drainage System

Stormwater runoff in the city is managed by a system of stormwater catch basins and storm drain lines that eventually discharge into either Newport Bay or Santa Ana River. Discharges into Newport Bay are first routed through Newport Beach City storm drain infrastructure or County facilities (City of Costa Mesa 2024). The City has

experienced a history of stormwater ponding, especially within the western and southwestern portions of the city. Much of the known locations of recurring ponding (i.e. flooding) within the city occur in flat areas that typically reside along historic water courses and are serviced by undersized drainage infrastructure design with old engineering standards that were less comprehensive than the current standards (City of Costa Mesa 2024). As part of the City's Storm Drain System Master Plan, the City prepared an Existing Conditions Assessment Report (ECAR) in 2024 to summarize the current conditions of the City's storm drain infrastructure. According to the ECAR, the City's storm drainage network is organized into three hydrologic regions or subareas (specifically, West, North, and East). These subareas collectively route stormwater runoff via catch basins, inlets, storm drain pipes, and channels that ultimately discharge into one of two watershed drainage basins; the Santa Ana River Watershed and the Newport Bay Watershed (City of Costa Mesa 2024). The Planning Area spans portions of all three subareas.

Most trunk facilities in and downstream of the city were built to pre-1986 "100-year Expected Value" criteria, which were ultimately reclassified as roughly equivalent to a 25-year "High Confidence" standard, meaning many pipes and channels now effectively provide approximately 25-year storm event capacity and cannot take more flow without overloading downstream infrastructure (City of Costa Mesa 2024). As a result, several locations in the city currently experience periodic flooding under existing conditions, led by the 17th Street/Pomona Avenue system in the West subarea (which is adjacent to several Planning Area Parcels) and the Canyon storm drain along the south edge of Fairview Park (City of Costa Mesa 2024). Other recurring hotspots in the vicinity of the Planning Area include 19th Street/Anaheim Avenue, Farad Street/Ohms Way, and Newport Boulevard/23rd Street (City of Costa Mesa 2024). A preliminary prioritization combining hydraulic deficiency and public safety factors identifies approximately 65,150 linear feet of storm drain as Moderate, High, or Highest priority for improvement, with many lines performing below the 25-year level (City of Costa Mesa 2024).

As discussed under "Storm Drain System Master Plan" in Section 4.10.2.3, Local (Regulatory Requirements), based on the results of the ECAR, the City also prepared a Proposed Drainage and Water Quality Improvements Report that identifies recommended storm drainage infrastructure improvements necessary to ensure the City achieves the desired flood control and water quality standards (City of Costa Mesa 2026a).

Surface Water Quality

As discussed in Section 4.10.2.3, Local (Regulatory Requirements), the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan) provides direction on the beneficial uses of the state waters in Region 8; describes the water quality that must be maintained to support such uses; and provides programs, projects, and other actions necessary to achieve the standards in the Basin Plan. Beneficial uses form the cornerstone of water quality protection under the Basin Plan. Once beneficial uses are designated, appropriate water quality objectives can be established and programs that maintain or enhance water quality are implemented to ensure the protection of beneficial uses. The designated beneficial uses, together with water quality objectives, form water quality standards. Table 4.10-1, Designated Beneficial Uses of Water Bodies, lists beneficial uses of water bodies in the vicinity of the Planning Area communities.

Table 4.10-1. Designated Beneficial Uses of Water Bodies

Water Body	Designated Beneficial Uses (Potential, Existing, or Intermittent)
Lower Newport Bay	NAV, REC1, REC2, COMM, WILD, RARE, SPWN, MAR, SHEL
Upper Newport Bay	REC1, REC2, COMM, BIOL, WILD, RARE, SPWN, MAR, SHEL, EST
Tidal Prism of Santa Ana River (to within 1000 feet of Victoria Street) and Newport Slough	REC1, REC2, COMM, WILD, RARE, MAR, EST
Santa Ana River (Reach 1 – Tidal Prism to 17th Street in Santa Ana)	REC1, REC2, WARM*, WILD*
Santa Ana-Delhi Channel (Reach 1 – Upper boundary of Tidal Prism to intersection of Sunflower Avenue/Flower Street)	REC2*, WARM, WILD, RARE
Santa Ana-Delhi Channel (Reach 2 – Sunflower Avenue/Flower Street intersection to Warner Avenue)	REC2*, WARM, WILD
Greenville Banning Channel (Reach 1-Inflatable Diversion Dam to California Street)	WARM, WILD

Source: SAWB 2025.
Notes: * Indicates intermittent beneficial use
NAV – Navigation Waters
REC1 – Water Contact Recreation
REC2 – Non-Contact Water Recreation
COMM – Commercial and Sportfishing
BIOL – Preservation of Biological Habitats of Special Significance
RARE – Preservation of Rare and Endangered Species
SPWN – Spawning, Reproduction and Development
MAR – Marine Habitat
WARM – Warm Freshwater Habitat
SHEL – Shellfish Harvesting
WILD – Wildlife Habitat
EST – Estuarine Habitat

As discussed in Section 4.10.2.1, Federal (Regulatory Requirements), Section 303(d) of the Clean Water Act (CWA) requires states to identify waterbodies that are "impaired," or those that do not meet water quality standards and are not supporting their beneficial uses. According to SWRCB, impaired water bodies in the vicinity of the Planning Area include Newport Bay (Upper and Lower) and Newport Slough (SWRCB 2024).

Water quality problems in Newport Bay and Newport Slough are due to nonpoint sources and fall into four major pollutant categories: 1) siltation; 2) bacterial contamination; 3) eutrophication (i.e., excessive nutrients, primarily phosphorous and nitrogen) and 4) toxic substances contamination. Section 303(d) requires that Total Maximum Daily Loads (TMDLs) be established for each pollutant causing water quality impairment. The TMDL must: 1) identify the maximum load of pollutant which can be discharged while ensuring compliance with water quality standards; 2) allocate necessary reductions in the pollutant load among contributing sources; and, 3) establish a plan and schedule to meet the target pollutant load. The Basin Plan includes the TMDLs and Load Allocations for each of the pollutant categories affecting Newport Bay and Newport Slough and an Implementation Plan and Schedule for the TMDLs and Load Allocations. Each TMDL also includes a proposed target for the reduction of pollutant discharge, together with an implementation plan and schedule for requiring compliance with the water quality objectives in the Basin Plan for each pollutant (SAWB 2025).

4.10.1.2 Groundwater

The Coastal Plain of Orange County (referred to herein as the Orange County Groundwater Basin [OC Basin]) covers an area of approximately 350 square miles in the north-central County. The OC Basin underlies the entirety of the Planning Area and the city (see Figure 4.10-2, Groundwater). The California Department of Water Resources (DWR) has designated the OC Basin as Basin 8-1, Coastal Plain of Orange County Groundwater Basin. The basin is bordered by hills and mountains to the north and northeast and by the Pacific Ocean to the southwest. The northwest boundary is the Orange County-Los Angeles County line, where groundwater flow is unrestricted into the Central Basin of Los Angeles County (Mesa Water District 2021). The OC Basin is managed by the Orange County Water District (OCWD).

DWR, in accordance with the Sustainable Groundwater Management Act (SGMA), has designated the Basin 8-1 as a medium-priority basin, primarily due to heavy reliance on the Basin's groundwater as a source of water supply. As a result, the basin is subject to SGMA requirements including the preparation of a groundwater sustainability plan (GSP) or alternative. OCWD, as the Groundwater Sustainability Agency, prepared an alternative GSP consistent with SGMA requirements.

Groundwater Supply

Groundwater is the primary water supply for much of north and central Orange County, including the service area of Mesa Water District and Irvine Ranch Water District (IRWD) (i.e., the two retail water purveyors for the Planning Area and city). OCWD regulates pumping from the basin through the basin production percentage (BPP), which determines the portion of each water provider's supply that may come from groundwater. The BPP is adjusted annually to balance water demands with available recharge supplies and basin storage. OCWD projects the BPP to remain around 85 percent in future years, supported by ongoing recharge improvements and the continued operation of the Groundwater Replenishment System (GWRS) (OCWD 2025a). OCWD's long-term planning documents project sufficient groundwater availability to reliably meet demands during normal and drought years, supported by recharge from stormwater, Santa Ana River base flows, incidental rainfall recharge, and GWRS (OCWD 2025a).[1]

Groundwater Quality

Groundwater quality in the OC Basin is extensively monitored and managed by OCWD. OCWD collects water quality and water level data from more than 1,300 wells, including monitoring wells, production wells, and seawater intrusion barrier wells. OCWD conducts regular testing for regulated and unregulated contaminants, ensures compliance with state and federal drinking water standards, and implements basinwide programs to protect and improve groundwater quality (OCWD 2025a). Specific contaminants of concern are discussed in further detail below.

Per- and Polyfluoroalkyl Substances

Per- and polyfluoroalkyl substances (PFAS) have emerged as a significant concern for groundwater quality throughout the state. Current scientific research suggests that exposure to certain PFAS may lead to adverse health outcomes (EPA 2026). The State Water Resources Control Board's (SWRCB) Division of Drinking Water (DDW) began requiring testing for PFAS compounds in certain production wells within OCWD's service area in 2019.

[1] OCWD operates the GWRS to help provides a reliable local water supply and reduce dependence on imported water. The system purifies wastewater treated by the Orange County Sanitation District to a level that meets or exceeds state and federal drinking water standards (OCWD 2025a).

Maximum Contaminant Levels (MCLs) were established by the U.S. Environmental Protection Agency in 2024. Additionally, SWRCB established a two-tiered advisory system for compounds without legally binding MCLs (SWRCB 2026).

PFAS have been detected in parts of the OC Basin managed by the OCWD, resulting in OCWD taking contaminated wells out of service (Mesa Water District 2021; OCWD 2025b). To address this, OCWD and its local water suppliers have been constructing new treatment facilities to remove PFAS from extracted groundwater. For example, in September 2025, OCWD and IRWD began operation of one such new treatment system that uses ion exchange technology to remove PFAS from groundwater pumped from Orange Park Acres Well Number 1. The system cleans up to 3,200 gallons of water per minute, providing enough clean drinking water to serve approximately 14,000 households in IRWD's service area (which includes a portion of the City and the Planning Area) (OCWD 2025b). According to OCWD, PFAS will be an ongoing contaminant issue (OCWD 2025b).

Salinity (Total Dissolved Solids)

Salinity, measured as Total Dissolved Solids (TDS), is a major water quality issue throughout Southern California, including the OC Basin. Higher TDS levels are found in parts of the cities of Irvine, Tustin, Yorba Linda, Anaheim, and Fullerton, as well as broad central areas of the OC Basin. TDS originates from natural mineral content, water used to recharge the basin, and on-site wastewater systems such as septic systems. Over time, TDS concentrations in the basin are expected to decline due to the use of low-TDS water (approximately 50 milligrams per liter) from the Groundwater Replenishment System for basin recharge (Mesa Water District 2021).

Nitrates

Nitrates are another widespread groundwater contaminant, originating from fertilizers, animal waste, sewage disposal systems, and other sources. The drinking water MCL for nitrate is 10 milligrams per liter. OCWD regularly tests nitrate levels and works with water producers to treat wells that exceed the safe limit (Mesa Water District 2021). OCWD also reduces nitrate concentrations through watershed management programs, including operating the Prado Wetlands, which naturally remove nitrogen and other pollutants from the Santa Ana River before it recharges the groundwater basin (Mesa Water District 2021).

Other Groundwater Quality Concerns

OCWD also monitors for the following additional contaminants that may affect groundwater quality (Mesa Water District 2021):

- **Methyl Tertiary Butyl Ether (MTBE):** A gasoline additive that has contaminated groundwater through leaks from underground fuel tanks. The drinking water MCL is 13 micrograms per liter.
- **Volatile Organic Compounds (VOCs):** Industrial chemicals found near locations such as the former Marine Corps Air Station El Toro and portions of Fullerton and Anaheim.
- **N-Nitrosodimethylamine (NDMA):** A compound associated with industrial wastewater and disinfected wastewater. The state notification level is 10 nanograms per liter.
- **1,4-Dioxane:** A solvent used in industrial processes and considered a potential human carcinogen.
- **Constituents of Emerging Concern (CECs):** Substances such as pharmaceuticals and personal care products that are not yet regulated but can be detected with advanced laboratory methods. OCWD operates one of the few laboratories in California capable of identifying many of these compounds.

4.10.1.3 Flooding Hazards

Flood Zones

FEMA determines flood zones in an effort to assist jurisdictions in mitigating flooding hazards through land use planning and outlines specific regulations for any construction within a 100-year flood zone. A 100-year flood zone (referred to as Zone A in the FEMA maps) is an area that has a 1 percent chance of being inundated during a 12-month period. The 100-year flood zone has been established as the base flood for purposes of flood-management measures. As illustrated in Figure 4.10-3, Flood and Tsunami Hazard Zones, the majority of the Planning Area is not within a flood hazard zone (FEMA Zones D and X indicate areas with reduced or minimal flood risk). Much of the northern portion of the Planning Area is within an area protected from flooding by a levee system. However, there are some smaller, intermittent areas within Zone A, including portions of several parcels along Bristol Street in the vicinity of the Santa Ana-Delhi Channel and South Coast Drive in the vicinity of the Greenville Banning Channel. Additionally, as discussed above in section 4.10.1.1 under "Municipal Drainage System," some parts of the city that are not within a recognized FEMA flood zone also experience seasonal flooding as a result of deficiencies in the exiting municipal storm drainage system.

Tsunami Zones

The Department of Conservation California Geological Survey maintains a map of tsunami hazard areas (to assist cities and counties in identifying their tsunami hazard for tsunami response planning. The hazard area represents the maximum considered tsunami runup from several extreme, infrequent, and realistic tsunami sources. As shown in Figure 4.10-3, none of the Planning Area parcels are within a tsunami hazard area (DOC 2026).

Dam Inundation

There are several dams located within 5 miles of the Planning Area southeast of Newport Bay, including Big Canyon, Harbor View, and San Juaquin Reservoir. However, according to the Department of Water Resources Division of Safety of Dams, the inundation areas for these facilities do not reach any portion of the Planning Area (DWR 2026).

4.10.2 Regulatory Requirements

4.10.2.1 Federal

Clean Water Act

The federal Water Pollution Control Act, or CWA, is the principal statute governing water quality. This act establishes the basic structure for regulating discharges of pollutants into the Waters of the United States (U.S.) and provides the U.S. Environmental Protection Agency (EPA) authority to implement pollution control programs, such as setting wastewater standards for industries. The goal of the statute is to completely end all discharges and to restore, maintain, and preserve the integrity of the nation's waters. The CWA regulates direct and indirect discharge of pollutants, sets water quality standards for all contaminants in surface waters, and makes it unlawful for any person to discharge any pollutant from a point source into navigable waters unless a permit is obtained under its provisions. The CWA mandates permits for wastewater and stormwater discharges; requires states to establish site-specific water quality standards for navigable bodies of water; and regulates other activities that affect water quality, such as dredging and the filling of wetlands. The CWA funds the construction of sewage treatment plants and recognizes the need for planning to address nonpoint sources of pollution. Section 402 of the CWA requires a permit for all

point source (i.e., a discernible, confined, and discrete conveyance, such as a pipe, ditch, or channel) discharges of any pollutant (except dredge or fill material) into Waters of the U.S.

Section 303(d) of the CWA requires states to identify waterbodies that are "impaired," or those that do not meet water quality standards and are not supporting their beneficial uses. Total Maximum Daily Loads (TMDLs) are established in Section 303(d) to serve as pollution controls for these specific pollutants. TMDLs define how much of a specific pollutant/stressor a given water body can tolerate and still meet relevant water quality standards. The Santa Ana Water Quality Control Board has developed TMDLs for select reaches of water bodies.

National Pollutant Discharge Elimination System

In compliance with the National Pollutant Discharge Elimination System (NPDES) program (under Section 402 of the CWA), all facilities that discharge pollutants from any point source into Waters of the U.S. must have an NPDES permit. The term "pollutant" broadly applies to any type of industrial, municipal, and agricultural waste discharged into water. Point sources can be publicly owned treatment works (POTWs), industrial facilities, and urban runoff. The NPDES program addresses certain agricultural activities, but the majority are considered nonpoint sources and are exempt from NPDES regulation. Direct sources discharge directly to receiving waters, and indirect sources discharge to POTWs, which in turn discharge to receiving waters. Under the NPDES program, permits are issued only for direct, point-source discharges. The National Pretreatment Program addresses industrial and commercial indirect dischargers. Municipal sources are POTWs that receive primarily domestic sewage from residential and commercial customers. Specific NPDES program areas applicable to municipal sources are the National Pretreatment Program, the Municipal Sewage Sludge Program, Combined Sewer Overflows, and the Municipal Storm Water Program. Nonmunicipal sources include industrial and commercial facilities. Specific NPDES program areas applicable to these industrial/commercial sources are: Process Wastewater Discharges, Non-process Wastewater Discharges, and the Industrial Storm Water Program. NPDES issues two basic permit types: individual and general. The EPA has focused on integrating the NPDES program further into watershed planning and permitting.

The NPDES has a variety of measures designed to minimize and reduce pollutant discharges. All counties with storm drain systems that serve a population of 100,000 or more, as well as construction sites one acre or more in size, must file for and obtain an NPDES permit. Another measure for minimizing and reducing pollutant discharges to a publicly owned conveyance or system of conveyances (including roadways, catch basins, curbs, gutters, ditches, human-made channels, and storm drains designed or used for collecting and conveying stormwater) is the EPA's Storm Water Phase I Final Rule. The Phase I Final Rule requires an operator (such as a city) of a regulated municipal separate storm sewer system (MS4) to develop, implement, and enforce a program (e.g., best management practices [BMPs], ordinances, or other regulatory mechanisms) to reduce pollutants in post-construction runoff storm drain system. Please refer to the "Orange County Municipal Separate Storm Water Permit" subheading in Section 4.10.2.3, Local, for discussion of the MS4 permit in effect for the Planning Area.

Federal Antidegradation Policy

The Federal Antidegradation Policy (Title 40 Code of Federal Regulations Section 131.12) requires states to develop statewide policies to prevent degradation of water quality 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.

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 U.S. 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 Guidelines for Emergency Action, FEMA Publication No. 64

These guidelines provide guidance to help dam owners, in coordination with emergency management authorities, effectively develop and exercise Emergency Action Plans for dams. The guidelines encourage (1) the development of comprehensive and consistent emergency action planning to protect lives and reduce property damage and (2) the participation of emergency management authorities and dam owners in emergency action planning.

Federal Guidelines for Dam Safety Risk Management, FEMA Publication No. 1025

These guidelines enable federal agencies to use the general principles of risk management to make risk-informed decisions. The agencies work to develop and maintain consistent application of risk analysis, risk assessment, risk management, and risk communication, using equivalent procedures and tools. Risk estimates typically reflect the risk at a given dam at the snapshot in time when the risk analysis is performed. Risk management includes structural and nonstructural actions on a given dam, as well as activities such as routine and special inspections, instrumented monitoring, structural analyses, site investigations, development and testing of emergency action plans, and many other activities.

4.10.2.2 State

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Act (Water Code Section 13000 et seq.) is the basic water quality control law for California. Under this act, the SWRCB has ultimate control over state water rights and water quality policy. In California, the U.S. EPA has delegated authority to issue NPDES permits to the SWRCB. The state is divided into nine regions related to water quality and quantity characteristics. The SWRCB, through its nine regional water quality control boards carries out the regulation, protection, and administration of water quality in each region. Each regional board is required to adopt a water quality control plan or basin plan that recognizes and reflects the regional differences in existing water quality, the beneficial uses of the region's ground and surface water, and local water quality conditions and problems. The Planning Area is in the jurisdiction of the Santa Ana Regional Water Quality Control Board (Region 8; referred to herein as the Santa Ana Water Board) which encompasses parts of Orange, Riverside, San Bernardino counties. The Water Quality Control Plan (i.e. the Basin Plan) for Region 8 is discussed below in Section 4.10.2.3, Local (Regulatory Requirements).

Construction General Permit Order No. 2022-0057-DWQ

Pursuant to the CWA, the SWRCB issued a statewide general NPDES permit for stormwater discharges from construction sites in 2022 (Order No. 2022-0057-DWQ, effective September 1, 2023). Under this statewide Construction General Permit, discharges of stormwater from construction sites with a disturbed area of one acre or more are required to either obtain individual NPDES permits for stormwater discharges or be covered by the General Permit. Coverage by the General Permit is accomplished by completing and filing a Notice of Intent with the SWRCB and developing and implementing a Storm Water Pollution Prevention Plan (SWPPP). Each applicant under the Construction General Permit must ensure that a SWPPP is prepared prior to grading and is implemented during construction. The SWPPP must list BMPs implemented on the construction site to protect stormwater runoff and must contain a visual monitoring program, a chemical monitoring program for "nonvisible" pollutants to be implemented if there is a failure of BMPs, and a monitoring plan if the site discharges directly to a waterbody listed on the state's 303(d) list of impaired waters.

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 U.S. 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.

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, the 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 to manage basins sustainably and requires those Groundwater Sustainability Agencies to adopt Groundwater Sustainability Plans for crucial (i.e., medium to high priority) groundwater basins in California.

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" (California Water Code Section 10754), provided they receive a majority of votes in favor of the proposal in a local election (California Water Code Section 10754.3).

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 (California Water Code Section 60000 et seq.) is authorized to establish groundwater replenishment programs and collect fees for that service, while a Water Conservation District (California 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.

California Water Code, Division 3. Dams and Reservoirs, Sections 6101–6102

These regulations require dam owners to maintain records of, and to report on, maintenance, operation, staffing, and engineering and geologic investigations and to issue orders as necessary to secure maintenance and operations to safeguard life and property. The owner of a dam, or his agent, shall fully and promptly advise the Department of Water Resources of any sudden or unprecedented flood or unusual or alarming circumstance or occurrence affecting the dam or reservoir. These regulations require the Department of Water Resources to periodically inspect dams and reservoirs for the purpose of determining their safety. If required, the dam owner shall perform work necessary to secure maintenance and operation that will safeguard life and property.

Governor's Office of Emergency Services, California Code of Regulations, Title 19 - Public Safety, Division 2 - Office of Emergency Services, Chapter 2 – Emergencies and Major Disaster, Subchapter 4 – Dam Inundation Mapping Procedures

These regulations were adopted to implement the provisions of Government Code Section 8589.5, which provide the standards for producing and submitting an inundation map, acquiring a waiver from the inundation mapping requirement, and administering the program. These regulations are not applicable to those structures identified as Debris Basins in Department of Water Resources Division of Safety and Dams Bulletin 17-00, dated July 2000. However, these regulations are not intended to limit the authority of the Governor's Office of Emergency Services, or any appropriate public agency, to act under the police power of the state, when necessary, to protect life and property from a threatened or actual dam failure.

California Fish and Game Code, Sections 1600–1616

California Fish and Game Code, Sections 1600–1616, mandates that "it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds, without first notifying the department of

such activity." Under California Fish and Game Code, Sections 1600–1616, the California Department of Fish and Wildlife (CDFW) has the authority to regulate work that will substantially divert or obstruct the natural flow of, or substantially change or use any material from, the bed, channel, or bank of any river, stream, or lake. The CDFW also has the authority to regulate work that will deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. This regulation takes the form of a requirement for a Lake or Streambed Alteration Agreement and is applicable to all projects. Applications to the CDFW must include a complete certified document pursuant to the California Environmental Quality Act (CEQA).

4.10.2.3 Local

Santa Ana River Basin Watershed Management Area Water Quality Control Plan

As discussed above in Section 4.10.1.1, Regional and Local Drainage, the City of Costa Mesa and the Planning Area are within portions of both the Santa Ana River Subbasin and Newport Bay Subbasin within the larger Santa Ana River Hydrologic Unit. The Basin Plan for the Santa Ana Region (i.e. Region 8) contains the water quality standards (water quality objectives, beneficial uses, and anti-degradation policy) for the protection of surface and groundwaters. The Santa Ana Region covers parts of southwestern San Bernardino County, western Riverside County, and northwestern Orange County. Additionally, the Basin Plan includes comprehensive watershed and groundwater management programs to implement water quality objectives, including total maximum daily loads salt nutrient management measures, and implementation plans (SAWB 2025).

The Basin Plan is reviewed periodically and updated as necessary. Basin Plan amendments are adopted by the Santa Ana Water Board and approved by the SWRCB, and the Office of Administrative Law. The EPA approves water quality standards contained in the Basin Plan, as required by CWA. The Basin Plan for the Santa Ana Region includes the upper and lower Santa Ana River watersheds, the San Jacinto River watershed, and several other small drainage areas. Chapters 3 (Beneficial Uses), 4 (Water Quality Objectives), 5 (Implementation), and 6 (Total Maximum Daily Loads) of the Basin Plan were updated in October 2025 to incorporate recent amendments effective on or before July 27, 2023 (SAWB 2025).

The OC Plan: Integrated Regional Water Management for North and Central Orange County

The OC Plan was prepared to identify and implement water management solutions on a regional scale. Agencies, organizations, and stakeholders collaborated to identify water resource needs, develop goals to improve water resource management, and evaluate projects for increased regional self-reliance. The goals of The OC Plan are to increase water supply, protect water quality, enhance the environment and habitat, provide flood risk management, improve the quality of life, and address climate change. The OC Plan accomplishes these goals through an established process of ranking projects to help further state and regional goals (IRWMG 2018).

The OCWD Resilience Plan: Adaptive Strategies for Securing Abundant and Reliable Water Supplies

The OCWD Resilience Plan functions as a long range, adaptive management framework that guides OCWD's compliance with state and federal regulatory requirements related to sustainable groundwater management, water quality protection, and long term water supply reliability. As the agency responsible for managing the OC Basin, OCWD is required under SGMA to maintain basin conditions that avoid undesirable results such as chronic lowering of groundwater levels, seawater intrusion, degraded water quality, land subsidence, and reduction of groundwater

storage. The OCWD Resilience Plan directly supports SGMA compliance by establishing strategies to balance groundwater pumping and recharge within a defined operating range, maintain an estimated 85 percent, and sustain adequate groundwater storage to ensure drought resilience and prevent seawater intrusion. The OCWD Resilience Plan also incorporates regulatory mandates governing water quality, particularly through projects addressing PFAS contamination, industrial plume remediation in the southern portion of the basin, and barrier system improvements to protect coastal aquifers. In addition, the plan aligns with regulatory requirements related to surface water-groundwater interactions, stormwater capture, and the operation of Prado Dam, including coordination with federal agencies for Forecast Informed Reservoir Operations and adherence to habitat protection obligations under federal and state wildlife regulations for the Prado Basin. By identifying and prioritizing projects that enhance recharge capacity, optimize the GWRS, manage sedimentation at Prado Dam, and expand regional stormwater capture, the OCWD Resilience Plan provides the regulatory foundation for maintaining a reliable, high quality, and sustainably managed groundwater supply consistent with SGMA, water quality standards, and long term regional water management obligations.

Orange County Municipal Separate Storm Sewer System Permit

MS4 permits are issued by local Regional Water Quality Control Boards to provide the means to address stormwater quality issues specific to the local watershed or region. MS4 permits require permittees to develop and implement a stormwater management program with the goal of reducing the discharge of pollutants to the maximum extent practicable (MEP). The stormwater management program or Drainage Area Management Plan, as it is referred to in the Orange County MS4 Permit (Order No. R8-2009-0030, as amended by Order No. R8-2010-0062 [NPDES Permit No. CAS618030]), must specify BMPs approved by the Santa Ana Water Board. Since the Orange County MS4 Permit has expired and was administratively extended, a tentative regional permit (Order No. R8-2024- 0001, NPDES No. CAS618000) has been released for public review.

The all existing and future development in the Planning Area would discharge into the MS4 within the jurisdiction of the City. Pursuant to the Orange County MS4 Permit, the City is responsible for controlling or limiting urban pollutants generated by post-construction activities from reaching their MS4s. The future development facilitated by the project would, therefore, be subject to the Orange County MS4 Permit will be required to comply with all applicable requirements in effect at the time of entitlement.

Model Water Quality Management Plan and Technical Guidance Document

The Model Water Quality Management Plan (WQMP) (dated May 2011) and Technical Guidance Document (TGD) (dated December 2013) have been developed to aid the County, the Orange County Flood Control District, and cities of the County (the Permittees) and development project proponents with addressing post-construction urban runoff and stormwater pollution from new development and significant redevelopment projects that qualify as Priority Projects. The criteria for defining a “Priority Project” is provided in the Model WQMP and TGD. The Model WQMP and TGD describe the process that permittees employ for developing a WQMP for individual new development and significant redevelopment projects. A WQMP is a plan for minimizing the adverse effects of urbanization, on-site hydrology, runoff flow rates, and pollutant loads. A WQMP, consistent with the Model WQMP and TGD, is required by the NPDES permit administered by the Santa Ana Water Board.

Construction Runoff Guidance Manual

The Construction Runoff Guidance Manual is intended to enable applicants for building or grading permits to understand and comply with the regulatory requirements for creek, river, stream and coastal water protection during

the construction phase of new development and significant redevelopment projects in the County. Project owners and developers are intended to use the Construction Runoff Guidance Manual as a guide to understand which permits and ordinances apply to their construction project. The Construction Runoff Guidance Manual acts as a guide to the BMPs typically needed to be implemented at a construction site to ensure compliance with the Construction General Permit and local ordinances.

Storm Drain System Master Plan

The City is currently in the process of creating a Storm Drain System Master Plan. The Storm Drain System Master Plan is currently being developed and implemented in two phases. Phase I includes the Existing Conditions Assessment Report (ECAR) and Proposed Drainage and Water Quality Improvements (completed and accepted by the City Council in October 2024), while Phase II includes a Storm Drainage Impact Fee Nexus Study (City of Costa Mesa 2026b). Based on the results of the ECAR, the Proposed Drainage and Water Quality Improvements summarized recommended storm drainage infrastructure improvements necessary to ensure the City archives the desired flood control and water quality standards (City of Costa Mesa 2026). Chapter III of the Municipal Code related to the collection of storm drainage fees was updated by Ordinance No. 2026-05 on May 5, 2026, and marked the completion of the Storm Drain System Master Plan process.

The Orange County Stormwater Program for North and Central Orange County

The Orange County Stormwater Program for North and Central Orange County (collectively North Orange County) is a regulatory compliance partnership consisting of the County of Orange, the Orange County Flood Control District (OCFCD), and the cities of Anaheim, Brea, Buena Park, Costa Mesa, Cypress, Fountain Valley, Fullerton, Garden Grove, Huntington Beach, Irvine, La Habra, La Palma, Laguna Hills, Laguna Woods, Lake Forest, Los Alamitos, Newport Beach, Orange, Placentia, Santa Ana, Seal Beach, Stanton, Tustin, Villa Park, Westminster, and Yorba Linda (collectively Permittees). The Permittees operate an interconnected MS4 that discharges stormwater and urban runoff pursuant to NPDES Municipal Separate Storm Sewer System Permits (MS4 Permits). North Orange County is regulated by the Santa Ana Water Board (County of Orange 2026a).

Drainage Area Management Plan (DAMP)

The specific water pollutant control elements of the Orange County Stormwater Program are documented in the Drainage Area Management Plan (DAMP) which is the City's primary policy, planning and implementation document for municipal NPDES stormwater permit compliance. The DAMP was prepared and is periodically updated using a consensus building process that involving public and private sector input and public review through the CEQA process. The main objective of the DAMP is to fulfill the commitment of the Permittees (including the City), to develop and implement a program that satisfies NPDES permit requirements. The DAMP describes the agreements, structures and programs that (County of Orange 2026b):

- Provide the legal authority for prohibiting unpermitted discharges into the storm drain system and for requiring BMPs in new development and significant redevelopment (DAMP Section 4.0);
- Improve existing municipal pollution prevention and removal best management practices (BMPs) to further reduce the amount of pollutants entering the storm drain system (DAMP Section 5.0);
- Ensure that all new development and significant redevelopment incorporates appropriate Site Design, Source Control and Treatment Control BMPs to address specific water quality issues (DAMP Section 7.0);

- Ensure that construction sites implement control practices that address control of construction related pollutants discharges including erosion and sediment control and on-site hazardous materials and waste management (DAMP Section 8.0);
- Ensure that existing development will address discharges from industrial facilities, selected commercial businesses, residential development and common interest areas/homeowner associations (DAMP Section 9.0);
- Detect and eliminate illegal discharges/illicit connections to the municipal storm drain system (DAMP Section 10.0);
- Identify impacted receiving waters and produce environmental quality information to direct management activities, including prioritization of pollutants to support the development of specific controls to address these problems (DAMP Section 11.0); and
- Assess watersheds and manage urban runoff on a watershed basis (DAMP Section 12.0).

The need to address increasingly prescriptive permit requirements and provide greater accountability, while maintaining the beneficial and synergistic cohesion of a countywide program, has been addressed through separation of the DAMP's policy and planning areas. As a result of this separation, the DAMP now includes Local Implementation Plans (LIPs). The LIPs were created to assist each Permittee in implementing an increasingly complex program within its jurisdiction while maintaining a single policy document that addresses two sets of permit requirements. The LIPs were completed by the Santa Ana Permittees (including the City) in June 2003.

Costa Mesa 2015-2035 General Plan

Land Use Element

The Land Use Element of the Costa Mesa 2015-2035 General Plan (General Plan) provides the following goals and policies are relevant to the Project (City of Costa Mesa 2016):

Goal LU-4: **New Development that Is Sensitive to Costa Mesa's Environmental Resources.**

Policy LU-4.1: Ensure that appropriate watershed protection activities are applied to all new development and significant redevelopment projects that are subject to the National Pollutant Discharge Elimination System Stormwater Permit during the planning, project review, and permitting processes.

Policy LU-4.2: Avoid conversion of areas particularly susceptible to erosion and sediment loss (e.g., steep slopes) and/or establish development guidelines that identifies these areas and protects them from erosion and sediment loss.

Policy LU-4.4: Promote site development that limits impact on and protects the natural integrity of topography, drainage systems, and water bodies, and protect the integrity of the bluff crest.

Policy LU-4.5: Promote integration of stormwater quality protection into construction and post-construction activities, as required by the NPDES Stormwater Permit and the City's Local Implementation Plan.

Conservation Element

The Conservation Element of the General Plan provides the following goals and policies related to hydrology and water quality:

Policy CON-1.A.6: Minimize soil depletion and erosion in development projects. Prevent erosion caused by construction activities, and encourage preservation of natural vegetation and topography.

Policy CON-1.A.9: Coordinate the development of plans, policies, and design standards for projects within the Coastal Zone with appropriate local, regional, and federal agencies.

Goal CON-3: **Improved Water Supply and Quality.** Pursue a multijurisdictional approach to protecting, maintaining, and improving water quality and the overall health of the watershed. A comprehensive, integrated approach will ensure compliance with federal and State standards, and will address a range of interconnected priorities, including water quality and runoff; stormwater capture, storage, and flood management techniques that focus on natural drainage; natural filtration and groundwater recharge through green infrastructure and habitat restoration; and water recycling and conservation.

Policy CON-3.A.3: Restrict use of turf in new construction and landscape reinstallation that requires high irrigation demands, except for area parks and schools, and encourage the use of drought-tolerant landscaping.

Policy CON-3.A.5: Work with public and private property owners to reduce stormwater runoff in urban areas to protect water quality in storm drainage channels, the Santa Ana River, and other local water courses that lead to the Pacific Ocean.

Policy CON-3.A.6: Continue to develop strategies to promote stormwater management techniques and storm drain diversion programs that collectively and naturally filter urban runoff.

Policy CON-3.A.7: Continue to comply with the National Pollutant Discharge Elimination System Program (NPDES) by participating in the Countywide Drainage Area Management Plan (DAMP), which stipulates water quality requirements for minimizing urban runoff and discharge from new development and requires the provisions of applicable Best Management Practices (BMP).

Policy CON-3.A.8: Require that all applicable development projects be reviewed with regards to requirements of both the on-site Water Quality Management Plan and State requirements for runoff and obtaining a Storm Water Pollution Prevention Plan (SWPPP) permit.

Safety Element

The Safety Element of the General Plan provides the following goals and policies relevant to the topic of hydrology and water quality:

Goal S-1: **Risk Management of Natural and Human-Caused Disasters.** Minimize the risk of injury, loss of life, property damage, and environmental degradation from seismic activity, geologic hazards, flooding,

fire, and hazardous materials. Promote a sustainable approach to reduce impacts of natural disasters, such as flooding and fire.

Policy S-1.11: Improve and maintain local storm drainage infrastructure in a manner that reduces flood hazards.

Policy S-1.14: Minimize flood hazard risks to people, property, and the environment by addressing potential damage tsunamis and sea level rise.

City of Costa Mesa Code

The Costa Mesa Municipal Code consists of the regulatory, penal, and administrative ordinances for the City. Components of the Municipal Code that are applicable to the subject of hydrology and water quality are identified below.

Title 8, Chapter 3—Water Quality

Requirements for erosion control and water quality for grading activities are set forth in Title 8, Chapter 3, Water Quality, of the Municipal Code. This code section establishes comprehensive requirements to prevent the discharge of pollutants into the municipal stormwater drainage system and local receiving waters. The code chapter prohibits illicit connections and prohibited discharges (defined broadly to include any pollutant-laden release to storm drains, surface waters, or groundwater) and allows only limited categories of exempt discharges such as uncontaminated stormwater, potable water system flushing, dechlorinated pool water, and certain non-polluting incidental flows.

As stated in Section 8-32, Control of Urban Runoff, of these regulations, all new development and significant redevelopment within the city shall be undertaken in accordance with the DAMP, including but not limited to the Development Project Guidance and associated BMPs, as well as any conditions and requirements established by the City's Development Services and Public Services Departments which are reasonably related to the reduction or elimination of pollutants in storm water runoff from the project site. The code chapter also mandates interagency cooperation with regional NPDES co-permittees and emphasizes that compliance with local standards does not relieve individuals or projects from meeting state and federal water quality laws, including the CWA and the Porter-Cologne Water Quality Control Act.

Title 13, Chapter 5, Article 10—Floodway and Floodplain Districts

Title 13, Article 10 of the Municipal Code sets forth requirements related to flooding to prevent loss of life and property and minimize economic loss caused by flood flows; to establish criteria for land management and land use in flood prone areas that are consistent with the criteria promulgated by the Federal Emergency Management Agency for the purpose of providing flood insurance eligibility for property owners; to prohibit encroachments, new construction or other improvements or development that would obstruct or divert the flow of floodwaters within a regulatory floodway; and to regulate and control land use below the elevation of the design flood flow within the remainder of the floodplain. The City's floodway and floodplain districts and regulations are intended to apply to areas of the city which are subject to periodic flooding and associated hazards. These regulations permit specific uses within the floodway areas and prohibit other uses within the floodway areas.

Title 13, Chapter 7—Landscaping Standards

Section 13-107, Irrigation Requirements, of the Municipal Code requires that all irrigation systems be designed that overspray, runoff, and low-head drainage onto streets, sidewalks, windows, walls, and fences are minimized. In addition, automatic irrigation systems for water cycles shall be scheduled to maximize ground infiltration rates and further minimize runoff.

Title 15, Chapter 3, Section 15-65 – Drainage fees established

Section 15-65 of the Municipal Code establishes a Drainage Fee that is set periodically by the City Council to pay for upgrades/improvements to the City's storm drain system. The fee is tiered to take into account the intensity of proposed development. The fee tiers include the following: low-density residential; medium-density residential; high-density residential; and commercial/industrial. The Drainage Fee shall be imposed on a pro rata, per acre basis upon any parcel or other piece of property for which an owner, developer or other applicant has requested approval to develop or redevelop, or to construct or reconstruct any structure upon such property pursuant to Section 15-70, prior to, and as a condition of approval being granted for such development or construction. The funds collected are deposited into one of two of the City's Drainage Fee Funds. One for property that tributary to the Santa Ana River Watershed and another for property that is tributary to the Newport Bay Watershed. Chapter III of the Municipal Code related to the collection of storm drainage fees was updated by Ordinance No. 2026-05 on May 5, 2026, and marked the completion of the 2026 Storm Drainage Impact Fee Nexus Study and the Storm Drain System Master Plan.

Existing Community Based Plans and Specific Plans

The 19 West Urban Plan, SoBECA Urban Plan, Mesa West Bluffs Urban Plan, Mesa West Residential Ownership Urban Plan/Mixed-Use Overlay, Harbor Mixed-Use Overlay, Residential Incentive Overlay, North Costa Mesa Specific Plan, and the Newport Boulevard Specific Plan are the only existing community-based or specific plans applicable to the Project. However, there are no applicable goals or policies pertaining to hydrology and water quality within these plans.

4.10.3 Thresholds of Significance

The significance criteria used to evaluate the Project's impacts on 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 the Project would:

Threshold 4.1-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.

Threshold 4.1-2: Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

Threshold 4.1-3: 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:

i. result in substantial erosion or siltation on or off site;

ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;

iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

iv. impede or redirect flood flows.

Threshold 4.1-4: In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.

Threshold 4.1-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

4.10.4 Impact Analyses

4.10.4.1 Methodology

As described in Chapter 3, Project Description, the Project is a policy document that does not include or propose any site-specific development that could directly result in construction or operational impacts to the environment. However, implementation of the Project would facilitate additional future development in the city. Therefore, this Draft PEIR does not assess the site-specific construction and operation details of each future development within the Planning Area. Rather, it assesses the impacts associated with changes to existing land uses and the associated overall effects of buildout of the Project through 2056, where reasonably foreseeable physical changes to the environment could occur. Analysis at a parcel or site-specific level was not conducted because, unless otherwise noted within this assessment, the actual locations of project-level development (and its chronologic sequence or concurrence) that may be implemented in the future are speculative.

The following analysis considers the existing environmental setting and regulatory environment applicable to the Planning Area. This analysis considers the checklist questions for hydrology and water quality in accordance with Appendix G of the CEQA Guidelines in determining whether implementation of the Project, including the increased density and building height changes (summarized in Chapter 3, Project Description), could adversely affect the quality of waterbodies during construction activities or result in a long-term increase in pollutant levels in stormwater originating from the Planning Area. The analysis considers the existing regulatory requirements related to hydrology and water quality that prohibit the contamination of receiving water bodies and provide protection of surface waters and groundwater.

Impacts associated with potential increased stormwater and polluted runoff have been evaluated on a programmatic level. Drainage and water quality impacts have been evaluated with consideration of existing regulatory requirements, including the DAMP and Model WQMP/TGD, which are intended to prevent and control the discharge of pollutants to the MS4 and receiving waters during construction and to ensure new development

and significant redevelopment projects comply with post-construction BMP regulations. Impacts on groundwater have also been evaluated in consideration of the OCWD Resilience Plan and SGMA.

4.1.4.2 Environmental Analyses

Threshold 4.10-1 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. For the reasons discussed below, construction and operation of the Project would not violate any water-quality standards or waste-discharge requirements, and impacts would be less than significant.

Construction

This analysis evaluates water-quality effects at a programmatic level and does not assess the detailed construction methods of individual future development projects. Typical construction activities such as demolition, vegetation removal, grading, excavation, stockpiling, material import/export, building construction, and landscaping could temporarily expose soils and construction materials to stormwater. These activities may also involve the use of heavy equipment and substances such as fuels, oils, solvents, paints, and concrete products, which could degrade surface water or groundwater if not properly contained.

As outlined in Section 4.10.2, Regulatory Requirements, existing federal, state, and local regulations provide comprehensive protection of water quality during construction. Under Municipal Code Section 8-32 (Control of urban runoff), all new development and significant redevelopment, regardless of acreage, must comply with the DAMP, including incorporation of BMPs, and any conditions imposed by the City to prevent pollutant discharges. Required compliance with NPDES permitting requirements ensures implementation of construction BMPs that prevent improper storage, handling, or disposal of construction-related materials and substantially reduce the potential for polluted runoff to affect receiving waters. Future development disturbing one acre or more would be required to prepare and implement a SWPPP under the NPDES Construction General Permit, incorporating site-specific BMPs for erosion control, sediment control, and materials and waste management. Projects disturbing less than one acre would still be required to implement BMPs consistent with the DAMP and City standards. Although downstream waters such as Newport Bay and Newport Slough are listed as impaired for certain constituents, adherence to the DAMP and NPDES Construction General Permit requirements would minimize the potential for construction-related pollutants to contribute to existing impairments.

Each future development would undergo project-level review to verify compliance with applicable City and NPDES requirements. Because construction activities within the Planning Area would be obligated to implement established water-quality regulations and BMPs, temporary construction-related water-quality impacts would be adequately controlled. Therefore, construction of the Project would not violate water-quality standards or waste-discharge requirements, and impacts would be less than significant.

Operations

As described above in Section 4.10.1.2, Existing Environmental Conditions, the receiving waters of the Planning Area are impaired by several pollutants. Future Project-facilitated development would include residential, mixed use, and commercial uses. Pollutants associated with these land uses typically include sediments, trash, petroleum products, metals, and chemicals.

For future development projects in the Planning Area, a final project WQMP or Water Quality Project Plan must be submitted and approved prior to issuance of building or grading permits (City of Costa Mesa 2025). A project WQMP is a plan for managing the quality of stormwater that flows from a developed site after construction is completed and through the life of the development. A project WQMP describes the BMPs that will be installed and maintained and used by property owner(s), facility operators, and tenants to prevent and minimize water pollution that can be caused by stormwater. All projects meeting the "priority project" definition (e.g., new development creating 10,000 square feet or more of impervious surface or redevelopment projects adding/replacing 5,000 square feet or more of impervious surface) must prepare a priority project WQMP consistent with the Model WQMP and TGD (City of Costa Mesa 2025). Non-priority projects are required to prepare a Non-Priority Project Water Quality Plan that requires a project proponent to document the selection of site design, source control and any other BMPs included in a project. Information contained in the Model WQMP and TGD may be used as a reference for completing the Non-Priority Water Quality Project Plan (City of Costa Mesa 2025).

Even projects that are exempt from preparation of a WQMP or Water Quality Project Plan would be subject to various terms, conditions, and/or requirements to minimize urban runoff and protect water quality if the development services department determines that a project may result in the discharge of significant levels of a pollutant. Note that changes in building height alone would not substantively change the sources or quantities of stormwater pollutants. Per Municipal Code Section 8-32(2), the City's development services department and the public services department will review project plans and impose terms, conditions and requirements on the project, including BMPs, as deemed necessary. By retaining and/or treating runoff on site through BMPs, the amount of potentially pollutant-laden runoff leaving a developed site and contaminating receiving waters would be minimized. Furthermore, the City currently inspects all residential, commercial, institutional, and industrial development and enforces structural and non-structural BMPs to ensure compliance with the City's MS4 and eliminate discharges.[2] Future development in the Planning Area would be subject to the same monitoring and enforcement procedures.

Compliance with existing regulations and implementation of BMPs would minimize pollutants being transported off site into downstream receiving waters from the reasonably foreseeable future development of residential, mixed use, and commercial uses in the Project area. As a result, future development implemented under the Project would not violate water quality standards or waste discharge requirements and impacts would be less than significant.

Threshold 4.10-2 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. For the reasons discussed below, the Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin, and impacts would be less than significant.

Groundwater Supplies

The Planning Area is serviced by two different retail water purveyors: Mesa Water District and IRWD. The majority (approximately 97 percent) of the Planning Area is in Mesa Water District's service area, with approximately 3 percent of the Planning Area (i.e., the areas southwest of Bristol Street, southeast of Newport Boulevard, and

[2] Structural BMPs involve engineered or installed physical systems designed to manage stormwater, control erosion, and treat pollutants. They directly intercept, contain, or trat sediment runoff. Non-structural BMPs focus on planning, operational practices, policies and education to prevent pollution and erosion without relying on physical structure. Examples include seeding, mulching, and revegetation to stabilize soils and filter sediment and bioretention areas to manage runoff and reduce sediment transport.

northeast of 23rd Avenue) within IRWD's service area (Mesa Water District 2021; IRWD 2021). Groundwater sourced from the OC Basin (Basin 8-1) (managed and supplied by OCWD) makes up a substantial portion of the water supply for both water purveyors; specifically, 94 percent for Mesa Water District and 50 percent for IRWD (Mesa Water District 2021; IRWD 2021).

As detailed in Table 4.10-2, Project-Related Population Increase by Service Area, the total population increase in the Planning Areas as a result of Project implementation (by 2056) is 66,026 (inclusive of the residential population and employment). Of that total population increase, approximately 97 percent (63,966) would be within Mesa Water District's service area, while approximately 3 percent (2,060) would be within IRWD's service area. (For a more detailed discussion of the Project-related residential population and employment increase within the Planning Area, please refer to Chapter 3, Project Description, of this PEIR.)

Table 4.10-2. Project-Related Population Increase by Service Area

Location	Increase in Residential Population	Increase in Employees	Increase in Planning Area Population	Mesa Water District		IRWD	
				Percentage of Planning Area[1]	Population Increase[2]	Percentage of Planning Area[1]	Population Increase[2]
Planning Area	51,572	14,454	66,026	97 percent	63,966	3 percent	2,060

Source: Mesa Water District 2021; IRWD 2021
Notes: Figure totals may not sum precisely due to rounding.

1. Percentages for the Mesa Water District and IRWD service areas are based on the Planning Area parcel acreage within each service area. Of the total approximately 1,353.4-acre Planning Area, approximately 1,311.1 acres (97 percent) are within Mesa Water District's service area, while approximately 42.2 acres (3 percent) are within IRWD's service area.
2. Population increases per service area are estimated based on the percentage of parcel acreage in each service area multiplied by the total increase in Planning Area population.

As shown in Table 4.10-3, Project-Related Water Demand Increase by Service Area, based on the Project-related population increase in each service area, the estimated increase in water demand (by 2056) would be approximately 5,437,141 gallons per day (or 6,090 acre-feet per year) in Mesa Water District's service area and 195,665 gallons per day (or 219 acre-feet per year) in IRWD's service area. The total Project-related water demand increase for the Planning Area (by 2056) would be approximately 5,632,806 gallons per day (or 6,310 acre-feet per year).

Table 4.10-3. Project-Related Water Demand Increase by Service Area

Location	Project-Related Pop. Increase[1]	2020 UWMP Actual GPCD[2]	GPD Increase[3]	AFY Increase[4]
Mesa Water District Service Area	63,966	85	5,437,141	6,090
IRWD Service Area	2,060	95	195,665	219
Planning Area	**66,026**	**—**	**5,632,806**	**6,310**

Sources: Mesa Water District 2021; IRWD 2021

Notes: Figure totals may not sum precisely due to rounding; IRWD = Irvine Ranch Water District; Pop. = population; GPCD = gallons per capita per day; GPD = gallons per day; AFY = acre feet per year.

1 The Project-related population increase includes both residential and employment population.

2 The actual 2020 GPCD rates are derived from the UWMPs for each water purveyor (Mesa Water District 2021; IRWD 2021).

3 The estimated increased water demand is based on the total Project-related population increase in each service area (i.e., increase in residential population plus increase in employees) multiplied by the 2020 actual water consumption rate (i.e., 95 GPCD for the IRWD service area and 85 GPCD in the Mesa Water District service area). As GPCD is anticipated to decrease overtime as a result of statewide water reduction targets, use of 2020 GPCD rates (as opposed to potential future rates) is the more conservative approach.

4 Conversion to acre feet is based on a conversion rate of 3.07E-06 acre-feet per gallon.

According to Mesa Water District's 2020 Urban Water Management Plan (UWMP), Mesa Water District is projected to have a multiple dry year water supply of 22,102 acre-feet and a normal year supply of 20,851 acre-feet in 2045, approximately 95 percent of which would come from OC Basin groundwater. Likewise, according to IRWD 2020 UWMP, IRWD is projected to have a multiple dry year water supply of 176,679 acre-feet and a normal year supply of 178,727 acre-feet by 2040, approximately 50 percent of which would come from OC Basin groundwater.

As discussed above in Section 4.10.1.2, Groundwater, the groundwater basin (i.e. the OC Basin) that supplies Mesa Water District and IRWD is actively managed by OCWD to balance withdrawals with recharge and to maintain storage within an established "safe operating range" (OCWD 2025a). OCWD sets an annual BPP that defines what share of each water retailer's total supply may come from the OC Basin. Pumping above the BPP is discouraged through the Basin Equity Assessment, which raises the marginal cost of extra groundwater to be on par with the cost of imported water supplies (which are generally more expensive than local supplies). OCWD also manages the OC Basin within a defined storage envelope to guard against increased pumping costs, reduced well yields, seawater intrusion, and land subsidence. These governance tools (i.e., the BPP/BEA and the storage operating range) are the primary, enforceable "limits" on withdrawals and are complemented by continuous monitoring and seawater-intrusion control barriers at the coast (OCWD 2025).

The OC Basin is not adjudicated; instead, it is managed under a SGMA "alternative plan" that the California Department of Water Resources (DWR) approved in 2019 based on more than a decade of demonstrated sustainable management. DWR also approved the first five-year periodic update (the 2022 alternative plan) in 2024, confirming that the OC Basin continues to meet SGMA's sustainability criteria. In addition, Santa Ana River base flows to the County are protected by the 1969 *OCWD v. City of Chino* judgment, which helps sustain recharge supplies (OCWD 2025a). Together, these frameworks provide institutional and hydrologic backstops that limit pumping, ensure adequate recharge, and help maintain long-term sustainability for municipal users, including within the Planning Area.

According to OCWD's 2025 Resilience Plan, the current recharge portfolio for the basin is diverse and drought-resilient, including: (1) year-round recycled water from the GWRS; (2) Santa Ana River base flows and storm flows; (3) coastal seawater barriers and mid-basin injection that both protect quality and add to storage; and (4) incidental recharge from precipitation and subsurface inflow (OCWD 2025a). OCWD forecasts total future

groundwater supplies on the order of approximately 286,000 to 319,000 acre-feet per year through 2050 (with GWRS as the recharge anchor and declining storm/base flows partially offset by operational improvements and as needed imported water replenishment) (OCWD 2025a). Furthermore, according to OCWD, ongoing initiatives such as desilting/riverbed filtration to sustain percolation rates and targeted PFAS treatment and seawater-barrier upgrades will further enhance recharge reliability and protect water quality in the OC Basin in the coming decades (OCWD 2025a).

Taking into consideration the management framework discussed above, the Project's net increase in water demand is relatively small when set against OCWD's managed supply volumes and planned operating BPP of approximately 85 percent (OCWD 2025a). Given OCWD's enforceable limits on pumping (i.e., the BPP/BEA), its storage-range criteria,[3] the base-flow minimum on the Santa Ana River that supports recharge, and expanding recharge projects, the Project-related water-demand increase within the Planning Area would not substantially decrease groundwater supplies in a manner that would impede sustainable groundwater management of the OC Basin. Therefore, impacts would be less than significant. (For more discussion on water supply, please refer to Section 4.19, Utilities and Service Systems of this PEIR.)

Groundwater Recharge

As described above, the Planning Area is located within the OC Basin, which is actively managed by OCWD. OCWD has operated an extensive managed aquifer recharge system since the 1930s, allowing OCWD to sustainably manage the basin and support increased groundwater pumping (OCWD 2025a). The OCWD has a diverse portfolio of sources for recharge water, including Santa Ana River base flow, stormwater, recycled water, and when needed, imported water to replenish the groundwater basin. OCWD operates a network of over two dozen recharge facilities covering 1,500 acres that are in the cities of Anaheim and Orange where geologic conditions are favorable for recharge. Although the surface water system provides the bulk of recharge to the basin, recharge from the Alamitos and Talbert Gap seawater barriers and the Mid-Basin injection wells are also important. The Mid-Basin injection wells were constructed in the center of the basin to provide additional recharge in an area of heavy pumping where groundwater levels tend to be low. OCWD's long-term planning documents project sufficient groundwater availability to reliably meet demands during normal and drought years, supported by recharge from stormwater, Santa Ana River base flows, incidental rainfall recharge, and GWRS (OCWD 2025a).

The Planning Area parcels are predominantly developed and therefore have limited groundwater recharge potential. As stated above, OCWD concentrates their recharge facilities in the cities of Anaheim and Orange, where geologic conditions are favorable for recharge (OCWD 2025a). Therefore, because the development associated with the Project would likely have very little net effect on groundwater recharge, and because OCWD carefully manages the OC Basin's recharge system, the Project would not reduce the groundwater recharge potential of the area and impacts would be less than significant.

[3] The storage-range criteria are OCWD's thresholds that define the OC Basin's allowable storage envelope—from "full" (0 acre -feet below full) down to a lower limit of 500,000 acre-feet below full, with an optimal target of approximately 150,000 to 200,000 acre-feet below full (OCWD 2025a). These thresholds guide actions (e.g., raising or lowering the BPP and seeking additional recharge supplies) to prevent seawater intrusion, subsidence, reduced well yields, and higher pumping costs as storage approaches the limits (OCWD 2025a).

Threshold 4.10-3 **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:**

- **i. result in substantial erosion or siltation on or off site;**
- **ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;**
- **iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or**
- **iv. impede or redirect flood flows?**

Less Than Significant Impact. Construction activities associated with future development under the Project would include grading, demolition, and vegetation removal which have the potential to temporarily alter drainage patterns. These activities could expose bare soil to rainfall and stormwater runoff, which could accelerate erosion and could result in sedimentation or siltation of stormwater and, eventually, water bodies. Alteration of the existing drainage pattern could also result in increased runoff that has the potential to exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

As discussed above in Section 4.10.1.1, Flooding Hazards and illustrated on Figure 4.10-3, areas located within a 100-year flood hazard zone are limited to small portions of parcels in the vicinity of existing flood control channels in the northern/northeastern portion of the Planning Area. Natural streams and rivers would not be altered as a result of future development within the Planning Area. The segments of the Santa Ana River adjacent to the Planning Area parcels are paved and channelized. The Santa Ana River and other flood control channels in the vicinity of the Planning Area (e.g., the Santa Ana-Delhi Channel, Greenville Banning Channel) would not be altered as a result of future development within Planning Area parcels. Additionally, as a majority of the Planning Area is developed with impervious surfaces, the Project would not involve the large-scale conversion of undeveloped open spaces to urban uses. However, all future development in the Planning areas, including within the unpaved agricultural parcels in the northern portion of the Planning Area, would be subject to low impact development protocols, such as structural and non-structural BMPs, as discussed above under Threshold 4.10-1. Structural BMPs involve engineered or installed physical systems designed to manage stormwater, control erosion, and treat pollutants. They directly intercept, contain, or treat sediment runoff. Non-structural BMPs focus on planning, operational practices, policies and education to prevent pollution and erosion without relying on physical structure. These BMPs may include the use of retention, biofiltration, vegetation-based, and/or treatment-based stormwater quality measures.

As discussed above in Section 4.10.1.1, Surface Hydrology and Drainage and Section 4.10.2.3, Local (Regulatory Requirements), several stormwater trunkline locations in the vicinity of the Planning Area parcels experience periodic flooding. As a result, the City in the process of creating a Storm Drain System Master Plan, including the ECAR, Proposed Drainage and Water Quality Improvements, and Storm Drainage Impact Fee Nexus Study (Nexus Study) to address existing system deficiencies. Based on the results of the ECAR, the Proposed Drainage and Water Quality Improvements identified storm drainage infrastructure improvements necessary to ensure the City achieves the desired flood control and water quality standards (City of Costa Mesa 2026a). These infrastructure improvements would be funded by future development through development impact fees.

Ultimately, the Planning Area is predominantly developed with impervious surfaces under existing conditions. Thus, future buildout including any potential increases in building heights would not be likely to substantially increase the volume of runoff originating from Planning Area parcels at a programmatic level. Regardless, all future development projects in the Planning Area would be subject to BMPs (such as treatment control measures during construction as well as post-construction measures) in accordance with existing regulatory requirements. Future projects in the Planning Area implemented under the amended MUOD would also be required to pay development impact fees to fund improvements to the existing storm drainage system. For the reasons discussed above, the Project would not 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, and impacts would be less than significant.

Threshold 4.10-4 In a flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

Less Than Significant Impact. As previously discussed under Section 4.10.1.3, Flooding Hazards, the Planning Area is not within a dam inundation or tsunami hazard zone. No large open bodies of water, such as reservoirs or lakes, are located within close enough proximity to the Planning Area for any risks of seiche wave hazards. The Planning Area would thus not be subject to seiche inundation during an earthquake. Some intermittent portions of Planning Area parcels are within a 100-year flood hazard zone, including portions of several parcels along Bristol Street in the vicinity of the Santa Ana-Delhi Channel and South Coast Drive in the vicinity of the Greenville Banning Channel. However, as discussed above Threshold 4.10-1, all future projects in the planning areas would be subject to BMPs and low impact development design components through required compliance with the DAMP, preparation of a WQMP, or other terms, conditions, and/or requirements levied by the City to minimize release of pollutants as a result of flooding events. Additionally, as discussed above under Threshold 4.10-3, all future projects would be subject to development impact fees to help address intermittent flooding as a result of existing storm drainage system deficiencies. As a result, future developments completed under the Project would not risk release of pollutants due to project inundation and impacts would be less than significant.

Threshold 4.10-5 Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Water Quality Control Plan

Less Than Significant Impact. Water quality control plans applicable to the Planning Area include the Santa Ana Water Board's Basin Plan, the DAMP, and the OC Plan (all of which are discussed above in Section 4.10.2, Regulatory Requirements). As previously described in Threshold 4.10-1, construction activities on future redevelopment sites in excess of one acre would be required to comply with the NPDES Construction General permit that would include typical BMPs for erosion control, sediment control, and waste management. Similarly, future redevelopment sites less than one acre would be required to implement the BMPs specified in the DAMP, as required in the Municipal Code. Operational activities associated with future development projects in the Planning Area would be required to demonstrate MS4 permit requirements through preparation of a WQMP or Water Quality Project Plan or would be subject to other terms, conditions, and/or requirements at the discretion of the City to minimize urban runoff and protect water quality. Furthermore, as discussed above under Threshold 4.10-3, future projects in the Planning Area would be subject to development impact fees to pay for required improvements to the City's storm drain system in accordance with the updated Storm Drain System Master Plan. Thus, the Project would not conflict with or obstruct implementation of a water quality control plan.

Sustainable Groundwater Management Plan

With respect to sustainable groundwater management, both Mesa Water District and IRWD supply water to the Planning Area and both water purveyors receive groundwater from the OC Basin, as overseen by OCWD. As of 2014, SGMA requires all high and medium-priority basins, as ranked by the Department of Water Resources (DWR) to submit a groundwater sustainability plan. The groundwater sustainability plan must demonstrate how the basin would achieve sustainable conditions in 20 years. If a groundwater basin was already being managed sustainably, an alternative plan could be submitted. DWR designated the OC Basin (Basin 8-1) as a medium-priority basin, primarily due to its heavy reliance on groundwater for water supply. OCWD submitted a plan called the "Basin 8-1 Alternative" to DWR in January 2017. OCWD collaborated with IRWD and the City of La Habra in preparing the plan to cover the entirety of Basin 8-1 as required by SGMA. OCWD's service area covers approximately 90 percent of Basin 8-1 with IRWD and La Habra covering the remaining 10 percent. The plan is called an "Alternative" because the basin had been managed sustainably over a decade prior to SGMA's passage. It was only one of two plans in the state to obtain approval based on 10 years of prior sustainable management. The first Basin 8-1 Alternative was submitted to DWR in January 2017 and approved by DWR in July 2019. The first five-year periodic update was submitted in 2022 and approved in 2024 (OCWD 2025a).

SGMA is an outcome-based law in that sustainability is defined as the lack of undesirable results for six criteria: (1) lowering groundwater levels, (2) reduction of storage, (3) seawater intrusion, (4) degraded quality, (5) land subsidence, and (6) surface water depletion. OCWD's approach to managing the groundwater basin within a defined storage range allows it to address the following sustainability criteria: lowering of groundwater levels, reduction of storage, and land subsidence (OCWD 2025a). Seawater intrusion in the OC Basin has historically been addressed by the Talbert and Alamitos Barriers. More recent intrusion has been noted in the Sunset Gap and the feasibility of constructing a new barrier is currently being studied (OCWD 2025a). The surface water depletion criterion does not apply to the OC Basin as basin recharge is managed and implemented by OCWD (OCWD 2025a). The degraded quality criterion is addressed by OCWD's groundwater quality monitoring and cleanup programs. Even though the OC Basin currently complies with SGMA, OCWD, IRWD and La Habra will continue to show DWR that it meets sustainable management criteria through its annual reports and periodic updates to the Basin 8-1 Alternative, which are due every 5 years (OCWD 2025a).

As indicated above, OCWD will continue to ensure that management of the OC Basin complies with the applicable SGMA requirements, including the Basin 8-1 Alternative plan. Additionally, as discussed above under Threshold 4.10-2, OCWD's long-term planning documents project sufficient groundwater availability to reliably meet demands during normal and drought years, supported by recharge from stormwater, Santa Ana River base flows, incidental rainfall recharge, and GWRS (OCWD 2025a).[4] Therefore, implementation of the Project would not conflict with a water quality control plan or sustainable groundwater management plan and impacts would be less than significant. (For more discussion on water supply, please refer to Section 4.19, Utilities and Service Systems of this PEIR.)

4.10.5 Cumulative Impact Analyses

Where a lead agency concludes that the cumulative effects of a project, taken together with the impacts of other closely related past, present, and reasonably foreseeable future projects are significant, the lead agency then must determine whether the project's incremental contribution to such significant cumulative impact is "cumulatively

[4] OCWD operates GWRS to help provides a reliable local water supply and reduce dependence on imported water. The system purifies wastewater treated by the Orange County Sanitation District to a level that meets or exceeds state and federal drinking water standards (OCWD 2025a).

considerable" (and thus significant in and of itself). The cumulative study area used to assess potential cumulative hydrology and water quality impacts includes the Newport Bay and Santa Ana watersheds as well as the OC Basin. This cumulative analysis considers buildout of the General Plan and one current project (i.e., the Fairview Developmental Center Specific Plan). The cumulative buildout applicable to this analysis is provided in Section 2.5, Cumulative Impact Analysis, in Chapter 2, Environmental Setting of this PEIR.

Threshold 4.10-1. Waters receiving runoff from the Planning Area (e.g., Upper/Lower Newport Bay, Santa Ana River reaches) are regulated under the Santa Ana Water Board (Region 8) Basin Plan, which designates beneficial uses and adopts TMDLs for listed impairments (e.g., siltation, bacteria, nutrients, toxics). All cumulative development must comply with the NPDES Construction General Permit, the Orange County MS4 permit (including the DAMP, Model WQMP, and TGD), and City ordinances requiring construction and post-construction BMPs. These programs collectively control sediment and pollutant loading, implement watershed-based TMDLs, and reduce the incremental contribution of new sources, such that cumulative water-quality effects are less than significant. As described under Threshold 4.10-1 in Section 4.10.4, future development facilitated by the Project must prepare a project WQMP or Water Quality Project Plan (as applicable), implement LID/treatment BMPs, and comply with construction stormwater requirements. Because the Planning Area parcels will be regulated under the same programs and BMPs as cumulative development, the Project's incremental contribution would not be cumulatively considerable.

Threshold 4.10-2. The OC Basin is a common regional resource for north/central Orange County retailers (including Mesa Water District and IRWD) and is actively managed by OCWD through the BPP, Basin Equity Assessment, and management of storage within a defined operating range. OCWD's Resilience Plan identifies a diversified, drought-resilient recharge portfolio (e.g., GWRS recycled water, Santa Ana River base/storm flows, mid-basin injection and coastal barriers, incidental recharge) and forecasts sustainable supplies to maintain an approximately 85 percent BPP on average, with imported replenishment used adaptively as conditions warrant. The OC Basin is not adjudicated; instead, DWR approved OCWD's SGMA Alternative in 2019 (with a 2024 five-year update approval), evidencing long-term sustainable management. Given these enforceable and adaptive basin controls, cumulative development within the OC Basin would not cause a substantial depletion of groundwater supplies or interfere with recharge in a manner that would impede sustainable groundwater management; cumulative impacts are less than significant. As summarized under threshold 4.10-2 in Section 4.10.4, the Project's citywide net demand increase (by 2056) is modest relative to OCWD's managed supplies and operating framework. The Project, together with cumulative growth throughout the city, and would occur within the context of an actively managed ground water basin, including OCWD's annual BPP and storage-range criteria. Accordingly, the Project's incremental contribution would not be cumulatively considerable.

Threshold 4.10-3. The cumulative surface-hydrology study area includes the City's MS4 and its immediate receiving channels. Under existing conditions, several stormwater trunkline segments experience periodic ponding due to legacy capacities. The City's Storm Drain System Master Plan identifies and prioritizes capital upgrades with a Storm Drain Impact Fee Nexus Study to fund improvements proportionally through development impact fees. In combination with construction and post-construction BMPs required by the MS4/DAMP/Model WQMP and TGD, these programs provide a pathway to address cumulative drainage and water-quality stressors such that cumulative impacts related to erosion/siltation, on-/off-site flooding, system capacity exceedances, and polluted runoff would be less than significant. Project-facilitated development would be required to: (1) implement LID/treatment and source-control BMPs to manage peak flows and water quality; and (2) pay applicable storm-drain impact fees to fund citywide backbone upgrades identified in the Storm Drain System Master Plan. Given the predominantly built

condition of the Planning Area and these mandatory controls/funding mechanisms, the Project's incremental contribution to cumulative drainage/runoff impacts would not be cumulatively considerable.

Threshold 4.10-4. The Planning Area is not in a tsunami, seiche, or dam-inundation zone; only small, intermittent areas lie within FEMA 100-year flood zones adjacent to engineered channels. Cumulative development must comply with applicable floodplain regulations and MS4/DAMP requirements that reduce pollutant mobilization during flood events. As future sites developed under the Project would be subject to the same floodplain regulations and BMP programs, the Project's contribution would not be cumulatively considerable.

Threshold 4.10-5. Regionally, the Basin Plan, DAMP, and the OC Plan guide water-quality and watershed management; for groundwater, OCWD implements the SGMA alternative plan and the OC Basin Resilience Plan. Cumulative development must conform to these plans through permitting and local implementation programs. As a result, cumulative conflicts with the applicable water-quality and groundwater sustainability plans would be less than significant. The Project would not change or obstruct implementation of the Basin Plan, DAMP, OC Plan, or OCWD's SGMA alternative plan and Resilience Plan; rather, future development would remain subject to those plans and programs through project-level approvals. Therefore, the Project's contribution would not be cumulatively considerable.

4.10.6 Mitigation Measures

No mitigation measures are required.

4.10.7 Significance Conclusion

Threshold 4.10-1: The Project would not violate any water-quality standards or waste-discharge requirements and impacts would be **less than significant** and would not be cumulatively considerable.

Threshold 4.10-2: The Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. Impacts would be **less than significant** and would not be cumulatively considerable.

Threshold 4.10-3: The Project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on or off site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site; 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 impede or redirect flood flows. Impacts would be **less than significant** and would not be cumulatively considerable.

Threshold 4.10-4: The Project would not risk release of pollutants in a flood hazard, tsunami, or seiche zones due to Project inundation and impacts would be **less than significant**.

Threshold 4.10-5: The Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Impacts would be **less than significant** and would not be cumulatively considerable.

4.10.8 References

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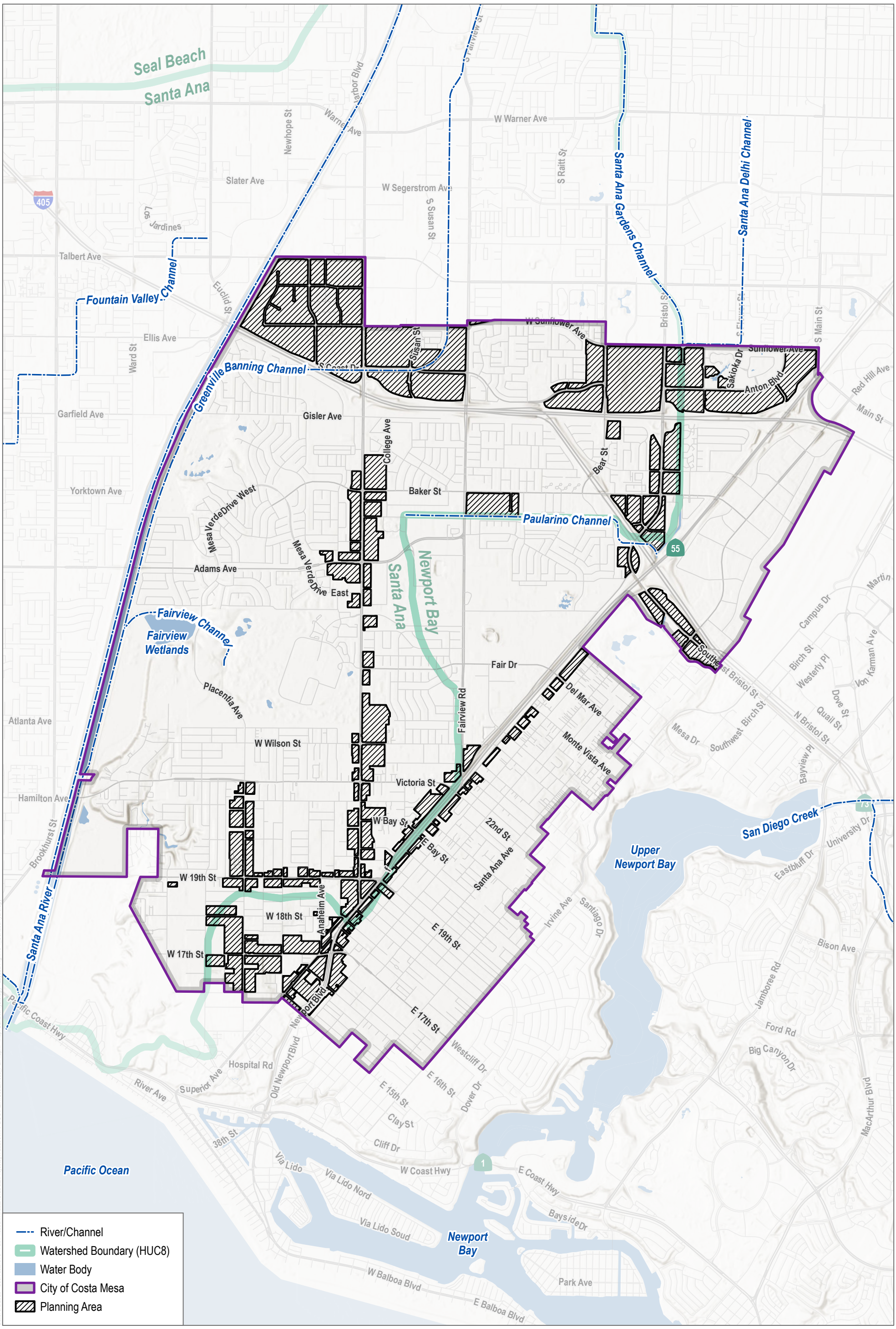

SOURCE: Esri, Open Street Map, USGS National Hydrography Dataset (NHD)

DUDEK

0 1,500 3,000 Feet

FIGURE 4.10-1

Surface Hydrology

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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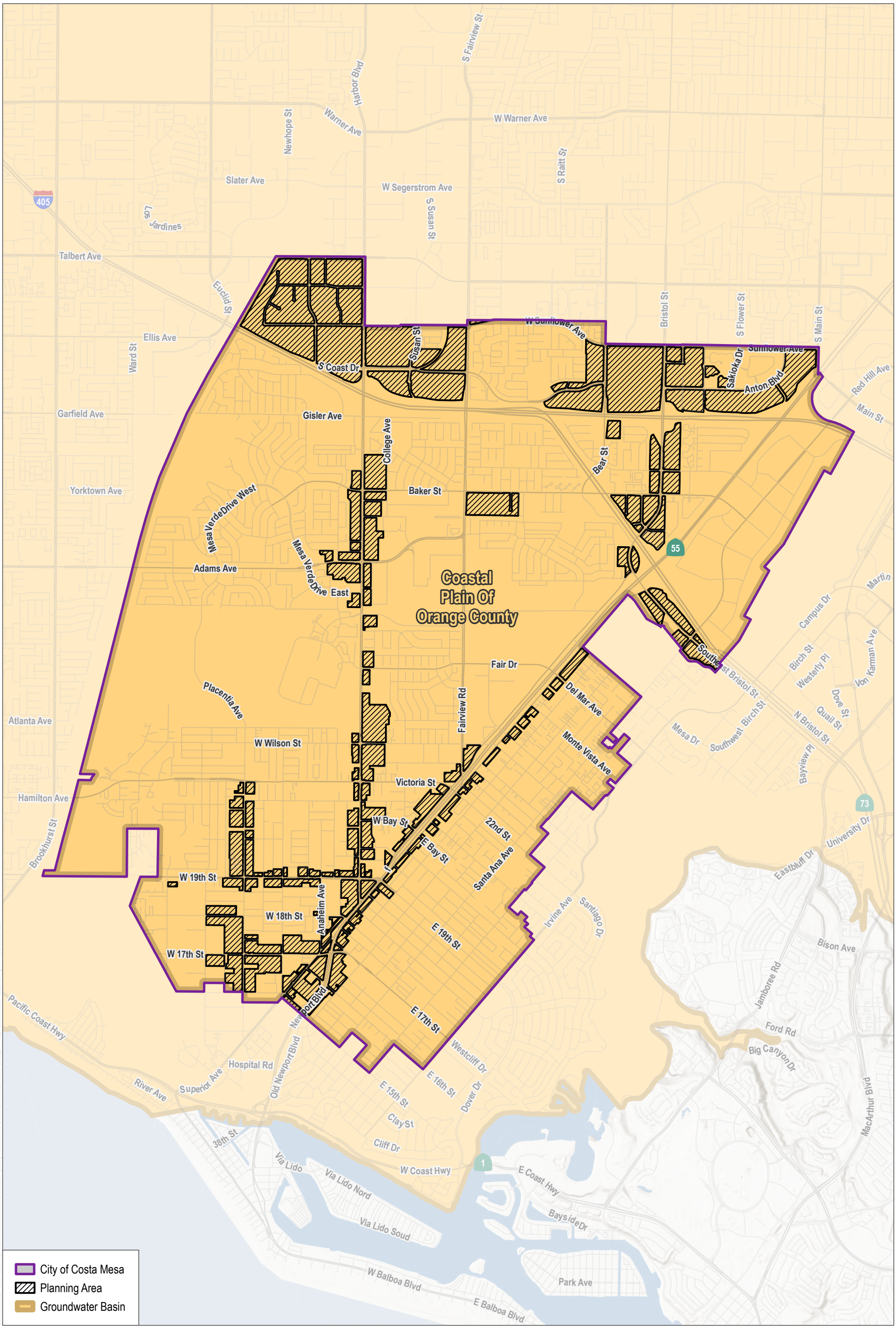

SOURCE: Esri, Open Street Map, CA Department of Water Resources

FIGURE 4.10-2

Groundwater

DUDEK

0 1,500 3,000 Feet

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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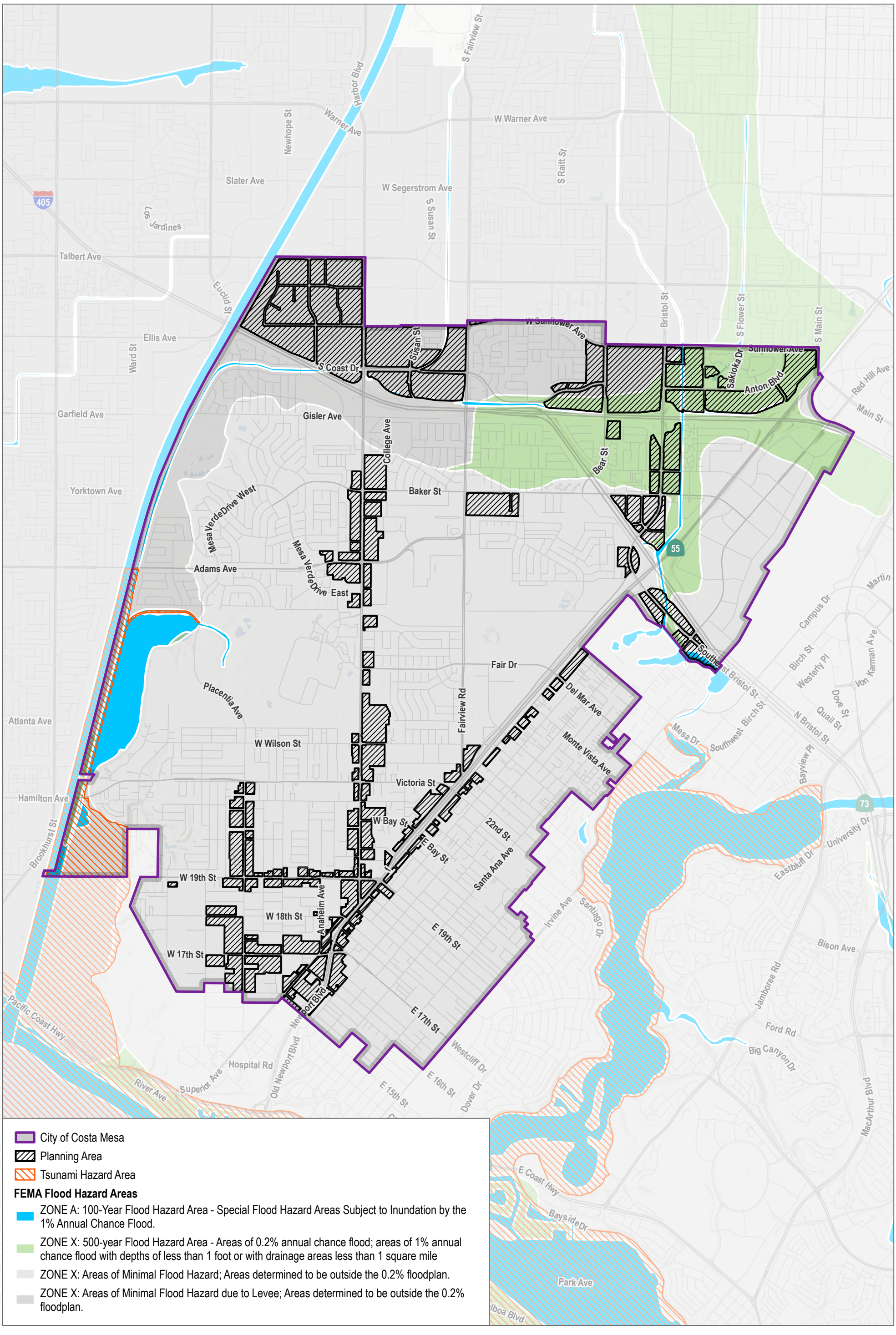

SOURCE: Esri, Open Street Map, FEMA, California Governor's Office of Emergency Services

DUDEK

0 1,500 3,000 Feet

FIGURE 4.10-3

Flood and Tsunami Hazard Zones

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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4.11 Land Use and Planning

This section of the Draft PEIR analyzes the potential impacts from the implementation of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation (Project) on land use and planning, specifically, the potential for the Project to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. A discussion of the existing land use and planning setting, focusing on the Planning Area, is also included in this section. This section describes the existing land use considerations within the city, identifies applicable regulatory requirements, and evaluates potential impacts related to implementation and buildout of the proposed Project. The analysis is based, in part, on information provided in the following resources: the Costa Mesa General Plan, the Housing Element Update, and Airport Environs Land Use Plan for John Wayne Airport. Other sources consulted are listed in Section 4.11.8, References.

4.11.1 Existing Conditions

Planning Area Conditions

As discussed in Chapter 3, Project Description, of this PEIR, the Planning Area consists of 1,079 parcels totaling approximately 1,353.4 acres distributed throughout the city (see Figure 2-2, Planning Area in Chapter 2, Environmental Setting, of this PEIR, and a full list of all parcels can be found as Attachment A, Planning Area Parcel List, within Appendix B, Buildout Methodology). The Planning Area is comprised of all Measure K sites, which include Housing Element sites, (except for the Fairview Developmental Center site) and non-Housing Element sites. For more information regarding Measure K, see Section 4.11.2.3 below.

Under existing conditions, Planning Area parcels contain vacant land and existing development, including but not limited to residential, commercial, and industrial land uses (see Table 2-1 in Chapter 2, Environmental Setting, of this PEIR for a breakdown of acreage, existing square feet, maximum allowable density, and maximum allowable intensity (floor area ratio [FAR]) by General Plan land use designation and zoning. In summary, the Planning Area contains the following General Plan land use designations: Commercial Center (CC); Commercial-Residential (CR); Cultural Arts Center (CAC); General Commercial (GC); High-Density Residential (HDR); Industrial Park (IP); Light Industrial (LI); Medium-Density Residential (MDR); Neighborhood Commercial (NC); Regional Commercial (RC); Urban Center Commercial (UCC). Moreover, the Planning Area parcel are zoned with the following: Administrative and Professional District (AP); Commercial Limited District (CL); General Business District (C2); General Industrial (MG); Industrial Park (MP); Institutional and Recreational District (I&R); Local Business District (C1); Multiple-Family Residential District, High Density (R2-HD); Multiple-Family Residential District, Medium Density (R2-MD); Planned Development Commercial (PDC); Planned Development Industrial (PDI); Planned Development Residential—High Density (PDR-HD); Planned Development Residential—Medium Density (PDR-MD); Shopping Center District (C1-S); Town Center District (TC). Additionally, the Planning Area contains existing specific plans, urban plans, and overlays, including North Costa Mesa Specific Plan, One Metro West Specific Plan, Newport Boulevard Specific Plan, 19 West Urban Plan, SoBECA Urban Plan, Mesa West Bluffs Urban Plan, Mesa West Residential Ownership Urban Plan, Mixed-Use Overlay District, and Harbor Mixed-Use Overlay District. The land use conditions throughout the city are illustrated in Figure 2-3, General Plan Land Use Designations, as well as Figure 2-4, Existing Zoning, in Chapter 2, Environmental Setting, of the Draft PEIR.

The city is bordered by the City of Fountain Valley to the northwest; the Santa Ana River and the City of Huntington Beach to the west; the City of Newport Beach to the south and southeast; John Wayne Airport (JWA) to the east; the City of Irvine to the northeast; and the City of Santa Ana to the north. The City and Planning Area are served mainly by three major freeways: Interstate (I)-405, State Route (SR)-73, and SR-55.

4.11.2 Regulatory Requirements

4.11.2.1 Federal

There are no federal policies or regulations applicable to land use and planning with respect to the proposed Project.

4.11.2.2 State

State Planning Law

State planning law (California Government Code Section 65300) requires every city and county in California to adopt a comprehensive, long-term general plan for the physical development of the jurisdiction and its sphere of influence. A general plan should consist of an integrated and internally consistent set of goals and policies grouped by topic into a set of elements and guided by a jurisdiction-wide vision. State law requires that a general plan address seven elements or topics (land use, circulation, housing, conservation, open space, noise, and safety), but allows some discretion on the arrangement and content. Additionally, each of the specific and applicable requirements in the state planning law should be examined to determine if there are environmental issues within the community that the general plan should address.

4.11.2.3 Local

Connect SoCal

The Regional Transportation Plan (RTP) is a long-range transportation plan that is developed and updated by the Southern California Association of Governments (SCAG) every four years to guide transportation investments throughout the region. The Sustainable Communities Strategy (SCS) is a required element of the RTP that integrates land use and transportation strategies to achieve California Air Resources Board (CARB) emissions reduction targets pursuant to Senate Bill 375. On April 4, 2024, the SCAG Regional Council adopted the 2024-2050 RTP/SCS (Connect SoCal). Connect SoCal includes goals and subgoals to increase mobility and build a multimodal transportation network for the region's residents and visitors; to develop, connect, and sustain livable and thriving communities; to create a healthy region and environment for people of today and tomorrow; and to support a sustainable, efficient, and productive regional economic environment that provides opportunities for all people in the region. In addition, Connect SoCal provides a regional investment framework to address the region's transportation and related challenges, while enhancing the existing transportation system and integrating land use into transportation planning (SCAG 2024a).

To address the mobility challenge of the region's continuing roadway congestion, Connect SoCal proposes transportation investments in transit; passenger and high-speed rail; active transportation; transportation demand management; transportation systems management; highways; arterials; goods movement; aviation and airport ground access; and operations and maintenance projects. Connect SoCal recommends local jurisdictions accommodate future growth within existing urbanized areas, particularly near existing transit, to reduce VMT, congestion, and greenhouse gas emissions. The Connect SoCal approach to sustainably manage growth and transportation demand would reduce the distance and barriers between new housing, jobs, and services and would reduce vehicle travel and greenhouse gas emissions. As part of Connect SoCal, SCAG develops population and housing forecasts for the SCAG region and for the jurisdictions that make up the SCAG region.

Additionally, according to SCAG, determining consistency with Connect SoCal for CEQA purposes, lead agencies (such as the City of Costa Mesa), have the sole discretion in determining a local project's consistency; consistency should be evaluated utilizing the goals and policies of Connect SoCal and its associated PEIR. Connect SoCal does not supersede or otherwise affect local jurisdiction authority or decisions on future development, including entitlements and development agreements. There is no obligation by a jurisdiction to change its land use policies, General Plan, or regulations to be consistent with Connect SoCal (SCAG 2024b). For more information, see Section 4.14, Population and Housing, of this Draft PEIR.

Costa Mesa 2015-2035 General Plan

The City's General Plan provides the policy framework and establishes the long range vision for how and where the City of Costa Mesa will grow through the year 2035, and establishes goals and policies to protect and enhance the City's diverse residential neighborhoods, accommodate an array of businesses that serve both local needs and attract regional and international spending, and continue to provide cultural, educational, social, and recreational amenities that contribute to the quality of life in the community (City of Costa Mesa 2016a). The General Plan consists of the following elements: Land Use, Circulation, Growth Management, Housing, Conservation, Noise, Safety, Community Design, Open Space and Recreation, and Historical and Cultural.

Land Use Element

The Land Use Element provides strategies and planning tools to facilitate and guide future development and revitalization efforts. In accordance with the California Government Code, the Land Use Element designates the proposed general distribution and general location and extent of uses. The General Plan Land Use Policy Map serve as the "blueprint" for how land will be used to accommodate growth and change in the city (City of Costa Mesa 2025a). The Land Use Element of the General Plan provides the goals and policies potentially relevant to the Project, which are listed in Table 4.11-1, General Plan Conflict Evaluation.

Circulation Element

The Circulation Element provides an overview of the transportation infrastructure and strategies for developing an efficient and multimodal transportation network. This element contains goals and policies designed to expand bicycle and pedestrian travel capabilities, manage the established roadway system efficiently and effectively, enhance transit facilities, and implement "complete street" strategies. Two sub-elements—the City's Master Plan of Streets and Highways and Bicycle Master Plan—supplement the Circulation Element. These plans establish policies for the roadway, highway, and bikeway systems in the city, which are coordinated with Orange County. The General Plan also establishes a Pedestrian Master Plan, with guidelines and standards to promote walkability and connectivity throughout the city. Applicable goals and policies from the Circulation Element are listed in Section 4.17, Transportation, of this Draft PEIR.

Growth Management Element

The goal of the Growth Management Element is to ensure that the planning, management, and implementation of traffic improvements and infrastructure meet the current and projected needs of the City. This element aims to achieve this goal while also remaining consistent with the other elements of the General Plan. Thus, the Growth Management Element does not supersede any other General Plan elements and instead addresses, amplifies, and supports the standards of the other elements while establishing new standards, where necessary. Applicable goals

and policies from the Growth Management Element are listed below in Table 4.11-1, Potential to Conflict with General Plan Goals and Policies.

Housing Element

State law requires that each jurisdiction's Housing Element consist of "identification and analysis of existing and projected housing needs and a statement of goals, policies, quantified objectives, and scheduled program actions for the preservation, improvement and development of housing" (California Government Code § 65583). The Housing Element must analyze and plan for housing for all segments of the community. The 6th Cycle Housing Element Update 2021-2029 (Housing Element) was adopted by the City in February 2022 and was certified by HCD on May 9, 2023 (HCD 2023a, 2023b). Applicable goals and policies from the Housing Element are included in Table 4.11-2, below, and listed in Section 4.14, Population and Housing, of this Draft PEIR. Following City Council action on March 17, 2026 to remove 17 Housing Element sites and add two sites the City of Costa Mesa has made "no net loss" findings and is in the process of identifying sites to be added to the Housing Element with sufficient capacity to meet the City's Regional Housing Needs Allocation (RHNA). All properties being considered are Measure K sites, within the Planning Area, and are already being studied under the project description of this PEIR.

Conservation Element

The Conservation Element aims to preserve, protect, and replenish the limited natural resources, including water, open space, and sensitive habitats, and addresses the management of energy resources and opportunities to integrate sustainability into City policies (City of Costa Mesa 2016a). The Conservation Element addresses the following conservation areas: air quality; biological resources; energy; water resources; wastewater; water quality; water management. Applicable goals and policies from the Conservation Element are listed in Section 4.4, Biological Resources, of this Draft PEIR.

Noise Element

The purpose of the Noise Element is to identify noise sources in the city and to define strategies for reducing the negative impact of noise on the community. Noise levels can have a significant impact on quality of life. Excessive levels of noise result in increased neighborhood annoyance, dissatisfaction, and in some cases, health and safety hazards. Due to the City's various types and densities of development, the levels and types of noise issues vary throughout the city (City of Costa Mesa 2016a). The Noise Element sets the goals and policy direction for the management of noise in the city. Applicable goals and policies from the Noise Element are listed in Section 4.13, Noise, of this Draft PEIR.

Safety Element

The purpose of the Safety Element is to identify and evaluate public health and safety hazards, and provide measures that can reduce unreasonable risks and minimize potential losses in the event of natural or human-caused disasters (City of Costa Mesa 2016a). The California Government Code requires the General Plan to address "the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence, liquefaction, and other seismic hazards…; flooding; and wildland and urban fires." The Safety Element addresses only limited aspects of man-made disasters, such as hazardous waste and materials management, in particular, those aspects related to seismic events, fires, and floods. In general, hazardous materials management is addressed in the Orange County Hazardous Waste Management Plan (California Code of Regulations [CCR] Section 18755.5). The Safety Element works in conjunction with the City's Local Hazard Mitigation Plan (LHMP). The LHMP

strengthens short and long-term emergency response and recovery capability and identifies emergency procedures. Applicable goals and policies from the Safety Element are listed in Section 4.7, Geology and Soils, Section 4.9, Hazards and Hazardous Materials, Section 4.15, Public Services, and Section 4.19, Utilities and Service Systems, of this Draft PEIR.

Community Design Element

The Community Design Element promotes quality design for numerous aspects of a community, such as buildings, structures, paths, corridors, districts, nodes, landmarks, natural features, and significant landscaping. This element ensures that public and private development enhances the sense of place for the City, district, and the site itself. This element contains goals and policies that aim to express the City's parameters for quality design and development (City of Costa Mesa 2016a). Applicable goals and policies from the Community Design Element are listed below in Table 4.11-1, Potential to Conflict with General Plan Goals and Policies.

Open Space and Recreation Element

The Open Space and Recreation Element provides policy direction to protect, maintain, and enhance the City's open space and recreation system for all purposes and to meet recreation needs. The purpose of the Open Space and Recreation Element is to sustain the network of open space and recreation resources for today's residents and future residents. The goals and policies set forth in this element address the continued expansion, improvement, and maintenance of community facilities and services for the enjoyment of current and future residents (City of Costa Mesa 2016a). Applicable goals and policies from the Open Space and Recreation Element are listed in Section 4.16, Recreation, of this Draft PEIR.

Historical and Cultural Resources Element

The Historical and Cultural Resources Element identifies the historical and cultural resources that provide an important connection to the past and that celebrate Costa Mesa's story and have fostered its vibrant ethnic and cultural diversity. The purpose of this element is to provide the regulatory framework for identifying, maintaining, and restoring the City's historical and cultural resources (City of Costa Mesa 2016a). Applicable goals and policies from the Historical and Cultural Resources Element are listed in Section 4.5, Cultural Resources, and in Section 4.18, Tribal Cultural Resources, of this Draft PEIR.

Costa Mesa Municipal Code

Title 13, Planning, Zoning and Development

The Zoning Code 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, and other development standards, for residential, mixed-use, commercial, industrial, and all other types of sites. The Zoning Code is a primary tool for implementing the City's General Plan. The purpose of the Zoning Code is to encourage, classify, designate, regulate, and restrict the highest and best locations and uses of buildings and structures, for residential, commercial, and industrial or other purposes. Applicable sections of the Zoning Code include Chapter 1, Article 2 (Definitions) and Article 3 (Review Authorities); Chapter 3 (Planning Applications); Chapter 4 (Land Use Matrix); Chapter 5 (Development Standards), Article 11 (Mixed-Use Overlay District); Chapter 6, Article 1 (Residential Districts); Chapter 9, Article 1 (Motels) and Article 15 (Reasonable Accommodations).

Mixed-Use Overlay District. Chapter V establishes the development standards that govern the physical form, site layout, design quality, and operational compatibility of private development throughout the city. These standards collectively ensure that new development minimizes impacts on surrounding neighborhoods, enhances the public realm, provides adequate infrastructure and utilities, and contributes to a coherent urban environment. The Mixed-Use Overlay District (MUOD) is intended to enable compact, walkable, and higher-intensity development in designated areas by allowing a combination of residential and commercial uses beyond what is permitted in the underlying zoning. The MUOD encourages a full array of different land use types and structures, including reuse of existing structures, to create an active city life and enhance business vitality, and ensures that the appearance of buildings are complementary to the existing architectural character of the area in which they are located and that uses are compatible. The article also clarifies the role of an adopted urban plan, which sets forth allowable uses and development standards for each designated mixed-use overlay area.

Mixed-use development types within the overlay include live/work units, commercial/residential units, and standard residential units. Live/work units integrate living quarters and workspace within a single unit and require specific residential and work components. Commercial/residential units represent vertical mixed-use formats where residential units are located above or adjacent to nonresidential uses, while residential units may also exist independently within larger mixed-use developments.

Development standards in the MUOD supersede those of the base zoning district and establish expectations for building form, land use distribution, and site design. Standards address allowable FAR, the placement of residential and nonresidential uses in vertical and horizontal configurations, requirements for shared or centrally located resident amenities, restrictions on single-family detached homes, and ownership rules for live/work units. Nonresidential components must be located and designed to minimize traffic conflicts and must integrate parking, service areas, landscaping, and lighting into the overall site plan. Additional standards are specified in each adopted urban plan, including signing requirements.

Compatibility standards address limitations on hours of operation, noise and vibration controls, lighting design, window placement for privacy, and security provisions such as separate entrances and circulation for residential uses. Collectively, these compatibility provisions ensure that residential units are adequately protected from operational impacts associated with commercial or light industrial uses within or adjacent to a mixed-use- project.

Costa Mesa Affordable Housing Ordinance. This ordinance requires market-rate residential developments to include affordable housing. It is one tool in the City's toolbox to address the City's shortage of affordable housing. Under the Affordable Housing Ordinance, any proposed residential or mixed-use project with 50 or more dwelling units is subject to the requirements of the Ordinance. This Ordinance also includes exceptions that would exempt projects under specific circumstances, including but not limited to ownership residential projects of any size, conversions of existing multi-family residential developments to residential common interest developments (condominiums) for ownership housing pursuant to Costa Mesa Municipal Code (CMMC) Section 13-42, and residential building additions, repairs or remodels. Under the Affordable Housing Ordinance, an applicant of a rental project must fulfil their obligations of on-site production of affordable units at the low- and very-low income levels and must include the required number of units calculated based on the project's base density.

Measure K. In November 2022, Costa Mesa voters approved Measure K, a City-referred ordinance that authorized the City Council to adopt land use plans and zoning amendments to facilitate housing and mixed-use development within specified commercial and industrial corridors. Measure K was adopted to address housing needs while preserving established residential neighborhoods, and is a direct result of Housing Element Program 3G, Address City-wide Vote Requirement in Relation to Housing Element Compliance.

Measure K allowed the City Council to approve qualifying General Plan amendments, zoning changes, specific plans, and overlays within designated corridors—such as Newport Boulevard and Harbor Boulevard—without requiring citywide voter approval. Measure K does not apply to residential neighborhoods or parks and does not eliminate Measure Y citywide. As a result, Measure Y continues to apply outside Measure K corridors, while Measure K allows the City Council to consider and approve qualifying projects within designated corridors without a public vote.

Overlay Districts, Urban Plans, and Specific Plans

The City's urban plans and specific plans are used as General Plan implementation tools within certain areas of the city. Urban plans and specific plans allow the City to assemble land uses and implementation programs tailored to the unique characteristics of a specific site. The 19 West Urban Plan, SoBECA Urban Plan, Mesa West Bluffs Urban Plan, Mesa West Residential Ownership Urban Plan/Mixed-Use Overlay, North Costa Mesa Specific Plan, One Metro West Specific Plan, and the Newport Boulevard Specific Plan are existing urban or specific plans applicable to the Planning Area within the city. Brief summaries of these plans are provided below.

19 West Urban Plan. The 19 West Urban Plan is one of three plans that guide development within the Westside of the city. The 19 West Urban Plan provides commercial and residential mixed-use opportunities primarily along West 19th Street and Harbor Boulevard, at a cluster of properties between Newport Boulevard and Superior Avenue, and at the south side of Victoria Street and Placentia Avenue. This mixed-use Urban Plan is intended to promote commercial and residential mixed-use development, encourage adaptive reuse, stimulate private investments and improvements, and promote new housing types and meet housing demand (City of Costa Mesa 2015).

SoBECA Urban Plan. The SoBECA Urban Plan applies to an area within the northwest portion of the city along SR-73 and Baker Street and allows for a mix of housing and retail/service commercial businesses, light industrial uses, creative studios, retail campuses, and entertainment and restaurant uses with the aim to attract local residents and visitors. Permitted development approaches under this Urban Plan are mixed-use developments that combine residential and commercial uses, and standalone commercial and residential uses, with a total cap of 450 residential units within its area. The maximum residential density is 40 dwelling units per acre, with a maximum 1.25 floor area ratio applied to mixed-use buildings with commercial and residential (City of Costa Mesa 2015).

Mesa West Bluffs Urban Plan. The Mesa West Bluffs Urban Plan covers approximately 277 acres and was adopted to provide an overlay zone encouraging the development of live/work units or residential development to revitalize and provide new high-quality residences without exceeding the development capacity of the General Plan transportation system. The Urban Plan applies to industrial properties predominantly south of 18th Street, north of 16th Street, and along Placentia Avenue. New residential development under the Mesa West Bluffs Urban Plan must be designed to minimized conflicts with long-established industrial uses (City of Costa Mesa 2015).

Mesa West Residential Ownership Urban Plan/Mixed-Use Overlay. The Mesa West Residential Ownership Urban Plan/Mixed-Use Overlay covers approximately 238 acres between Victoria Street and 17th Street, west of SR-55, and aims to promote economic viability in existing medium-density and high-density residential areas, encourage the conversion of existing rental apartments to residential common-interest development (i.e., condominiums, planned unit developments), and encourage new residential common-interest development to improve the balance between rental and ownership opportunities (City of Costa Mesa 2015).

Harbor Mixed-Use Overlay. The Harbor Mixed-Use Overlay is not an urban plan, but applies to select areas along Harbor Boulevard, between Wilson Street and 19th Street. The intent is to introduce a diverse mix of uses to create

a much more integrated, walkable, and complementary balance of creative residential and retail spaces, neighborhood-serving retail and commercial services, and residential uses along the southern portion of Harbor Boulevard that intersects with 19th Street. The Harbor Mixed-Use Overlay allows residential development at up to 20 dwelling unit per acre (du/ac), with a maximum 1.25 floor area ratio for projects that consist of both residential and commercial mixed uses and a maximum building height of four stories (City of Costa Mesa 2015).

Residential Incentive Overlay District. The Residential Incentive Overlay District was adopted to provide new housing opportunities for residential development at strategic locations along Harbor Boulevard and Newport Boulevard. This overlay allows for higher density residential uses in certain areas along Harbor Boulevard currently developed with commercial uses and on Newport Boulevard, where limited lower density residential is allowed (City of Costa Mesa 2025b).

North Costa Mesa Specific Plan. The North Costa Mesa Specific Plan covers approximately 423 acres and consists of many identifiable and diversified components within the city, including the South Coast Plaza Town Center. The North Costa Mesa Specific Plan specifies the land use designations and accompanying residential densities and commercial and industrial intensities for the plan area, as well as numerous policies that are relevant or specific to North Costa Mesa. The intent of the North Costa Mesa Specific Plan is to implement the policies of the General Plan through the adoption of development standards which recognize the development potential of the plan area and the need to sensitively integrate new development with the surrounding areas, and, therefore, promote both resident and business community confidence in the long-term vision for the plan area (City of Costa Mesa 2016b).

Newport Boulevard Specific Plan. The Newport Boulevard Specific Plan encompasses properties fronting the east side of Newport Boulevard between Mesa Drive and 19th Street and generally consists of commercial properties; although, there are some residential properties. The intent of the Specific Plan was to provide a long-term vision for this area of the city and to encourage viable commercial businesses to continue to prosper along Newport Boulevard and to encourage marginal uses to redevelop. The Newport Boulevard Specific Plan also aimed to address development issues resulting from the changed circulation patterns due to the completion of the Costa Mesa Freeway between Del Mar Avenue and 19th Street and its extension to 15th Street. The Newport Boulevard Specific Plan also intended to ensure land use compatibility and viability in the plan area and to attract traffic back to Newport Boulevard (City of Costa Mesa 1999).

One Metro West Specific Plan. The One Metro West Specific Plan establishes planning and design standards for one 15.23-acre site and the off-site improvements on Sunflower Avenue along the project site and the bikeway connection to the Santa Ana River Trail. The Specific Plan study area is bordered by Sunflower Avenue to the north, I-405 Freeway to the south, the South Coast Collection commercial retail/dining development to the east and industrial uses to the west. The One Metro West Specific Plan allows over 1,000 multi-family residential units, a 1.5-acre urban open space, as well as some supportive retail and office uses.

4.11.3 Thresholds of Significance

The significance criteria used to evaluate the Project's 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:

Threshold 4.1-1: Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

The following threshold question for this topic required in accordance with Appendix G of the CEQA Guidelines was scoped out of this Draft PEIR, having been adequately addressed in the Initial Study, wherein it was determined that the Project would have a less than significant impact on the environment:

- Would the project physically divide an established community?

Thus, an analysis of this threshold is included in Appendix A-1, NOP and Initial Study, of this Draft PEIR.

4.11.4 Impact Analysis

4.11.4.1 Methodology

Approach

As described in Chapter 3, Project Description, the Project does not include or propose any site-specific development that could directly result in construction or operational impacts to the environment. However, implementation of the Project would facilitate additional future development in the city. Therefore, this Draft PEIR does not assess the site-specific construction and operation details of each future development within the Planning Area. Rather, it assesses the impacts associated with changes to existing land uses and the associated overall effects of buildout of the Project through 2056, where reasonably foreseeable physical changes to the environment could occur. Analysis at a parcel or site-specific level was not conducted because, unless otherwise noted within this assessment, the actual locations of Project development (and its chronologic sequence or concurrence) that may be implemented in the future are speculative.

This section of the Draft PEIR analyzes impacts related to land use and conflicts with applicable planning documents that were adopted for the purpose of avoiding or mitigating an environmental effect. As stated in CEQA Guidelines Section 15382, a conflict would not result in a significant impact unless it would result in an adverse physical change to the environment related to a policy that was intended to avoid environmental impacts. Reasonably foreseeable environmental effects resulting from land use policy implementation and are addressed in other topical sections of this Draft PEIR. For example, air impacts resulting from increased car trips as a result of reasonably anticipated development under the Project are discussed in Section 4.3, Air Quality, of this Draft PEIR; transportation impacts resulting from vehicle miles traveled (VMT) associated with increased development under the Project are discussed in Section 4.17, Transportation, of this Draft PEIR.

4.11.4.2 Environmental Analyses

Threshold 4.11-1 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. For the purposes of this analysis, the applicable land use plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect include the City's General Plan, the City's Housing Element, Zoning Code, urban plans, overlays, and specific plans, and the Airport Environs Land Use Plan for John Wayne Airport.

City of Costa Mesa General Plan

Table 4.11-1 below outlines the applicable goals and policies identified in each element of the General Plan (Land Use Element, Circulation Element, Conservation Element, Noise Element, Safety Element, Open Space and Recreation Element, and Historical and Cultural Element) and the Project's potential to conflict with each goal and policy. For the purposes of this Draft PEIR, the analysis contained in this section is based on the applicable goals and policies pertaining to the implementation of the Project. As shown below, the Project would not conflict with applicable goals and policies of the General Plan adopted for the purpose of avoiding or mitigating an environmental effect.

Table 4.11-1. Potential to Conflict with General Plan Goals and Policies

Goals and Policies	Conflict Analysis
Land Use Element	
Goal LU-1. A Balanced Community with a Mix of Land Uses to Meet Resident and Business Needs.	*No Conflict*. The Project's land use and zoning changes would concentrate growth and development of both housing and employment opportunities along existing commercial and industrial corridors, as defined in Figure 2-2, Planning Area. As detailed in Chapter 2, Environmental Setting, Measure K was adopted to address housing needs while preserving established residential neighborhoods, and is a direct result of Housing Element Program 3G, Address City-wide Vote Requirement in Relation to Housing Element Compliance. As a result of the Project, the future development would provide jobs, housing, and commercial services in proximity to one another. With the implementation of amended MUOD development standards, future development projects would promote compatibility between land uses and their environments. The proposed land uses would also enhance neighborhood connections by facilitating infill development of housing and mixed uses to bring residents in proximity to employment, thereby reducing VMT. In addition, the Project would require development standards that would promote compatibility between land uses and their environments (see Table 3-3 within Chapter 3 of this Draft PEIR).
Policy LU-1.5. Maintain a land use structure that strives to balance jobs and housing with available infrastructure and public and human services.	*No Conflict*. The Project would provide a balanced mix of land uses within the Planning Area to provide housing, commercial services, and jobs in proximity to one another, promoting compatibility between land uses and their environments. The purpose of the amended MUOD is to provide greater residential and mixed-use development along commercial and industrial corridors that would provide convenient pedestrian access to neighborhood-serving local retail, services, and food resources and would preserve the integrity of residential neighborhoods. As discussed in Section 4.14, Population and Housing, it is estimated that the City contains 42,292 dwelling units and 74,957 jobs, equating to a 1.77 job-to-housing ratio,[1] which is considered a jobs-rich community. The Project would introduce 21,522 additional dwelling units and 14,454 additional jobs to the city through 2056, bringing the total number of units in the city to 63,814[2] and the total number of jobs in the city to 89,411,[3] equating to a future job-to-housing ratio of 1.40,[4] which is a better balanced community than under existing conditions. All future development under the Project would undergo

1 74,957 jobs / 42,292 dwelling units = 1.77 job-to-housing ratio
2 42,292 existing units + 21,522 additional units = 63,814 future total units in the city
3 74,957 existing jobs + 14,454 additional jobs = 89,411 future total jobs in the city
4 89,411 future total jobs / 63,814 dwelling units = 1.40 future job-to-housing ratio

Table 4.11-1. Potential to Conflict with General Plan Goals and Policies

Goals and Policies	Conflict Analysis
	project-level review for compliance with applicable Zoning Code provisions and other regulatory requirements, including those related to providing adequate infrastructure (e.g. water, sewer, energy, and stormwater management facilities) and public and human services (e.g. schools, fire services, police services, parks, and library services). Refer to discussion and analysis in Sections 4.14, Population and Housing; 4.15, Public Services; 4.16, Recreation; and 4.19, Utilities and Service Systems, of this Draft PEIR.
Goal LU-2. Preserve and Protect Residential Neighborhoods.	*No Conflict*. The Project is a program-level zoning action that amends and applies the MUOD to Measure K sites and would not approve or construct site-specific development; subsequent projects would undergo project-level review for compliance with applicable Zoning Code provisions and other regulatory requirements. The Project would focus additional residential capacity and mixed-use opportunities within primarily commercial and industrial corridors and subareas, rather than within established single-family neighborhoods. The MUOD amendment expressly identifies maintaining the character of the City's single-family neighborhoods as a policy objective of the overlay while implementing additional housing, and it clarifies how the MUOD relates to base zoning, urban plans, overlays, and specific plans so that neighborhood-protective provisions remain operative unless an applicant elects to use the MUOD (in which case the overlay's objective standards apply). The amended MUOD would also implement Objective Design Standards to emphasize neighborhood compatibility, architectural quality, protection of privacy, and context-sensitive development. . Moreover, one of the Project's objectives (see Section 3.2 of this Draft PEIR) is to prioritize new housing near jobs and amenities, while reducing potential impacts to existing residential neighborhoods, in order to revitalize existing commercial and industrial areas with the introduction of new housing and mixed-use development.
Policy LU-2.3. Develop standards, policies, and other methods to encourage the grouping of individual parcels to eliminate obsolete subdivision patterns and to provide improved living environments while being consistent with the neighborhood character of the surrounding community.	*No Conflict*. As described in Chapter 3, Project Description, of this Draft PEIR, the Project's buildout was determined by utilizing a methodology that considered the following: (1) its area and ability for lot consolidation; (2) its location in the city; and (3) its likelihood for redevelopment. As such, non-Housing Element sites with an area less than 0.5 acres and ineligible for lot consolidation (i.e., not contiguous to an adjacent parcel where, if consolidated, amounted to an area of at least 0.5 acres) were removed and not included in the realistic residential buildout calculation. The Project would apply the amended MUOD overlay to Planning Area parcels to support residential and mixed-use development. The Planning Area is limited to the parcels identified under Measure K, which are primarily located adjacent to major thoroughfares in the city. As detailed in Chapter 2, Environmental Setting, Measure K was adopted to address housing needs while preserving established residential neighborhoods and is a direct result of Housing Element Program 3G, Address City-wide Vote Requirement in Relation to Housing Element Compliance. Given this, the Project would result in residential and mixed-use development that would not conflict with the City's policy to eliminate obsolete subdivision patterns while preserving the neighborhood character of the surrounding community. For more discussion on neighborhood character compatibility,

Table 4.11-1. Potential to Conflict with General Plan Goals and Policies

Goals and Policies	Conflict Analysis
	refer to discussion for General Plan Goal LU-1 and the discussion for General Plan Goal LU-2.
Policy LU-2.7. Permit the construction of buildings over two stories or 30 feet only when it can be shown that the construction of such structures will not adversely impact surrounding developments and deprive existing land uses of adequate light, air, privacy, and solar access.	Refer to discussion for Policy LU-2.7 within Table 4.1-2, General Plan Conflict Evaluation, in Section 4.1, Aesthetics.
Policy LU-2.8. Limit building height to four stories above grade south of the I-405 Freeway, except for special purpose housing such as elderly, affordable, or student housing, unless otherwise approved by a General Plan amendment. (A four-story/five-level parking structure with roof deck parking on the fifth level is considered a four-story structure.)	*No Conflict*. The Project would rezone parcels to allow for residential and mixed-use development within the Planning Area. As part of this rezoning, allowable building height maximums for approximately half of the parcels in the Planning Area would increase, including in areas south of I-405. The building height maximums for residential and vertical mixed-use projects allowed per the amended MUOD would fluctuate depending on the maximum allowable residential density. Maximum density from 20 dwelling units per acre to 40 dwelling units per acre would have a maximum allowable building height of 60 feet. Maximum building height would increase to 72 feet for projects with a maximum density of 60 dwelling units per acre and to 108 feet (approximately 9 stories) for projects with a maximum density of 90 dwelling units per acre. Parcels with a 108-foot building height maximum would be limited to the North Costa Mesa subarea and other parcels north of I-405. There are some instances of proposed 72-foot building height maximums located south of I-405; however, for the majority of the Planning Area, the maximum residential or mixed-use building height would be 60 feet. Maximum building height for all non-residential buildings under the amended MUOD would be 40 feet. The proposed Project would amend this policy to state that the height limitation may be increased further to realize the residential site capacity, or density, of housing opportunity sites identified within the sites inventory of the Housing Element. This revision is necessary to avoid inconsistency with state law, as well as allowable density bonus building height increases pursuant to state law (i.e. Article 4 (Density Bonuses and Other Incentives) of Chapter IX of Title 13 of the Costa Mesa Municipal Code, and as allowed under Government Code Section 65915 et. Seq). In addition, these proposed land use and building height changes in the city involve amendments to the City's General Plan and would therefore be approved through a General Plan Amendment, as consistent with this policy. The potential adverse environmental effects of building height increase throughout the Planning Area (such as potential air quality concerns, shade/shadow effects, increased potential for bird collisions, etc.) are addressed in accordance with CEQA throughout this PEIR in the appropriate topical section (e.g., Sections 4.1, Aesthetics, 4.2, Air Quality, 4.3, Biological resources).
Policy LU-2.11. Ensure adequate noise attenuation in urban design, such as walls for sound	*No Conflict*. All future development under the Project would undergo project-level review for compliance with applicable Zoning Code provisions and other regulatory requirements. MUOD projects may be subject to

Table 4.11-1. Potential to Conflict with General Plan Goals and Policies

Goals and Policies	Conflict Analysis
attenuation, development of landscaped greenbelts, provision of landscape berms, etc.	technical studies to ensure compatibility with surrounding uses and compliance with City standards. For example, a noise study prepared by a qualified acoustical engineer may be required to demonstrate compliance with the City's Noise Ordinance, including applicable interior and exterior Community Noise Equivalent Level (CNEL) standards. As described in Chapter 3, Project Description, of this Draft PEIR, Project implementation via the amended MUOD would require a noise study for future development projects abutting a freeway or within the Airport Influence Area, as defined by the AELUP for John Wayne Airport. The noise study would certify compliance with the City's Noise Ordinance and be consistent with requirements in the AELUP for John Wayne Airport. Commercial uses would be designed and operated, including limitations on hours of operation where appropriate, to minimize noise effects on nearby residences.
Goal LU-3. Development that Maintains Neighborhood Integrity and Character.	*No Conflict*. Refer to the discussion for General Plan Goal LU-2.
Policy LU-3.4. Ensure that residential densities can be supported by the infrastructure and are compatible with existing residential neighborhoods in the surrounding area.	*No Conflict*. The Project's proposed land use changes would result in future residential and mixed-use projects within the Planning Area via the amended MUOD that would provide a balanced mix of land uses, including jobs, housing, and commercial services in proximity to one another, promoting compatibility between land uses and their environments and existing neighborhoods. The amended MUOD would promote the construction of future land uses in the Planning Area that are much more compatible with the City's existing neighborhoods than the current commercial and industrial uses along the Planning Area corridors. Furthermore, in compliance with State law (California Government Code §65583.2[h]), the amended MUOD would require that projects on Housing Element sites provide a minimum amount of residential floor area and achieve a minimum residential density, such that projects consisting of 100 percent of residential uses would be permitted. (Note that such requirements do not preclude the possibility of a mixed-use project on a Housing Element site, as long as it is compliant with State law, such as the requirement to provide at least 50 percent of the total floor area as residential uses with a minimum density of 20 du/ac.). Additionally, the Project would incorporate development standards in order to ensure compatibility with existing residential neighborhoods in the surrounding area. The Project would not introduce substantially different land uses into residential neighborhoods and is intended to reduce potential impacts to existing residential neighborhoods. Moreover, all future development under the Project would be required to comply with and adhere to all goals and policies related to providing adequate infrastructure and public and human services, including payment of "fair share" public service and utility service fees. Refer to Sections 4.15, Public Services; 4.16, Recreation; and 4.19, Utilities and Service Systems.
Policy LU-3.5. Provide opportunities for the development of well-planned and designed projects which, through vertical or horizontal integration, provide for the	*No Conflict*. The Project would rezone parcels throughout the city to support residential and mixed-use development via amendments to the MUOD. Moreover, the Project's Zoning Code Amendments would amend the purpose of the MUOD to include the following, "To encourage vertical and horizontal mixed-use development projects that combines residential and compatible non-residential uses, including office, retail, business services,

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development of compatible residential, commercial, industrial, institutional, or public uses within a single project or neighborhood.	personal services, public spaces and uses, and other community amenities." In addition, as discussed in Chapter 3, Project Description, the Project includes Objective Design Standards that would implement and support policies contained in the City's General Plan that emphasize neighborhood compatibility, pedestrian-oriented design, architectural quality, protection of privacy, noise mitigation, and context-sensitive development, and are intended to function as site- and building-design regulations as well as performance standards intended to ensure compatibility between residential and non-residential uses within the same mixed-use development or building. In addition, the Project would require development standards that would promote compatibility between land uses and their environments (see Table 3-3 within Chapter 3 of this Draft PEIR). Refer to the discussion for General Plan Policy LU-3.4.
Policy LU-3.8. Ensure that new development reflects existing design standards, qualities, and features that are in context with nearby development and surrounding residential neighborhoods.	*No Conflict*. Refer to the discussion for General Plan Policy LU-3.8 within Table 4.1-2, General Plan Conflict Evaluation, in Section 4.1, Aesthetics.
Policy LU-3.9. Locate high-intensity developments or high-traffic generating uses away from low-density residential in order to buffer the more sensitive land uses from the potentially adverse impacts of the more intense development or uses.	*No Conflict*. The Project would concentrate growth and development of both housing and employment opportunities along existing commercial and industrial corridors outlined in Measure K, as defined in Figure 2-2, Planning Area. While the Project would primarily result in future development projects that would consistent of infill redevelopment, the Project would locate higher-intensity land uses adjacent to low-density residential. However, the Project would require development standards that would promote compatibility between land uses and their environments (see Table 3-3 within Chapter 3 of this Draft PEIR). Additionally, MUOD projects may be subject to technical studies to ensure compatibility with surrounding uses and compliance with City standards. For example, traffic impacts would be evaluated to ensure that new development, redevelopment, or adaptive reuse does not exceed the capacity of the City's transportation system. If a project has the potential to adversely affect roadway conditions, a traffic study may be required. Transportation Services staff would review anticipated traffic and circulation impacts, consistency with the City's traffic model, trip generation characteristics, and the need for mitigation. Traffic conditions would continue to be monitored through the City's Development Phasing and Performance Monitoring Program to confirm that assumptions remain accurate and that the circulation system operates in accordance with the General Plan and Master Plan of Highways.
Policy LU-3.13. Prohibit construction of buildings which would present a hazard to air navigation, as determined by the Federal Aviation Administration (FAA).	*No Conflict*. Almost the entire City of Costa Mesa is within the JWA Planning Area, which request that all construction or alteration of structures within the County of Orange at elevations more than 200 feet above ground level require FAA and ALUC notification (Orange County ALUC 2008). The Project would rezone parcels within the JWA Planning Area to support residential and mixed-use development, including some parcels within the Airport Safety Zones associated with John Wayne Airport. As detailed in Section 4.9, Hazards and Hazardous Materials, Project implementation via the

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	amended MUOD would require noise and safety requirements, including height and land use restrictions, to be consistent with the AELUP for John Wayne Airport. As a result, future development projects would be required to modify the density through a reduction of units and occupancy terms, reduce the intensity of land uses, and modify the building height in order to be consistent with the AELUP for John Wayne Airport. In addition, with review by the ALUC (Airport Land Use Commission) through standard permitting processes prior to construction, future development would be required to meet requirements for safety within airport influence areas, including building heights to be analyzed in accordance with FAR (Federal Aviation Regulation) Part 77.
Policy LU-3.14. Certain development proposals which may include the construction or alteration of structures more than 200 feet above ground level may require filing with the Federal Aviation Administration (FAA) and Airport Land Use Commission (ALUC) pursuant to federal and State law. If a filing requirement is determined to be necessary in accordance with the procedures provided by State/federal agencies, the filing of a Notice of Proposed Construction or Alteration (FAA Form 7460-1) shall be required prior to review and consideration of the proposed development." Land Use Element (page LU-18) refers to the threshold stated above. It shall be amended to refer to Filing FAA Form 7460-1 Notice of Construction and Alteration, and not to Form 7480-1.	*No Conflict*. The Project's proposed land use changes set maximum building heights ranging from 40 feet to 72 feet that are tied to residential density tiers. As such, future development under the Project would not be allowed to be over 200 feet.
Policy LU-3.15. The City will ensure that development proposals, including the construction or operation of a heliport or helistop comply fully with permit procedures under State law, including referral of the project to the ALUC by the applicant, and with all conditions of approval imposed or recommended by the Federal Aviation Administration, ALUC, and Caltrans, including the filing	*No Conflict*. All future development under the Project would undergo project-level review for compliance with applicable Zoning Code provisions and other regulatory requirements, including State requirements and any applicable ALUC requirements. As detailed in Section 4.9, Hazards and Hazardous Materials, with review by the ALUC through standard permitting processes prior to construction, future development would be required to meet requirements for safety within airport influence areas.

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of Form 7480-1 (Notice of Landing Area Proposed) with the FAA. This requirement shall be in addition to all other City development requirements.	
Policy LU-3.16. The City shall refer certain projects to the Airport Land Use Commission for Orange County, as required by Section 21676 of the California Public Utilities Code to determine consistency of the project(s) with the Airport Environs Land Use Plan for John Wayne Airport.	*No Conflict*. The Project does not include or propose any site-specific development that could directly result in construction or operational impacts to the environment. However, implementation of the Project would facilitate additional future development in the city. As detailed in Section 4.9, Hazards and Hazardous Materials, with review by the ALUC through standard permitting processes prior to construction, future development would be required to meet requirements for safety within airport influence areas. Therefore, the Project would not conflict with the City's policy to refer certain projects to the Airport Land Use Commission for Orange County to determine consistency with the Airport Environs Land Use Plan (AELUP) for John Wayne Airport.
Policy LU-3.17. New residential developments within the 60 dB CNEL noise contour of the airport shall provide designated outdoor signage informing the public of the presence of operating aircraft.	*No Conflict*. The Planning Area includes parcels within the JWA 60 dB (decibel) CNEL (community noise equivalent level) noise contours. All future development under the Project would undergo project-level review for compliance with applicable Zoning Code provisions and other regulatory requirements, including outdoor aircraft signage requirements for the parcels located within JWA's 60 dB CNEL noise contour. As detailed further in Section 4.13, Noise, of this Draft PEIR, Measure K sites within the JWA 65 A-weighted decibel (dBA) CNEL contour would be subject to the noise compatibility requirements associated with the AELUP for JWA and the City's Noise Element compatibility framework. Future residential development on these sites would be required to demonstrate compliance with the State interior noise standard of 45 dBA CNEL (Title 24, California Building Code) and with the City's exterior noise compatibility criteria through acoustical analysis, building design measures, and site planning. Project implementation via the amended MUOD would also require a noise study for future development projects abutting a freeway or within the Airport Influence Area, as defined by the AELUP for John Wayne Airport. The noise study would certify compliance with the City's Noise Ordinance and be consistent with requirements in the AELUP for John Wayne Airport. The Project would not prevent compliance with this requirement for outdoor signage informing the public or operating aircraft.
Goal LU-4. New Development that is Sensitive to Costa Mesa's Environmental Resources.	*No Conflict*. The Project would rezone already developed, urban parcels in the city and would therefore not affect any of the City's environmental resources, such as parks, open spaces, or other natural areas. As discussed in Chapter 3, Project Description, the Project includes Site Design Objective Design Standards that would guide the relationship between buildings, circulation systems, open spaces, and site features to support functional, attractive, and context-sensitive development that is compatible with surrounding uses and natural conditions and that would focus on site planning principles intended to preserve natural features, minimize environmental disturbance, and promote safe and efficient movement for pedestrians, bicyclists, and vehicles. As such, impacts to the City's sensitive environmental resources would be avoided.

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	In addition, the Project would enhance sustainability by facilitating integrated mixed uses and increased residential and mixed-use density development. Increased density brings numerous environmental advantages, notably in sustainability. It combats urban sprawl by promoting infill development, thereby preserving open spaces and environmental resources. This type of development also makes more efficient use of land, reducing per capita land consumption. Incorporating mixed-use elements into higher density developments along existing transit corridors in the city would further contribute to reduced resource consumption and lessen reliance on single-occupancy vehicles.
Policy LU-4.1. Ensure that appropriate watershed protection activities are applied to all new development and significant redevelopment projects that are subject to the National Pollutant Discharge Elimination System Stormwater Permit during the planning, project review, and permitting processes.	*No Conflict*. As discussed in Section 4.10, Hydrology and Water Quality, all future development disturbing one acre or more under the Project would be required to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) under the National Pollutant Discharge Elimination System (NPDES) Construction General Permit, incorporating site-specific best management practices (BMPs) for erosion control, sediment control, and materials and waste management. Projects disturbing less than one acre would still be required to implement BMPs consistent with the Drainage Area Management Plan (DAMP) and City standards.
Policy LU-4.2. Avoid conversion of areas particularly susceptible to erosion and sediment loss (e.g., steep slopes) and/or establish development guidelines that identifies these areas and protects them from erosion and sediment loss.	*No Conflict*. The Project would rezone already developed, urban parcels in the city and would therefore not convert any areas susceptible to erosion or sediment loss, or any areas with steep slopes. In addition, as discussed in Section 4.10, Hydrology and Water Quality, all future development disturbing one acre or more would be required to comply with the NPDES Construction General permit that would include typical BMPs for erosion control, sediment control, and materials and waste management, including implementation of a SWPPP. Future redevelopment sites less than one acre would be required to implement the BMPs specified in the DAMP, as required in the Municipal Code. Operational activities associated with future development projects in the Planning Area would be required to demonstrate MS4 permit requirements through preparation of a water quality management plan (WQMP) or Water Quality Project Plan or would be subject to other terms, conditions, and/or requirements at the discretion of the City to minimize urban runoff and protect water quality. As such, with review under the City's building plan check process, compliance with existing regulations would minimize short- and long-term erosion and sediment loss.
Policy LU-4.4. Promote site development that limits impact on and protects the natural integrity of topography, drainage systems, and water bodies, and protect the integrity of the bluff crest.	*No Conflict*. The Planning Area does not include parcels that are on a bluff crest or that have largely varying topographies or slopes. Refer to discussion for General Plan Goal LU-4.
Policy LU-4.5. Promote integration of stormwater quality protection into construction and post-construction activities, as	*No Conflict*. Refer to discussion for General Plan Policy LU-4.1 and Policy LU-4.2.

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required by the NPDES Stormwater Permit and the City's Local Implementation Plan.	
Policy LU-4.6. Incorporate the principles of sustainability into land use planning, infrastructure, and development processes to reduce greenhouse gas emissions consistent with State goals.	*No Conflict*. Refer to discussion for General Plan Goal LU-4. In addition, as discussed in Section 4.8, Greenhouse Gas Emissions, the Project would implement various mitigation measures designed to promote energy-efficient and sustainable equipment and practices, including the use of electric equipment and design features, rooftop solar systems in future development projects, and implementation of energy conservation and solid waste reduction measures.
Goal LU-5. Adequate Community Services, Transportation System, and Infrastructure to Meet Growth.	*No Conflict*. Refer to discussion for General Plan Policy LU-1.5 and Policy LU-5.5. In addition, refer to Sections 4.15, Public Services; 4.16, Recreation; and 4.17, Transportation, of this Draft PEIR for more discussion.
Policy LU-5.5. Ensure that new development pays its fair share of impact fees such as park fees and traffic impact fees. This can also include impact fees related to community services (police protection services and fire emergency response services) or library facilities, once adopted and applicable.	*No Conflict.* All future development under the Project would undergo project-level review for compliance with applicable Zoning Code provisions and other regulatory requirements, including required development impact fees to address the impacts from future development projects. Future development under the Project would pay into City and County fee pools to reduce potential impacts related to fire, police, and library services. The City also has established fire system development impact fees codified in Article 2, Fire Protection System, of Chapter XII, Special Fee Assessments, of the CMMC. In addition, State law requires residential development projects to pay established school impact fees in accordance with SB 50. Article 4, Park and Recreation Impact Fees, of Chapter XII of the CMMC requires that multi-family residential development and accessory dwelling unit (ADU) development pay park fees to provide park and recreational facilities to serve the future residents of such developments. Section 13-270 within Chapter XII of the CMMC imposes "fair share" traffic fees on any project requiring a building permit or other land development permit that would result in the attraction or generation of traffic trips to be used for any traffic-related capital improvement project. Refer to Section 4.15, Public Services, Section 4.16, Recreation, and Section 4.17, Transportation, of this Draft PEIR for more discussion.
Policy LU-5.7. Encourage new development that is organized around compact, walkable, mixed-use neighborhoods and districts to conserve open space resources, minimize infrastructure costs, and reduce reliance on the automobile.	*No Conflict*. Refer to the discussion for General Plan Goal LU-1 and Goal LU-4.
Policy LU-5.8. Include an evaluation of impacts on utility systems and infrastructure in EIRs for all major general plan amendment, rezone, and development applications.	*No Conflict*. As this Project includes general plan amendments and rezoning throughout the Planning Area in the city, all potential impacts associated with utility systems and infrastructure are analyzed in Section 4.19, Utilities and Service Systems, of this Draft PEIR. As discussed in Chapter 3, Project Description, MUOD projects with certain criteria would be required to provide off-site improvements within the public right-of-way, which may include, but is not limited to sidewalks, parkway trees, parkway landscaping, utilities, and street lighting. As discussed in Section 4.19,

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	Utilities and Service Systems, as the Project is implemented through 2056, the need for wastewater infrastructure would be evaluated and accommodated by Orange County Sanitation District through their ongoing assessment of facility capacity and infrastructure. In addition, future MUOD projects would be required to obtain a sewer permit from Costa Mesa Sanitary District and pay the applicable sewer permit fees and system development fees and would be required to obtain water service approval from Irvine Ranch Water District and Mesa Water District, and pay applicable meter connection, connection, and capacity-related- fees. Regarding electric power, future MUOD projects would be responsible for any necessary upgrades as determined by SCE, in coordination with the City's Building Safety Division after building plan submittal. Telecommunication providers chosen for individual projects would assess demand for services and the ability to serve new developments on a case-by-case basis after building plans are submitted by developers and would pay for any assessed upgrades or new services and recoup the cost later with the additional revenue from new customers. In addition, analysis and decision on capacity to meet future demand would be conducted by SoCalGas and the City at the time building plans are submitted and development occurs, and developers would be responsible for the cost of required upgrades for new development. Any future MUOD projects that may require an additional general plan amendment or rezone would be required to go through the CEQA process again to analyze any potential impacts relating to utility systems and infrastructure.
Policy LU-5.10. Building densities/intensities for proposed new development projects shall not exceed the trip budget for applicable land use classifications, as identified in the Land Use Element. Building intensities for proposed new development projects shall not exceed the applicable floor area standards, except for the following conditions: (a) Limited deviations from the graduated floor-area ratio standards for the commercial and industrial land use designations may be approved through a discretionary review process. No deviation shall exceed a 0.05 increase in the FAR in the moderate traffic category, and no deviation shall be	*No Conflict*. As stated in Chapter 3, Project Description, the Project would amend the General Plan to remove redundancies (e.g., removed provision related to housing opportunity sites) and added to the following to this policy, "The General Plan does not specify trip generation standards as allowed in the Mixed-Use Overlay." As such, for development within the amended MUOD, the development review process would not require an analysis of trip budgets. As currently required, all discretionary projects would be subject to review under the California Environmental Quality Act (CEQA), which would necessitate an evaluation of transportation impacts. As discussed in Section 4.17, Transportation of this Draft PEIR, there are no significant impacts related to transportation with implementation of the MUOD. Further, as discussed in Chapter 3, Project Description, MUOD projects would be subject to a traffic impacts evaluation to ensure that new development, redevelopment, or adaptive reuse does not exceed the capacity of the City's transportation system. If a project has the potential to adversely affect roadway conditions, a traffic study may be required. Transportation Services staff would review anticipated traffic and circulation impacts, consistency with the City's traffic model, trip generation characteristics, and the need for mitigation. Traffic conditions would continue to be monitored through the City's Development Phasing and Performance Monitoring Program to confirm that assumptions remain accurate and that the circulation system operates in accordance with the General Plan and Master Plan of Highways. Therefore, even when considering ministerial projects that would not be subject to CEQA review, impacts would be less than significant. Therefore, although the Project

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allowed in the very low, low, and high traffic categories. Deviations from the FAR standards shall not cause the daily trip generation for the property to be exceeded when compared to the existing daily trip generation for the site without the proposed project or maximum allowable traffic generation for the Moderate Traffic FAR category, whichever is greater. (b) Additions to existing nonconforming nonresidential developments may be allowed if the additions do not affect the overall traffic generation characteristics of the development and if the additions do not substantially affect the existing height and bulk of the development. Additions to nonresidential developments shall be limited to those land uses with traffic generation rates based on variables other than building area square footage. Examples of such additions include, but are not limited to: 1) Hotels/motels: Increases in the size of hotel rooms or lobbies where no increase in the total number of rooms is proposed, and	would alter the applicability of this policy, there would be no significant impacts on the environment.

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2) theaters: Increases to "back-stage" support areas or lobbies where no increase in the total number of seats is proposed. (c) In the above conditions, the new development shall be compatible with surrounding land uses. (d) Additional criteria for approving deviations from the FAR standards may be established by policy of the City Council.	
Policy LU-5.12. Development plans shall include an overall buildout plan, which can demonstrate the ability of the circulation system to support the proposed level of development.	*No Conflict*. As discussed in Chapter 3, Project Description, MUOD projects would be subject to a traffic impacts evaluation to ensure that new development, redevelopment, or adaptive reuse does not exceed the capacity of the City's transportation system. If a project has the potential to adversely affect roadway conditions, a traffic study may be required. Transportation Services staff would review anticipated traffic and circulation impacts, consistency with the City's traffic model, trip generation characteristics, and the need for mitigation. Traffic conditions would continue to be monitored through the City's Development Phasing and Performance Monitoring Program to confirm that assumptions remain accurate and that the circulation system operates in accordance with the General Plan and Master Plan of Highways.
Policy LU-6.19. Provide flexibility and support for development of residential, office, small retail centers, and similar uses that would serve local residents and would also benefit from the high visibility along major corridors outside of significant commercial or industrial nodes.	*No Conflict*. As shown in Table 3-2, Permitted Uses in the MUOD, within Chapter 3, Project Description, the Project's proposed amendments to the MUOD would allow for mixed-use development and live/work units along the Planning Area's identified commercial and industrial corridors that could include various office and retail uses. The Project would apply to Measure K sites in the city that are located along key corridors, including Newport Boulevard, Harbor Boulevard, Placentia Avenue, 19th Street, 18th Street, 17th Street, Baker Street, Bristol Street, and areas north of I-405 (City of Costa Mesa 2025c). Refer to discussion for General Plan Goal LU-1.
Circulation Element	
Goal C-1. Implement "Complete Streets" Policies on Roadways in Costa Mesa. Plan, develop, and implement a comprehensive transportation system that serves all users and modes of travel.	*No Conflict*. As discussed in Section 4.17, Transportation, the General Plan Circulation Element establishes policies governing the system of roadways, intersections, bike paths, pedestrian ways, and other components of the circulation system, and applies Complete Streets strategies for street improvements, defines active transportation improvements, coordinates land use planning and transportation improvements and identifies linkages and connectivity among all transportation modes. Furthermore, the City prepared the Bicycle Master Plan and Pedestrian Master Plan which became a part of the City's Active Transportation Plan and were

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	incorporated into the Circulation Element of the General Plan per General Plan Amendment PGPA-23-0001. The Project would support these plans' policies to promote alternative modes of transportation, including walking and bicycling, to reduce total VMT. The Project would not alter or inhibit compliance with the requirements of the Circulation Element, Active Transportation Plan, Bicycle Master Plan, or Pedestrian Master Plan. Furthermore, the Project would not preclude Orange County Transit Authority (OCTA) from implementing any projects, programs and services including bus and rail transit, rideshare, environmental programs, active transportation and express lanes and freeways, nor conflict with existing programs and policies or new policies and initiative required to achieve its regional goals. In addition, the Project would support future transit features through implementation of MM-4.3-11, Transit Oriented Features, which would require future project applicants to consult with the City to determine appropriate and reasonable contribution towards construction or implementation of transit features.
Policy C-1.10. Encourage non-motorized transportation in residential areas by providing sidewalks, implementing pedestrian and bicycle friendly design of local streets, and incorporating street trees in new projects wherever feasible.	*No Conflict*. As discussed in Chapter 3, Project Description, MUOD projects with certain criteria must provide off-site improvements within the public right-of-way, which may include, but is not limited to sidewalks, parkway trees, parkway landscaping, utilities, and street lighting. In addition, the Project's Objective Design Standards would promote good design to support walkability and landscaping for all multi-family residential and mixed-use residential projects throughout the city. As discussed in Section 4.17, Transportation, a number of parcels in the Planning Area are served by existing transit, bike and pedestrian facilities in the City's well-developed transportation system. In addition, the General Plan Circulation Element establishes policies governing the system of roadways, intersections, bike paths, pedestrian ways, and other components of the circulation system, and applies Complete Streets strategies for street improvements, defines active transportation improvements, coordinates land use planning and transportation improvements and identifies linkages and connectivity among all transportation modes. Furthermore, the City prepared the Bicycle Master Plan and Pedestrian Master Plan which became a part of the City's Active Transportation Plan and were incorporated into the Circulation Element of the General Plan per General Plan Amendment PGPA-23-0001. The Project would support these plans' policies to promote alternative modes of transportation, including walking and bicycling, to reduce total VMT. The Project would not alter or inhibit compliance with the requirements of the Circulation Element, Bicycle Master Plan, or Pedestrian Master Plan. Refer to discussion for General Plan Goal LU-4.
Goal C-4. Promote Transportation Demand Management, Transit, and Efficiency. Utilize Transportation Demand Management strategies to manage demand and maximize available capacity.	*No Conflict*. The Project would incorporate transportation demand management (TDM) measures via mitigation measures MM-4.3-9, Trip Reduction Program, MM-4.3-10, Enhanced End-of-Trip Bicycle Facilities, and MM-4.3-11, Transit Oriented Features (refer to Section 4.3, Air Quality, for more information regarding these mitigation measures). These mitigation measures would implement strategies to reduce transportation demand, to maximize transportation capacity, and to support future implementation of transit features. In addition, as discussed in Section 4.17, Transportation, the Project would not conflict with or impede implementation of policies, plans, ordinances, and programs addressing

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	the circulation system, including transit, roadways, bicycle lanes, and pedestrian paths. For additional discussion regarding TDM measures, refer to Sections 4.3, Air Quality, and 4.17, Transportation.
Policy C-4.9. Encourage the integration of compatible land uses and housing into major development projects to reduce vehicle use.	*No Conflict*. Refer to the discussion for Goal LU-2.
Goal C-5. Ensure Coordination between the Land Use and Circulation Systems. Facilitate close coordination between development of land use and circulation system.	*No Conflict*. As discussed in Chapter 3, Project Description, MUOD projects would be subject to a traffic impacts evaluation to ensure that new development, redevelopment, or adaptive reuse does not exceed the capacity of the City's transportation system. If a project has the potential to adversely affect roadway conditions, a traffic study may be required. Transportation Services staff would review anticipated traffic and circulation impacts, consistency with the City's traffic model, trip generation characteristics, and the need for mitigation. Traffic conditions would continue to be monitored through the City's Development Phasing and Performance Monitoring Program to confirm that assumptions remain accurate and that the circulation system operates in accordance with the General Plan and Master Plan of Highways.
Policy C-5.2. Require that large developments and redevelopments provide short-term and long-term vehicular traffic impact studies.	*No Conflict*. Refer to discussion for General Plan Policy LU-5.10 and Goal C-5.
Policy C-5.5. Promote development of mixed-use projects to reduce number of vehicle trips.	*No Conflict*. Refer to discussion for General Plan Goal LU-1.
Policy C-5.9. Require that circulation necessary to provide or attain the minimum traffic level of service standard at an intersection to which a development project contributes measurable traffic be completed within three years of issuance of the first building permit for such development project, unless additional right-of-way or coordination with other government agencies is required to complete the improvement. Improvements may be required sooner if, because of extraordinary traffic generation characteristics of the project or extraordinary impacts to the surrounding circulation system, such improvements are	*No Conflict*. Refer to discussion for General Plan Policy LU-5.10. Additionally, the land use changes proposed by the Project would be implemented gradually through 2056. All future development under the Project would undergo project-level review for compliance with applicable Zoning Code provisions and other regulatory requirements, and for the ability of the Project to be accommodated by the existing and/or planned circulation system.

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necessary to prevent significant adverse impacts.	
Policy C-5.15. Consider the needs of the transportation and infrastructure system early for large developments and coordinate with developers to design projects that minimize traffic impacts and infrastructure demands, and implement complete streets wherever feasible. Alternatively, address transportation and infrastructure system impacts through the implementation of development agreements.	*No Conflict*. As discussed in Section 4.17, Transportation, the General Plan Circulation Element establishes policies governing the system of roadways, intersections, bike paths, pedestrian ways, and other components of the circulation system, and applies Complete Streets strategies for street improvements, defines active transportation improvements, coordinates land use planning and transportation improvements and identifies linkages and connectivity among all transportation modes. The Project would not alter or inhibit compliance with the Circulation Element requirements. All future development under the Project would undergo project-level review for compliance with applicable Zoning Code provisions and other regulatory requirements, including those relating to the transportation and infrastructure systems. In addition, future development under the Project may opt to address the transportation and infrastructure systems through a development agreement.
Goal C-6. Fund and Evaluate the City's Transportation Network. Explore opportunities to secure funding for enhancing the circulation system.	*No Conflict.* As discussed in Section 4.3, Air Quality, the Project would support future transit features through implementation of MM-4.3-11, Transit Oriented Features, which would require future project applicants to consult with the City, and other relevant agencies such as Orange County Transportation, OCTA, SCAG, as applicable, to determine appropriate and reasonable contribution towards construction or implementation of transit features.
Policy C-6.13. Require that every new development project pay its share of costs associated with the mitigation of project generated impacts.	*No Conflict*. Refer to discussion for General Plan Policy LU-5.5.
Goal C-9. Integrate Active Transportation Elements into Circulation System and Land Use Planning. Provide bikeway and walkway facilities that are integrated with other transportation systems and land use planning decisions.	*No Conflict*. As discussed in Chapter 3, Project Description, the Project includes Site Design Objective Design Standards that would focus on site planning principles intended to preserve natural features, minimize environmental disturbance, and promote safe and efficient movement for pedestrians, bicyclists, and vehicles. Any bikeway or walkway facilities constructed as part of a future development project would be integrated with other relevant transportation systems and land use planning decisions. In addition, as discussed in Section 4.17, Transportation, the Project would not conflict with the policies or goals of SCAG's Connect SoCal that outline a series of actions and strategies for integrating the transportation network with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands, including goals and policies that support implementation of bikeways and walkways. Refer to discussion for General Plan Goal C-1 and Goal C-5.
Policy C-9.2. Ensure that all current and proposed land use planning is consistent with the Costa Mesa Active Transportation and Pedestrian Master Plan.	*No Conflict*. Refer to discussion for General Plan Goal C-1.

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Policy C-9.5. Encourage the integration of compatible land uses and housing into major development projects to reduce vehicle use.	*No Conflict*. Refer to discussion for General Plan Goal LU-1.
Growth Management Element	
Goal GM-2. Integration of Land Use and Transportation Planning.	*No Conflict*. The Project would coordinate land use and transportation planning decisions. Refer to discussion for General Plan Goal C-1 and Goal C-5.
Policy GM-2.3. Use the Development Phasing and Performance Monitoring Program to assess the impact of existing and new development on the circulation system.	*No Conflict*. Refer to discussion for General Plan Goal C-5.
Conservation Element	
Goal CON-1. Preserved and Restored Natural Coastal Habitat and Landforms. It is the goal of the City of Costa Mesa to provide residents with a high-quality environment through the conservation of resources, including land, water, wildlife, and vegetation; and the protection of areas of unique natural beauty.	*No Conflict*. As discussed in Chapter 3, Project Description, the Project includes Site Design Objective Design Standards that would guide the relationship between buildings, circulation systems, open spaces, and site features to support functional, attractive, and context-sensitive development that is compatible with surrounding uses and natural conditions and that would focus on site planning principles intended to preserve natural features, minimize environmental disturbance, and promote safe and efficient movement for pedestrians, bicyclists, and vehicles. The Project would continue to provide residents of the city with a high-quality environment as the Project would not affect natural habitat, coastal habitat, or landforms. Refer to discussion for General Plan Goal LU-4.
Policy CON-1.A.1. Natural habitat is essential to ensuring biodiversity and protecting sensitive biological resources. Protect these areas and consult with the California Department of Fish and Wildlife, Orange County Water District, Orange County Parks, and other regional agencies to identify areas for special protection, and establish appropriate protection measures for these areas.	*No Conflict*. Refer to discussion for General Plan Goal LU-4.
Policy CON-1.A.2. Contribute to regional biodiversity and the preservation of rare, unique, and sensitive biological resources by maintaining functional wildlife corridors and habitat linkages.	*No Conflict*. As discussed in Section 4.4, Biological Resources, most of the Planning Area is developed and surrounded by developed areas, and the Project would not affect any designated wildlife corridors and/or habitat linkages areas in the city. Potential movement corridors would not be impacted by future buildout of the Project and wildlife would be allowed to continue to use these areas during future project-specific construction activities. Undeveloped parcels in the Planning Area (particularly agricultural lands) are surrounded by development and do not function as a

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	corridor or linkage between larger habitat blocks in the vicinity (e.g. Santa Ana River and Newport Back Bay). In addition, implementation of mitigation measures MM-4.4-1, Habitat Assessment, and MM-4.4-2, Rare Plants, would contribute to the preservation of rare, unique, and sensitive biological resources. Refer to discussion for General Plan Goal LU-4.
Policy CON-1.A.3. Coordinate with the United States Fish and Wildlife service, the California Department of Fish and Wildlife, and other regulatory agencies to mitigate project impacts affecting open and natural spaces.	*No Conflict*. The Project would rezone already developed, urban parcels in the city and would therefore not affect any of the City's environmental resources, such as parks, open spaces, or other natural areas. As discussed in Section 4.4, Biological Resources, utilizing California Department of Fish and Wildlife lists and resources, it was determined that three species of special-status plants as well as burrowing owl are found and restricted to open space parks within the city and do not have any potential to occur within the Planning Area. In addition, it was determined that the open space parks and channelized portions of the Santa Ana River and its tributaries within the city provide opportunities for sensitive natural communities to occur; however, these areas occur outside of the Planning Area and would not be impacted by future buildout of the Project. Refer to discussion for General Plan Goal LU-4.
Policy CON-1.A.5. Ensure that all future development is reviewed with regard to protecting natural topography and bluffs to preserve and enhance Costa Mesa's natural beauty.	*No Conflict*. The Planning Area does not include parcels that are on a bluff crest or that have largely varying topographies or slopes. In addition, the amended MUOD's proposed development standards table includes a specific "Abutting bluff crest" line item requiring a minimum 10-foot setback, and explicitly cross-references Section 13-34 (Bluff-Top Development) of Title 13 of the CMMC, thereby preserving the City's existing bluff-top standards and review criteria. All future development under the Project would undergo project-level review for compliance with applicable Zoning Code provisions and other regulatory requirements, including any potentially applicable requirements relating to protection of natural topography and bluffs. Refer to discussion for General Plan Goal LU-4.
Policy CON-1.A.6. Minimize soil depletion and erosion in development projects. Prevent erosion caused by construction activities, and encourage preservation of natural vegetation and topography.	*No Conflict*. As detailed in Appendix A-1, the Project would not result in any impacts relating to erosion or soil depletion. As discussed in Section 4.4, Biological Resources, open space parks and channelized portions of the Santa Ana River and its tributaries within the city provide opportunities for sensitive natural communities, such as vegetation communities, to occur. However, these areas occur outside of the Planning Area and would not be impacted by future buildout of the Project. Refer to discussion for General Plan Goal LU-4 and Policy CON-1.A.5.
Policy CON-1.A.9. Coordinate the development of plans, policies, and design standards for projects within the Coastal Zone with appropriate local, regional, and federal agencies.	*No Conflict*. Small portions of the city are located within the Coastal Zone. However, as no portion of the Planning Area falls within the boundaries of the Coastal Zone, the Coastal Zone would not be affected.
Goal CON-2. Conserved Natural Resources through Environmental Sustainability. Reduce the City's carbon footprints and manage resources wisely to meet the	*No Conflict*. Regarding energy-efficiency, any future development facilitated by the Project would be required to adhere to all federal, state, and local requirements for energy efficiency, including the latest Title 24 standards for building efficiency. Regarding renewable energy, future development under the Project is anticipated to incorporate rooftop photovoltaic systems into building designs. As discussed in Section 4.6, Energy, although the

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needs of a growing population and economy. Base community planning decisions on sustainable practices that reduce environmental pollutants, conserve resources, and minimize waste. Encourage the design of energy-efficient buildings, use renewable energy, and promote alternative methods of transportation.	Project would increase demand for electricity, natural gas, gasoline, and diesel consumption in the Planning Area, energy use would not represent wasteful, inefficient, or unnecessary consumption of energy use. In addition, as discussed in Sections 4.3, Air Quality, 4.6, Energy, and 4.8, Greenhouse Gas Emissions, the Project would implement various mitigation measures designed to promote energy-efficient and sustainable equipment, materials, and practices, including the use of electric equipment, rooftop solar systems in future development projects, and implementation of solid waste reduction measures. Refer to discussion for General Plan Goal LU-4.
Policy CON-2.A.1. Promote efficient use of energy and conservation of available resources in the design, construction, maintenance, and operation of public and private facilities, infrastructure, and equipment.	*No Conflict*. Refer to discussion for General Plan Goal CON-2.
Policy CON-2.A.2. Consult with regional agencies and utility companies to pursue energy efficiency goals. Expand renewable energy strategies to reach zero net energy for both residential and commercial new construction.	*No Conflict*. As discussed in Section 4.6, Energy, Title 24 2025 standards would increase the required amount of solar for non-residential spaces and would expand battery storage systems requirements compared to the 2019 standards. Future projects under the Project would be required to comply with Title 24 standards for building efficiency. In addition, as discussed in Sections 4.3, Air Quality, 4.6, Energy, and 4.8, Greenhouse Gas Emissions, the Project would implement various mitigation measures designed to promote energy-efficient and sustainable equipment, materials, and practices, including the use of electric equipment, rooftop solar systems in future development projects, and building performance and energy conservation measures. In addition, measures and programs included in CARB's 2017 Scoping Plan Update would result in the reduction of Project-related GHG emissions with no action required at the project-level, including GHG emission reductions through increased energy efficiency and renewable energy production (SB 350), reduction in carbon intensity of transportation fuels (declining low carbon fuel standard), and the accelerated efficiency and electrification of the statewide vehicle fleet (Mobile Source Strategy). Refer to discussion for General Plan Goal CON-2.
Policy CON-2.A.4. Encourage new development to take advantage of Costa Mesa's optimal climate in the warming and cooling of buildings, including use of heating, ventilation and air conditioning (HVAC) systems.	*No Conflict*. Future development under the Project would be required to comply with applicable development standards contained in the California Residential Code, as adopted by the City. Under existing law, HVACs are not required; however, multifamily units are required to provide certain levels of natural ventilation, as well as a heating system (California Residential Code, Section R303.1 and R303.9). As such, implementation of the Project would not conflict with the City's policy to utilize the City's optimal climate in the warming and cooling of buildings.
Policy CON-2.A.5. Promote environmentally sustainable development principles for buildings, master planned	*No Conflict*. Refer to discussion for General Plan Goal LU-4.

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communities, neighborhoods, and infrastructure.	
Policy CON-2.A.9. Encourage waste management programs that promote waste reduction and recycling to minimize materials sent to landfills. Maintain robust programs encourage residents and businesses to reduce, reuse, recycle, and compost.	*No Conflict*. Regarding solid waste, any future development facilitated by the Project would be required to adhere to all federal, state, and local requirements related to solid waste, including the California Integrated Waste Management Act, California Solid Waste Reuse and Recycling Act, and the California Green Building Standards Code. For additional discussion regarding waste management measures, refer to Section 4.19, Utilities and Service Systems.
Policy CON-2.A.10. Support waste management practices that provide recycling programs. Promote organic recycling, landfill diversion, zero waste goals, proper hazardous waste collections, composting, and the continuance of recycling centers.	*No Conflict*. Refer to discussion for General Plan Policy CON-2.A.9. As discussed in Section 4.9, Hazards and Hazardous Materials, risks relating to hazardous materials would be minimized through regulatory compliance with all federal, state, and local regulations, including the California Health and Safety Code, Hazardous Materials Transportation Act, California Division of Occupational Safety and Health, and Los Angeles County Fire Department requirements, and implementation of proposed mitigation measures applied to future discretionary projects. With the identification and abatement of hazardous building materials that could be encountered during demolition activities within the Planning Area through implementation of MM-4.9-2, Hazardous Materials Building Survey and Abatement, and protective measures in place during construction, future construction of projects subject to CEQA and discretionary actions would not pose a significant risk to the public or environment through the temporary routine transport and limited use or disposal of hazardous materials.
Policy CON-2.A.11. Continue construction and demolition programs that require recycling and minimize waste in haul trips.	*No Conflict*. As discussed in Section 4.19, Utilities and Service Systems, the California Green Building Standards Code requires that at least 65 percent of nonhazardous construction and demolition waste must be recycled or salvaged for reuse. Haul truck trips that would occur for future project development would be required to minimize waste through implementation of CARB's In-Use Off-Road Diesel Vehicle Regulation that applies to certain off-road diesel engines, vehicles, or equipment greater than 25 horsepower and would require the vehicle fleet to either show that its fleet average index was less than or equal to the calculated fleet average target rate, or that the fleet has met the Best Achievable Control Technology requirements.
Policy CON-3.A.3. Restrict use of turf in new construction and landscape reinstallation that requires high irrigation demands, except for area parks and schools, and encourage the use of drought-tolerant landscaping.	*No Conflict*. Future development under the Project would not include turf or landscape reinstallation that requires high irrigation demands. In addition, future projects would be encouraged to utilize drought-tolerant landscaping.
Policy CON-3.A.5. Work with public and private property owners to reduce stormwater runoff in urban areas to protect water quality in storm drainage	*No Conflict*. The Planning Area includes some parcels located near the Santa Ana River in the northwestern portion of the city. As discussed in Section 4.10, Hydrology and Water Quality, most future development projects in the Planning Area would require a final project WQMP, or a priority project WQMP consistent with the Model WQMP and Technical

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channels, the Santa Ana River, and other local water courses that lead to the Pacific Ocean.	Guidance Document (TGD) for project determined to be "priority project," to be submitted and approved prior to issuance of building or grading permits (City of Costa Mesa 2025d). A project WQMP is a plan for managing the quality of stormwater that flows from a developed site after construction is completed and through the life of the development. A project WQMP describes the BMPs that will be installed and maintained and used by property owner(s), facility operators, and tenants to prevent and minimize water pollution that can be caused by stormwater. By retaining and/or treating runoff on site through BMPs, the amount of potentially pollutant-laden runoff leaving a developed site and contaminating receiving waters would be minimized.
Policy CON-3.A.7. Continue to comply with the National Pollutant Discharge Elimination System Program (NPDES) by participating in the Countywide Drainage Area Management Plan (DAMP), which stipulates water quality requirements for minimizing urban runoff and discharge from new development and requires the provisions of applicable Best Management Practices (BMP).	*No Conflict*. As discussed in Section 4.10, Hydrology and Water Quality, under CMMC Section 8-32 (Control of Urban Runoff), all new development and significant redevelopment, regardless of acreage, must comply with the DAMP, including incorporation of BMPs, such as those outlined in the City's Construction Runoff Guidance Manual, and any conditions imposed by the City to prevent pollutant discharges. Required compliance with NPDES permitting requirements would ensure implementation of construction BMPs that prevent improper storage, handling, or disposal of construction-related materials and substantially reduce the potential for polluted runoff to affect receiving waters. In addition, future development disturbing one acre or more would be required to prepare and implement a SWPPP under the NPDES Construction General Permit, incorporating site-specific BMPs for erosion control, sediment control, and materials and waste management.
Policy CON-3.A.8. Require that all applicable development projects be reviewed with regards to requirements of both the on-site Water Quality Management Plan and State requirements for runoff and obtaining a Storm Water Pollution Prevention Plan (SWPPP) permit.	*No Conflict*. Refer to discussion for General Plan Policy CON-3.A.5 and Policy CON-3.A.7.
Goal CON-4. Improved Air Quality. Take steps to improve and maintain air quality for the benefit of the health and vitality of residents and the local economy. In alignment with State emissions reduction goals and in cooperation with the South Coast Air Quality Management District, pursue regional collaboration to reduce emissions from all sources.	*No Conflict*. As discussed in Section 4.3, Air Quality, future discretionary projects under the Project would be required to implement mitigation measures MM-4.3-1 through MM-4.3-11 and comply with federal, state, and local regulations relating to air quality which would serve to reduce air quality impacts, while future non-discretionary projects would be subject to federal, state and local regulations relating to reducing air quality impacts. In addition, implementation of MM-4.14-1 would ensure that the appropriate residential and employment growth projections of the Project would be incorporated into the next SCAG RTP/SCS (anticipated to be the 2028 RTP/SCS). Implementation of the Project would be consistent with SCAG's regional goals of providing infill housing, improving the jobs-to-housing balance, and integrating land uses near major transportation corridors. As SCAG is in process of preparing their next RTP/SCS and SCAQMD has not identified the next target year for updating the AQMP, there is an anticipated interim period where the SCAG RTP/SCS growth

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	projections and the SCAQMD AQMP do not reflect the appropriate residential and employment growth associated with the Project; however, this would eventually be resolved with updates of both plans. Refer to discussion for General Plan Goal LU-1 and Goal LU-4.
Policy CON-4.A.1. Support regional policies and efforts that improve air quality to protect human and environmental health and minimize disproportionate impacts on sensitive population groups.	*No Conflict*. Refer to discussion for General Plan Goal CON-4.
Policy CON-4.A.5. Encourage compact development, infill development, and a mix of uses that are in proximity to transit, pedestrian, and bicycling infrastructures.	*No Conflict*. Refer to discussion for General Plan Goal LU-1 and Goal LU-4.
Policy CON-4.A.6. Enhance bicycling and walking infrastructure, and support public bus service, pursuant to the Circulation Element's goals, objectives, and policies.	*No Conflict*. The Project includes Site Design Objective Design Standards that would focus on site planning principles intended to promote safe and efficient movement for pedestrians, bicyclists, and vehicles. In addition, the Project would not alter or inhibit compliance with the Circulation Element requirements. Refer to discussion for General Plan Goal LU-1, Goal LU-4, Policy C-1.10, and Goal C-9.
Policy CON-4.A.7. Encourage installation of renewable energy devices for businesses and facilities and strive to reduce community-wide energy consumption.	*No Conflict*. Refer to discussion for General Plan Goal CON-2.
Noise Element	
Policy N-1.1. Enforce the maximum acceptable exterior noise levels for residential areas at 65 CNEL.	*No Conflict*. As discussed in Section 4.13, Noise, Costa Mesa's Noise Control Ordinance provides enforceable standards and a measurement protocol by which fixed noise sources can be assessed at affected properties, including exterior and interior standards and cumulative exceedance rules (CMMC Sections 13-280 through 13-282). In practice, compliance is commonly achieved by integrating noise control into project design through equipment selection (quieter units), strategic placement away from sensitive edges, shielding with parapets or walls, vibration isolation, and acoustical enclosures or barriers. The Project would be implemented through future discretionary or ministerial approvals where compliance with noise ordinance standards can be demonstrated through equipment control, site planning, and building design. Additionally, as described in Chapter 3, Project Description, MUOD projects may be subject to technical studies, including a noise study, to ensure compatibility with surrounding uses and compliance with City standards. With application of the City's enforceable noise standards, MUOD-required noise studies and project-level design controls (placement, shielding, enclosures), future development enabled by the Project would not result in substantial

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Goals and Policies	Conflict Analysis
	permanent increases in ambient noise levels at nearby receptors beyond adopted standards.
Policy N-1.4. Ensure that appropriate site design measures are incorporated into residential developments, when required by an acoustical study, to obtain appropriate exterior and interior noise levels. When necessary, require field testing at the time of project completion to demonstrate compliance.	*No Conflict*. Refer to discussion for General Plan Policy N-1.1. Additionally, the City's Noise Element describes the need for acoustical studies and interior noise objectives (e.g., 45 dBA CNEL) for new noise-sensitive structures where exterior exposure is elevated. Future residential development on Planning Area sites would be required to demonstrate compliance with the State interior noise standard of 45 dBA CNEL (Title 24, California Building Code) and with the City's exterior noise compatibility criteria through acoustical analysis, building design measures (e.g., enhanced facade construction, sound transmission class–rated windows, mechanical ventilation to allow windows-closed conditions), and site planning.
Policy N-1.6. Discourage sensitive land uses from locating within the 65 CNEL noise contour of John Wayne Airport. Should it be deemed by the City as appropriate and/or necessary for a sensitive land use to locate in the 65 CNEL noise contour, ensure that appropriate interior noise levels are met and that minimal outdoor activities are allowed.	*No Conflict*. As discussed in Section 4.13, Noise, future residential development on Measure K sites within the JWA 65 dBA CNEL contour would be subject to the AELUP noise compatibility requirements, General Plan Noise Element policies, and State Building Code interior noise standards (45 dBA CNEL). Compliance with these existing regulatory requirements and the proposed amendment in the MUOD would ensure that aircraft noise exposure at new noise-sensitive uses remains within acceptable limits.
Policy N-2.1. Require the use of sound walls, berms, interior noise insulation, double-paned windows, and other noise mitigation measures, as appropriate, in the design of new residential or other new noise sensitive land uses that are adjacent to arterials, freeways, or adjacent to industrial or commercial uses.	*No Conflict*. As discussed in Section 4.13, Noise, at the program level, the feasibility of noise barriers along the affected roadway segments is constrained by several factors as the identified segments (South Coast Drive, Hyland Avenue, Placentia Avenue, Sunflower Avenue) are existing arterial and collector roadways in urbanized areas where frontage properties have direct driveway access, sidewalk connections, and existing development patterns that preclude the construction of continuous noise barriers without obstructing access, visibility, or land use functionality. Building sound insulation improvements (e.g., upgraded windows, mechanical ventilation) can reduce interior noise exposure at new development but do not reduce outdoor noise levels and do not benefit existing receptors along the affected corridors. Even with implementation of mitigation measures (see Section 4.13, Noise, for details), traffic noise impacts on South Coast Drive, Placentia Avenue, Hyland Avenue, and Sunflower Avenue would be significant and unavoidable because feasible mitigation measures are not available to fully offset the noise increases associated with the projected volume doublings on these roadway segments. Furthermore, the Project is a rezoning action and does not include the construction of specific roadway improvements. Refer to discussion for General Plan Policy N-1.1.
Policy N-2.2. Require, as a part of the environmental review process, that full consideration	*No Conflict*. For information regarding the existing and projected noise environment, refer to Section 4.13, Noise, of this Draft PEIR.

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Goals and Policies	Conflict Analysis
be given to the existing and projected noise environment.	
Policy N-2.4. Require that all proposed projects are compatible with adopted noise/land use compatibility criteria.	*No Conflict*. Refer to discussion for General Plan Policy N-1.1 and Policy N-1.4.
Policy N-2.5. Enforce applicable interior and exterior noise standards.	*No Conflict*. Refer to discussion for General Plan Policy N-1.1 and Policy N-1.4.
Policy N-2.6. Allow a higher exterior noise level standard for infill projects in existing residential areas adjacent to major arterials if it can be shown that there are no feasible mechanisms to meet the exterior noise levels. The interior standard of 45 dBA CNEL shall be enforced for any new residential project.	*No Conflict*. Refer to discussion for General Plan Policy N-1.1, Policy N-1.4, and Policy N-2.1.
Policy N-2.7. Encourage effective site planning in mixed-use areas that provides the optimal distance between source of excessive sound and residents.	*No Conflict*. As discussed in Section 4.13, Noise, while the precise service configuration of future development projects is unknown at this stage, these impacts are typically controllable through site planning and operational measures: locating loading and refuse areas away from shared walls with existing residences; orienting service activity toward internal site areas or away from sensitive property lines; enclosing dumpsters and compactors within masonry walls; using rubber bumpers and quiet hardware on roll-up doors; restricting routine delivery and refuse service hours to daytime periods (typically 7:00 a.m. to 10:00 p.m.); and prohibiting extended truck idling. In addition, the City's planning application review process (CMMC Title 13, Chapter III) provides a mechanism to impose conditions of approval related to hours of operation, outdoor patio use, and amplified sound for commercial uses in proximity to residential receptors; thus, commercial uses under the Project would be designed and operated to minimize noise effects on nearby residences, including limitations on hours of operation where appropriate.
Policy N-2.8. Require new mixed-use developments to site loading areas, parking lots, driveways, trash enclosures, mechanical equipment, and other noise sources away from the residential portion of the development and adjacent established residential development.	*No Conflict*. Refer to discussion for General Plan Policy N-2.7.

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Policy N-2.9. Limit hours and/or require attenuation of commercial/entertainment operations adjacent to residential and other noise sensitive uses in order to minimize excessive noise to these receptors.	*No Conflict*. Refer to discussion for General Plan Policy N-2.7.
Safety Element	
Goal S-1. Risk Management of Natural and Human-Caused Disasters. Minimize the risk of injury, loss of life, property damage, and environmental degradation from seismic activity, geologic hazards, flooding, fire, and hazardous materials. Promote a sustainable approach to reduce impacts of natural disasters, such as flooding and fire.	*No Conflict*. As discussed in Section 4.10, Hydrology and Water Quality, because future development projects would be subject to BMPs in accordance with existing regulatory requirements, and would be required to pay development impact fees, the Project would not 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, and no flooding impacts would occur. As discussed in Section 3.7, Geology and Soils, of Appendix A-1, attached to this Draft PEIR, the Project would not result in impacts relating to seismic or geologic hazards. As discussed in Sections 3.9, Hazards and Hazardous Materials, and 3.20, Wildfire, of Appendix A-1, attached to this Draft PEIR, the Project would not result in impacts relating to fire. As discussed in Section 4.9, Hazards and Hazardous Materials, risks relating to hazardous materials would be minimized through regulatory compliance with all federal, state, and local regulations, including the California Health and Safety Code, Hazardous Materials Transportation Act, California Division of Occupational Safety and Health, and Los Angeles County Fire Department requirements, and implementation of proposed mitigation measures applied to future discretionary projects.
Policy S-1.2. Enforce standards, review criteria, and ensure that structures on or adjacent to bluffs are set back sufficiently to preserve the natural contours and aesthetic value of the bluff line and to provide sufficient access for fire protection.	*No Conflict*. Refer to the discussion for Policy S-1.2 within Table 4.1-2, General Plan Conflict Evaluation, in Section 4.1, Aesthetics.
Policy S-1.11. Improve and maintain local storm drainage infrastructure in a manner that reduces flood hazards.	*No Conflict*. As discussed in Section 4.10, Hydrology and Water Quality, the City prepared a Proposed Drainage and Water Quality Improvements report that identifies recommended storm drainage infrastructure improvements necessary to ensure the City archives the desired flood control and water quality standards to be funded through development impact fees. These fees are expected to be effective prior to the start of any future construction projects implemented under the Project; therefore, future development in the Planning Area would be required to make fair share payments to fund the necessary improvement to the City's storm drain system to meet or exceed a 25-year storm event capacity to reduce flood hazards in the city.

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Policy S-1.14. Minimize flood hazard risks to people, property, and the environment by addressing potential damage tsunamis and sea level rise.	*No Conflict*. As discussed in Section 3.10, Hydrology and Water Quality, of Appendix A-1, attached to this Draft PEIR, the Project would not result in flooding impacts related to tsunamis and sea level rise.
Policy S-1.17. Utilize the John Wayne Airport Environs Land Use Plan (AELUP) as a planning resource for evaluation of land use compatibility and land use intensity in areas affected by airport operations. In particular, future land use decisions within the Safety/Runway Protection Zone will be evaluated in light of the risk to life and property associated with aircraft operations.	*No Conflict*. As discussed in Sections 4.9, Hazards and Hazardous Materials, and 4.13, Noise, future development projects in the Planning Area within the JWA 65 dBA CNEL contour would be subject to the AELUP's noise and safety compatibility requirements, General Plan Noise Element policies, and State Building Code interior noise standards (45 dBA CNEL). Future residential development on these sites would be required to demonstrate compliance with the State interior noise standard of 45 dBA CNEL (Title 24, California Building Code) and with the City's exterior noise compatibility criteria through acoustical analysis, building design measures, and site planning. Moreover, Project implementation via the amended MUOD would require noise and safety requirements, including height and land use restrictions, to be consistent with the AELUP for John Wayne Airport. As a result, future development projects would be required to modify the density through a reduction of units and occupancy terms, reduce the intensity of land uses, and modify the building height in order to be consistent with the AELUP for John Wayne Airport. Project implementation via the amended MUOD would also require a noise study for future development projects abutting a freeway or within the Airport Influence Area, as defined by the AELUP for John Wayne Airport. The noise study would certify compliance with the City's Noise Ordinance and be consistent with requirements in the AELUP for John Wayne Airport. In addition, future projects within the JWA 65 dBA CNEL contour and within the Safety/Runway Protection Zone would be reviewed by the ALUC through standard permitting processes for their ability to meet the noise and safety requirements for airport influence areas.
Policy S-1.19. Use the Federal Aviation Regulations as a guideline to establish the ultimate height of structures as defined in FAR Part 77.	*No Conflict*. Refer to discussion for General Plan Policy LU-3.13.
Goal S-2. High Level of Police and Fire Services and Emergency Preparedness. Provide a high level of security in the community to prevent and reduce crime, and to minimize risks of fire to people, property, and the environment.	*No Conflict*. As discussed in Section 4.15, Public Services, the Project could allow for future development of public service uses, such as new fire and police stations, on non-Housing Element sites within the Planning Area utilizing their underlying base zones in accordance with Chapter IV (Citywide Land Use Matrix) of Title 13 (Planning, Zoning, and Development) of the CMMC to support fire and police services and emergency response times as the population within the Planning Area increases through 2056. For more information regarding fire and police services, refer to Section 4.15, Public Services, of this Draft PEIR.
Policy S-2.4. Provide a high level of police and fire service in the community. Secure adequate facilities, equipment, and personnel for police and fire.	*No Conflict*. Refer to discussion for General Plan Goal S-2.

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Policy S-2.6. Require that water supply systems for development are adequate to combat structural fires in terms of location and minimum required fire-flow pressures.	*No Conflict*. As discussed in Section 4.19, Utilities and Service Systems, the Project would result in increased water usage, including potable water and water from fire prevention demand. As shown in Table 4.19-4, Project-Related Water Demand Comparison by 2045, within Section 4.19, the Project's interpolated water demand through 2045 (end year of the applicable Urban Water Management Plans) would be fully accommodated within the anticipated water supply portfolios of both Mesa Water District and Irvine Ranch Water District, and would result in a combined surplus of approximately 79,503 acre-feet per year is projected for 2045 across the two water district service areas, indicating that Project related demand represents a small fraction of total available supply. The Project would comply with existing water conservation regulations as well as MM-4.8-5, Water Conservation, which is not required to reduce water supply impacts but is discussed in Section 4.8, Greenhouse Gas Emissions. Existing regulations would also serve to facilitate installation of water efficient fixtures with new development. As a result, it is anticipated that sufficient water supplies would be available to serve the reasonably foreseeable future development of the Project, during normal, dry, and multiple dry years.
Policy S-2.7. Require development to contribute its fair share toward funding the provision of appropriate fire and emergency medical services as determined necessary to adequately serve the project.	*No Conflict*. Refer to discussion for General Plan Goal S-2.
Policy S-2.12. Continue to maintain adequate police and fire staffing, facilities, equipment, and maintenance sufficient to protect the community.	*No Conflict*. Refer to discussion for General Plan Goal S-2.
Policy S-2.16. Require the safe production, transportation, handling, use, and disposal of hazardous materials that may cause air, water, or soil contamination.	*No Conflict*. As discussed in Section 4.9, Hazards and Hazardous Materials, the transport, storage, and use of all hazardous materials during construction must be used and stored in accordance with manufacturers' instructions and handled in compliance with federal, local and state requirements, including HSC Section 25163; CCR Title 22, Chapter 13; and California Health and Safety Code Division 20 Chapter 6.95. All hazardous substances must be transported from construction sites and disposed of at a contracted solid waste disposal provider in accordance with all federal, state, and local regulations, including California Health and Safety Code, Hazardous Materials Transportation Act, California Division of Occupational Safety and Health, and Los Angeles County Fire Department requirements. Furthermore, during operations, the transport, use, or disposal of hazardous materials is regulated by the Resource Conservation and Recovery Act (RCRA); Comprehensive Environmental Response, Compensation, and Liability (CERCLA); the Hazardous Materials Transportation Act; International Fire Code (IFC); Title 22; and Title 27. In addition, the Project incorporates MM-4.9-1, Pre-Construction Due Diligence, which includes requirements for environmental site assessments

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	for future development sites and steps that outline the proper screening, handling, characterization, transportation, and disposal procedures for contaminated soils or soil vapor or dewatering procedures for contaminated groundwater, if required.
Policy S-2.17. Encourage best practices in hazardous waste management, and ensure consistency with City, County, and federal guidelines, standards, and requirements.	*No Conflict*. Refer to discussion for General Plan Goal S-2.16.
Community Design Element	
Policy CD-5.2. Control the visual impacts of new development on natural views of the coast and the wetlands.	Refer to the discussion for Policy CD-5.2 within Table 4.1-2, General Plan Conflict Evaluation, in Section 4.1, Aesthetics.
Policy CD-7.2 Preserve the character and scale of Costa Mesa's established residential neighborhoods where possible; when new residential development is proposed, encourage that the new structures are consistent with the prevailing character of existing development in the immediate vicinity, and that new development does not have a substantial adverse impact on adjacent areas.	Refer to the discussion for Policy CD-7.2 within Table 4.1-2, General Plan Conflict Evaluation, in Section 4.1, Aesthetics.
Policy CD-8.8. Require that exterior lighting on commercial properties be consistent with the architectural style of the commercial building. On each commercial site, all lighting fixtures should be from the same family of fixtures with respect to design, materials, color, fixture, and color of light. Lighting sources should be shielded, diffused or indirect to avoid spillover on adjacent properties, nighttime sky light pollution, and glare to pedestrians and motorists. To minimize the total number of freestanding light standards, wall-mounted and pathway lights should be utilized to the greatest extent possible.	Refer to the discussion for Policy CD-8.8 within Table 4.1-2, General Plan Conflict Evaluation, in Section 4.1, Aesthetics..

Table 4.11-1. Potential to Conflict with General Plan Goals and Policies

Goals and Policies	Conflict Analysis
Policy CD-9.1. Require that mixed-use development projects be designed to mitigate potential conflicts between uses. Consider noise, lighting, and security.	*No Conflict*. As discussed in Chapter 3, Project Description, the amended MUOD includes performance standards designed to ensure compatibility between residential and non-residential uses within the same mixed-use development or building. Residential uses would be designed to protect privacy and security when located adjacent to non-residential uses, and residential windows would not directly face non-residential windows unless adequate screening or design measures are provided. Deviations from the performance standards may be approved through a conditional use permit when it is demonstrated that the deviation would not create conflicts, nuisances, or adverse compatibility impacts between residential and non-residential uses on the same site. Furthermore, the Project's Objective Design Standards would implement and support policies contained in the Costa Mesa General Plan that emphasize neighborhood compatibility, pedestrian-oriented design, architectural quality, protection of privacy, noise mitigation, and context-sensitive development. In addition, the Project's development standards are designed to adverse lighting and glare impacts associated with future development and redevelopment. As discussed in Section 4.13, Noise, commercial mixed uses under the Project would be designed and operated to minimize noise effects on nearby residences, including limitations on hours of operation where appropriate. Refer to discussion for General Plan Policy N-2.7 and Policy CD-8.8.
Policy CD-9.2. Provide adequate parking, open space and recreational facilities to serve residents in mixed-use development projects. Design parking and other areas to acknowledge different users (residents versus shoppers) and to be compatible with the architectural character of the building(s).	*No Conflict*. As discussed in Chapter 3, Project Description, the Project would implement Zoning Code Amendments that include amendments to parking standards and future projects would therefore be required to provide minimum parking for non-residential uses in accordance with the updated parking standards. The Project's Site Design Objective Design Standards would guide the relationship between buildings, circulation systems, open spaces, and site features to support functional, attractive, and context-sensitive development that is compatible with surrounding uses and would require residential entrances, exits, and access to parking to be secured and separated from non-residential areas, and residential and non-residential uses may not share entrance hallways or balconies. In addition, the Site Design Objective Design Standards would encourage access to open-air outdoor space to improve health and wellness by requiring minimum open space requirements for future development projects under the MUOD. As discussed in Section 4.16, Recreation, the Quimby Act would ensure that when new residential subdivisions are developed, an increase in park funding and/or dedication of additional parkland proportional to increases in population and community needs would occur, and the facilitation of future park spaces in accordance with General Plan policies, the Quimby Act, and Title 13 of the CMMC would help to support the City's recreation system as the Project is implemented through 2056. Refer to discussion for General Plan Goal OSR-1.
Open Space and Recreation Element	
Goal OSR-1. Balanced and Accessible System of Parks and Open Spaces. Provide a high-quality environment through the development of recreation	*No Conflict*. As discussed in Section 4.16, Recreation, the Quimby Act would ensure that when new residential subdivisions are developed, there is an increase in park funding and/or dedication of additional parkland proportional to increases in population and community needs. For properties where the MUOD does not currently apply, all future projects on

Table 4.11-1. Potential to Conflict with General Plan Goals and Policies

Goals and Policies	Conflict Analysis
resources and preservation of open space that meets community needs in Costa Mesa.	those properties' standards must also be consistent with the provisions of the General Plan. The facilitation of future park spaces in accordance with General Plan policies would help to maintain acceptable parkland service ratios in the city. In accordance with the Quimby Act (Government Code Section 66477) and Title 13 of the CMMC, the City requires dedication of 3 acres of parkland or payment of in-lieu fees as a condition of approval for new multi-family residential units and subdivisions per every 1,000 residents (Appendix I).
Policy OSR-1.5. Maximize public space by requiring plazas and public gathering spaces in private developments that can serve multiple uses, including recreation and social needs.	*No Conflict*. Future development projects under the Project would be required to incorporate open spaces, as shown under the header, Open Space and Landscaping Standards, of Table 3-3, Development Standards for MUOD Projects. For example, MUOD projects would be required to provide usable common residential open space, usable private residential open space, and publicly accessible open space. In addition, as described in Chapter 3, Project Description, the Project would also apply Objective Design Standards to all new construction multifamily residential and mixed-use buildings (consistent with California Government Code Section 65913.4) of three or more stories in height, as well as second-story additions to multifamily residential or mixed-use buildings, regardless of zoning designation. The Objective Design Standards, including Site Design Objective Design Standards, would guide the relationship between buildings, circulation systems, open spaces, and site features to support functional, attractive, and context-sensitive development that is compatible with surrounding uses and natural conditions. Refer to discussion for General Plan Goal OSR-1.
Policy OSR-1.18. Provide a minimum of 4.26 acres of parkland per 1,000 residents.	*No Conflict*. The Project does not include the development of new open space areas; however, it does not prohibit the City's expansion of parkland. The Project would facilitate mixed-use development in commercial and industrial corridors, which are developed areas and would not reduce or induce development of any open space areas or parkland. As discussed in Section 4.16, Recreation, the Quimby Act would ensure that when new residential subdivisions are developed, an increase in park funding and/or dedication of additional parkland proportional to increases in population and community needs would occur. The facilitation of future park spaces in accordance with General Plan policies, the Quimby Act, and Title 13 of the CMMC would help to maintain acceptable parkland service ratios in the city. Refer to discussion for General Plan Goal OSR-1.
Historical and Cultural Element	
Goal HCR-1. Historical, Archeological, and Paleontological Resource Preservation. The City of Costa Mesa supports focused efforts to provide residents with a sense of community and history through the protection and preservation of historical and cultural resources.	*No Conflict*. As described in Section 4.5, Cultural Resources, future projects under the Project would comply with all existing federal, state, and local policies and regulations in place to identify, assess impacts to, and protect historical resources. Future projects would be subject to the City's General Plan Historical and Cultural Resources Element, which would ensure that proposed developments are reviewed for consistency with historic preservation standards and protect designated historic resources. Implementation of MM-4.5-1 and MM-4.5-2 for all future discretionary development projects within the Planning Area would ensure that potential historical and archaeological resources will be identified, project-specific impacts would be evaluated, and feasible mitigation measures would be

Table 4.11-1. Potential to Conflict with General Plan Goals and Policies

Goals and Policies	Conflict Analysis
	required, as appropriate, to mitigate impacts to historical and archaeological resources.
Policy HCR-1.1. Encourage protection and enhancement of the diverse range of historical sites and resources in the City for the benefit of current and future residents and visitors.	*No Conflict*. Refer to discussion for General Plan Goal HCR-1.
Policy HCR-1.2. Encourage the preservation of significant historical resources (as identified in Table HCR-1) by developing and implementing incentives such as building and planning application permit fee waivers, Mills Act contracts, grants and loans, and implementing other incentives identified in the Historical Preservation Ordinance.	*No Conflict*. Refer to discussion for General Plan Goal HCR-1.
Policy HCR-1.4. Require, as part of the environmental review procedure, an evaluation of the significance of paleontological, archaeological, and historical resources, and the impact of proposed development on those resources.	*No Conflict*. As discussed in Section 4.5, Cultural Resources, there are existing federal and state regulations in place to identify, assess impacts to, and protect both historical and archaeological resources. In addition, the City's Historic Preservation Ordinance and General Plan Historical and Cultural Resources Element include guidelines, goals and policies that promote the identification and preservation of historical and archaeological resources. In addition, the Project incorporated mitigation measures MM-4.5-1, Historic Architectural Resources, and MM-4.5-2, Archaeological Resources, that would require historical and archaeological resources to be appropriately considered prior to implementation of any future project-specific activities and that any discovered historical and archaeological resources are appropriately considered, evaluated, and treated. In addition, as discussed in Section 4.7, Geology and Soils, the Planning Area is considered to be potentially sensitive for paleontological resources; therefore, the Project incorporated MM-4.7-1, Mitigation Protocols for Paleontological Resources , that would require future project applicants within the Planning Area subject to CEQA to follow impact-mitigating steps depending on whether or not the future project site is within an area of low or high paleontological sensitivity. All of these mitigation measures and their respective efforts to identify any potential impacts to historical, cultural, or paleontological resources would be applicable to future discretionary projects as part of the environmental review process, and all non-discretionary projects would be required to comply with all federal, state, and local laws and regulation relating to these resources.
Policy HCR-1.7. Require cultural resources studies (i.e, archaeological and historical investigations) for all applicable discretionary projects, in accordance with CEQA	*No Conflict*. Refer to discussion for General Plan Goal HCR-1 and Policy HCR-1.4.

Table 4.11-1. Potential to Conflict with General Plan Goals and Policies

Goals and Policies	Conflict Analysis
regulations. The studies should identify cultural resources (i.e., prehistorical sites, historical sites, and isolated artifacts and features) in the project area, determine their eligibility for inclusion in the California Register of Historical Resources, and provide mitigation measures for any resources in the project area that cannot be avoided. Cultural resources studies shall be completed by a professional archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards in prehistorical or historical archaeology.	
Policy HCR-1.8. Comply with requirements of the California Environmental Quality Act regarding protection and recovery of archaeological resources discovered during development activities.	*No Conflict*. Refer to discussion for General Plan Goal HCR-1 and Policy HCR-1.4.
Policy HCR-1.9. Require paleontological studies for all applicable discretionary projects. The studies should identify paleontological resources in the project area, and provide mitigation measures for any resources in the project area that cannot be avoided.	*No Conflict*. Implementation of MM-4.7-1, Mitigation Protocols for Paleontological Resources , would require future project applicants within the Planning Area subject to CEQA to follow steps depending on whether or not the future project site is within an area of low or high paleontological sensitivity, including preparation and implementation of a Paleontological Resources Mitigation and Monitoring Program for projects within areas of the Planning Area designated as having high paleontological sensitivity. Refer to discussion for General Plan Goal HCR-1 and Policy HCR-1.4.
Policy HCR-1.10. Comply with the California Environmental Quality Act regarding the protection and recovery of paleontological resources during development activities.	*No Conflict*. As described in Section 4.7, Geology and Soils, future projects under the Project would comply with all existing state and local policies, including General Plan policies, in place to protect paleontological resources. Refer to discussion for General Plan Goal HCR-1 and Policy HCR-1.4.

Source: City of Costa Mesa 2015.

As demonstrated by Table 4.11-1 above, the Project would not conflict with any goals or policies within the City's General Plan adopted for the purpose of avoiding or mitigating an environmental effect. As such, impacts would be less than significant, and no mitigation is required.

City of Costa Mesa Housing Element

As described in Chapter 3, Project Description, of this Draft PEIR, the Project implements the City's 2021-2029 Housing Element. An evaluation of potential conflicts between the adopted goals and policies of the Housing Element and the Project is provided in Table 4.11-2. As shown below, the Project would not conflict with applicable goals and policies of the 2021-2029 Housing Element adopted for the purpose of avoiding or mitigating an environmental effect.

Table 4.11-2. Potential to Conflict with Housing Element Goals and Policies

Goals and Policies	Conflict Analysis
Housing Goal #1. Preserve and enhance the City's existing housing supply.	*No Conflict*. The Project's land use and zoning changes would concentrate growth and development of both residential and mixed-use development along existing commercial and industrial corridors and subareas, rather than within established single-family neighborhoods, as shown in Figure 2-2, Planning Area. Based on data provided by SCAG, the Planning Area parcel list (see Appendix B) includes existing residential land uses, consisting of 508 residential units. Although the Project is anticipated to result in the redevelopment of these existing residential uses, the Project's buildout is estimated at 21,522 additional units in the Planning Area. As such, the Project would enhance the City's existing housing supply. Refer to the assessment of existing residential land uses included in Appendix B and see more discussion within Section 4.14, Population and Housing, of the Draft PEIR regarding displacement of existing residential uses.
Policy HOU-1.2. Minimize the displacement risk for existing residents when considering approval of future redevelopment and public projects.	*No Conflict*. The temporary displacement of some residents due to the redevelopment of 508 residential units is anticipated to occur. However, the Project proposes land use changes to accommodate development of approximately 21,522 additional dwelling units that would substantially increase the capacity for housing stock in the Planning Area. As such, any temporary indirect impacts associated with displacement would be offset by the anticipated increases in housing production. Refer to discussion for Housing Goal #1.
Housing Goal #2. Facilitate the creation and availability of housing for residents at all income levels and for those with special housing needs.	*No Conflict*. As discussed in Chapter 3, Project Description, of this Draft PEIR, the Project would result in a buildout of 21,522 additional units within the Planning Area while implementing the City's Housing Element. For example, these programs would update zoning provisions, including development standards, and provide for internal consistency and consistency with state law including, but not necessarily limited to, those with respect to larger units for large-family households; persons with physical and developmental disabilities; farmworker housing; transitional and supportive housing; parking standards for residential development; motel conversions, efficiency units, and co-living housing types; findings for conditional use permits, design review, and master plans; low barrier navigation centers; and parking for emergency shelters. Moreover, the City is required to accommodate its fair share of the RHNA (11,760 units) within the 6th cycle (2021-2029). As such, the Project proposes land use and zoning changes to Planning Area parcels to satisfy the

Table 4.11-2. Potential to Conflict with Housing Element Goals and Policies

Goals and Policies	Conflict Analysis
	City's RHNA goals, including 2,919 very-low income units, 1,794 low-income units, 2,088 moderate-income units, and 4,959 above-moderate income units within the Planning Area.
Policy HOU-2.1. Facilitate the development of housing that meets the needs of all segments of the population including affordable housing and households with specialized needs.	*No Conflict*. Refer to discussion for Housing Goal #2.
Policy HOU-2.2. Promote the use of State density bonus provisions to encourage the development of affordable housing for lower and moderate-income households, as well as senior housing through the dissemination of informational materials and discussions with project applicants.	*No Conflict*. A MUOD project would be eligible for a density bonus pursuant to Article 4 (Density Bonuses and Other Incentives) of Chapter IX of Title 13 of the Costa Mesa Municipal Code. Refer to discussion for Housing Goal #2. Moreover, the Project would not conflict or impede the City in implementing this policy. Instead, the provision of informational materials and discussions with project applicants is directed at the City and outside of the scope of this Project.
Policy HOU-2.4. Encourage housing programs and future actions that address the need for affordable housing options as well as the housing needs of Costa Mesa's senior resident population and the large households population.	*No Conflict*. Refer to discussion for Housing Goal #2.
Housing Goal #3. Identify adequate, suitable sites for residential use and development to meet the City's Regional Housing Needs Assessment (RHNA) at all income levels and promote a range of housing types to meet the needs of all segments of the Costa Mesa community.	*No Conflict*. Refer to discussion for Housing Goal #2.
Policy HOU-3.1. Encourage the conversion of existing marginal, underutilized, or vacant motels, commercial, and/or industrial land to residential, where feasible and consistent with environmental conditions that are suitable for new residential development.	*No Conflict*. Refer to discussion for General Plan Goal LU-4 and Housing Goal #1.
Policy HOU-3.2. Encourage the development of well-planned and designed residential or mixed-use projects which, through vertical or horizontal integration, provide for the development of compatible residential, commercial, industrial, institutional, or public uses within a single project, neighborhood, or geographic area within the City.	*No Conflict*. Refer to discussion for General Plan Goal LU-1 and Policy LU-3.5.
Policy HOU-3.4. Consider the potential impact of new housing opportunities and their impacts on existing residential neighborhoods when reviewing development applications affecting residential properties.	*No Conflict*. Refer to discussion for General Plan Policy LU-3.1 and Policy LU-3.4.

Table 4.11-2. Potential to Conflict with Housing Element Goals and Policies

Goals and Policies	Conflict Analysis
Policy HOU-3.5. Encourage residential and mixed-use development along transportation routes and major commercial/mixed use corridors.	*No Conflict.* Refer to discussion for General Plan Goal LU-1.
Housing Goal #4. Provide housing opportunities to residents of all social and economic segments of the community without discrimination on the basis of race, color, religion, sex, sexual orientation, disability/medical conditions, national origin or ancestry, marital status, age, household composition or size, source of income, or any other arbitrary factors.	*No Conflict.* Refer to discussion for Housing Goal #2.
Policy HOU-4.1. Support equal housing opportunities as expressed in Federal and State fair housing laws.	*No Conflict.* Refer to discussion for Housing Goal #4.
Policy HOU-4.3. Encourage and support the construction, maintenance and preservation of residential developments which will meet the needs of families and individuals with specialized housing requirements, including those with developmental disabilities.	*No Conflict.* Refer to discussion for Housing Goal #2.

Source: City of Costa Mesa 2023.

Zoning Code (Title 13 of the CMMC)

In terms of enforcement, the General Plan's goals and policies are implemented by the Zoning Code (Title 13, Planning, Zoning and Development of the CMMC). As discussed in Section 4.11.2, Regulatory Requirements, the Zoning Code specifies development standards, permits, and processes required for the development of a property. The Project's proposed changes would adopt the amended MUOD to implement the City's currently adopted Housing Element and to establish zoning provisions for Housing Element sites to accommodate the required lower-, moderate-, and above-moderate-income units from RHNA. The amended MUOD consists of zoning code amendments and an update the City's zoning map to maintain consistency with those proposed amendments. In addition, the Project would update the General Plan land use map to maintain consistency with the proposed Zoning Code amendments and would incorporate the proposed rezoning as identified in the City's Housing Element Update to meet the RHNA for the City. In addition, as discussed in Chapter 3, Project Description, the Project would also apply new Objective Design Standards to new residential projects that are two or more stories in height and to all new mixed-use projects in the city, including multi-family residential and commercial development, regardless of zoning designation. Enabled by recent state legislation, including Senate Bill (SB) 35 and SB 330, the Objective Design Standards are intended to improve predictability, efficiency, and transparency in project review while promoting high-quality design that aligns with state law, City goals, and the community's vision. The Objective Design Standards would be consistent with the community's vision for citywide multi-family and mixed-use projects.

As demonstrated above in Table 4.11-1, the Project's proposed changes would be consistent with the goals and policies of the General Plan. Therefore, upon approval of the proposed Project, the Project would be consistent with Zoning Code standards and would not conflict with existing applicable zoning. In addition, the Project would

implement the Project's Objectives to support the City Council's goal to diversify, stabilize, and increase housing to reflect community needs. The Project would not conflict with the CMMC or result in a significant environmental impact due to conflict with any CMMC regulations adopted for the purpose of avoiding or mitigating an environmental effect.

Urban Plans, Overlays, and Specific Plans

The Project aims to build off the character and existing assets within the city by identifying opportunities for equitable and sustainable investment and development of new housing units. In addition, the Project is comprised of land use changes, including amendments to the Mixed-Use Overlay District, amendments to the General Plan, and modifications to the City's zoning regulations, including the City's existing urban plans, overlays, and specific plans, with the intent to clarify, consolidate, and streamline the plans where possible to implement the required rezoning in compliance with State law. The Project incorporates applicable policies from the existing urban plans and the Harbor Mixed Use Overlay, such as requirements related to noise studies, Phase I Environmental Assessments for hazards, and traffic studies to evaluate and mitigate any potential impacts from future proposed MUOD projects. For more discussion regarding these required studies under the amended MUOD, refer to Chapter 3, Project Description, of this Draft PEIR. As such, the Project would not conflict with any urban or specific plans.

The Project proposes to redesignate 1,079 parcels totaling 1,353.4 acres within the city along Newport Boulevard, Harbor Boulevard, Placentia Avenue, 19th Street, 18th Street, 17th Street, Baker Street, Bristol Street, and areas north of I-405 to help facilitate future mixed-use development (City of Costa Mesa 2025c). The Project would create a universal framework for guiding growth and development of the City through 2056, thereby reducing the potential for conflicts to arise in the future. The Project would support and be consistent with State law by facilitating required housing growth in accordance with the RHNA and would implement the Project's Objectives to support the City Council's goal to diversify, stabilize, and increase housing to reflect community needs. As discussed in Chapter 3, Project Description, of this Draft PEIR, although the Project would sunset the City's existing urban plans and the Harbor Mixed Use Overlay, the applicable regulations from the urban plans would be transferred into the Zoning Code under the MUOD. Therefore, the intent of the urban plans and the Harbor Mixed Use Overlay would still be executed through the Project's amended MUOD.

Regarding specific plans in the city, the Project would maintain the City's North Costa Mesa Specific Plan, One Metro West Specific Plan, and Newport Boulevard Specific Plan but would amend them to apply the MUOD to Measure K sites. These changes would also be reflected in the General Plan Land Use Map and Zoning Map. While base zones would remain the same, the MUOD would be applied to Measure K sites. The specific plan would continue to apply to a property unless specifically superseded by a MUOD project when a property owner chooses to exercise provisions of the MUOD on a qualifying property. With implementation of the Project's rezoning effort, the Project would provide for a clearer, more predictable, and more straightforward path to develop housing in the city in support of implementing State law (RHNA) and in support of the City Council's goal to diversify, stabilize, and increase housing to reflect community needs. For more discussion regarding the proposed amendments to the urban and specific plans in the city, refer to Chapter 3, Project Description, of this Draft PEIR. As such, the Project would not result in a significant environmental impact due to conflict with any regulation adopted for the purpose of avoiding or mitigating an environmental effect. Impacts would be less than significant, and no mitigation is required.

Airport Influence Areas

As described within Section 4.9, Hazards and Hazardous Materials, the Airport Influence Areas shown in Figure 4.9-5, Airport Hazards, illustrates the JWA Airport Influence Area overlies the Planning Area, including noise contours,

notification zones, and safety zones. The Orange County ALUC regulates development of new residential dwellings, commercial structures, and other noise- or risk-sensitive uses within the Airport Influence Area based on factors, including but not limited to noise and safety. Height Restriction boundaries are based on FAR Part 77 guidelines.

The Project proposes zone changes to parcels within the Planning Area, which would overlap the JWA Airport Influence Area. General Plan Policy S-1.19 requires the use of the Federal Aviation Regulations as a guideline to establish the ultimate height of structures as defined in FAR Part 77. As detailed further in Section 4.9, Hazards and Hazardous Materials, the Project's rezoned parcels within the JWA Influence Area would be limited to a building height set forth in the CFR Part 77 guidelines. A total of 9 parcels[5] are located within John Wayne Airport Safety Zone 3, as shown in Figure 4.9-5. Project implementation via the amended MUOD would require noise and safety requirements, including height and land use restrictions, to be consistent with the AELUP for John Wayne Airport. As a result, future development projects would be required to modify the density through a reduction of units and occupancy terms and/or reduce the intensity of land uses in order to be consistent with the AELUP for John Wayne Airport. In addition, Project implementation via the amended MUOD would require future development projects to modify building heights in in order to be consistent with the AELUP for John Wayne Airport.

The Orange County ALUC restricts residential uses in the 65 CNEL zone unless it can be conclusively shown that sufficient sound attenuation is present, and strongly recommends that residential units be limited or excluded from the 60 CNEL zone unless sufficient sound attenuation is provided (ALUC 2008). Interior residential noise levels cannot exceed 45 decibels, and residences in the 65 CNEL zone are also required an accompanying dedication of an avigation easement for noise to the airport applicable to all single-family residences, multi-family residences, and mobile homes. As detailed further in Section 4.13, Noise, of this Draft PEIR, the Project would facilitate the development and redevelopment of areas within the JWA Airport Influence Area and 65 CNEL noise contour. Furthermore, as described in Chapter 3, Project Description, of this Draft PEIR, Project implementation via the amended MUOD would require a noise study for future development projects abutting a freeway or within the Airport Influence Area, as defined by the AELUP for John Wayne Airport. The noise study would certify compliance with the City's Noise Ordinance and be consistent with requirements in the AELUP for John Wayne Airport.

As discussed within Section 4.9, Hazards and Hazardous Materials, Safety Zones 3 and 6 overlap portions of the Planning Area and include restrictions on land use within those zones. Within Safety Zone 3, residential uses must be limited[6] to very low densities, and land uses should avoid[7] moderate or high use intensities (such as major shopping, fast food restaurants, theaters, meeting halls, buildings with more than three aboveground habitable floors) and prohibit[8] children's schools, large day care centers, hospitals, and nursing homes. Within Safety Zone 6, residential uses can be permitted, but high intensity outdoor uses (such as stadiums) are prohibited. Additionally, children's schools, large day care centers, hospitals, and nursing homes should be avoided unless there are no other feasible alternatives. As discussed above, Project implementation via the amended MUOD would require noise and safety requirements, including height and land use restrictions, in order to be consistent with the AELUP for John Wayne Airport.

Thus, future project-level developments would be required to be in compliance with the AELUP and associated regulations. Given the above, the Project's impacts would be less than significant with mitigation.

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5 For the purposes of this analysis, the 9 parcels are identified as APNs 119-200-14, 119-200-36, 119-401-01, 119-401-02, 119-401-03, 119-401-04, 119-401-05, 119-401-06, and 427-165-07.

6 "limit": "use is acceptable only if density/intensity restrictions are met" (ALUC 2008).

7 "avoid": "use generally should not be permitted unless no feasible alternative is available" (ALUC 2008).

8 "prohibit": "use should not be permitted under any circumstances" (ALUC 2008).

4.11.5 Cumulative Impact Analyses

Where a lead agency concludes that the cumulative effects of a project, taken together with the impacts of other closely related past, present, and reasonably foreseeable future projects are significant, the lead agency then must determine whether the project's incremental contribution to such significant cumulative impact is "cumulatively considerable" (and thus significant in and of itself). The cumulative geographic study area used to assess potential cumulative impacts related to the potential to conflict with the City's General Plan is the City of Costa Mesa. The full list of related plans applicable to the cumulative analyses is provided in Section 2.5, Cumulative Impact Analysis, in Chapter 2, Environmental Setting of the Draft PEIR.

Threshold 4.11-1. Given the built-out conditions of the Planning Area and adjacent jurisdictions, development would likely convert existing properties in the city to revitalized higher-density developments to respond to the need for housing, sources of employment, and associated retail land uses. The Project would benefit the surrounding community by replacing properties; adding residential uses to reduce overcrowding and support projected employment growth; and by adding commercial uses and bringing new jobs to the Planning Area. By providing additional housing and employment in proximity to each other, the Project would be consistent with SCAG and other regional policies for promoting more intense land uses adjacent to job centers.

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 PEIR. 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 Project have been addressed in the technical sections of this Draft PEIR. Therefore, the Project's incremental contribution to impacts related to land use and planning would not be cumulatively considerable.

4.11.6 Mitigation Measures

No mitigation measures are required.

4.11.7 Level of Significance Conclusion

Threshold 4.11-1 The Project would have **less than significant impacts** related to conflicts with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect and would not be cumulatively considerable.

4.11.8 References

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4.12 Mineral Resources

This section of the Draft PEIR analyzes the potential impacts from the implementation of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation (Project) on mineral resources, including the potential loss of availability of a known mineral resource and/or the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. This section describes the existing mineral resources within the city and the Planning Area, identifies applicable regulatory requirements, and evaluates potential impacts related to implementation and buildout of the proposed Project. The analysis is based, in part, on information provided in the following resources: the Costa Mesa 2015-2035 General Plan (General Plan), Final Environmental Impact Report (EIR) for the General Plan, California Department of Conservation (CDOC) digital mapping applications, and geographic information system data files provided by the City of Costa Mesa (City) Planning Division. Other sources referenced for this section are listed below in Section 4.12.8, References.

4.12.1 Existing Conditions

4.12.1.1 Mining and Aggregate Resources

Mineral Land Classification studies are produced by the California Geological Survey (CSG; previously the "State Geologist") as specified by the Surface Mining and Reclamation Act (SMARA; Public Resources Code 2710 et seq.) of 1975. To address mineral resource conservation, SMARA requires California Geological Survey (CGS) to identify all mineral deposits within the state and to classify them as one of four Mineral Resource Zones (MRZs) (i.e., MRZ-1, -2, -3, or -4). The objective of the MRZ classification process is to ensure, through appropriate local lead agency policies and procedures, that mineral materials will be available when needed and do not become inaccessible as a result of inadequate information during the land-use decision-making process (CDOC 2026a). The mineral resource deposits identified in Orange County MRZs are aggregate resources only (i.e., coarse particulate material such as sand or stone used in making concrete).

Most of the Planning Area is within an area classified as MRZ-3; however, the parcels in the northeastern portion of the Planning Areas fall within an area classified as MRZ-1 (CDOC 1995). MRZ-3 designates areas containing known or inferred construction aggregate resources of undetermined mineral resource significance, while MRZ-1 designates areas where available geologic information indicates that little likelihood exists for the presence of significant construction aggregate resources. As such, aggregate resources may be present underlying the MRZ-3 designated portions of the Planning Area, but the significance of those resources has not been determined.

According to CDOC Division of Mines, there are no active or inactive mines within or adjacent to the city (CDOC 2026b). Thus, there are no active or inactive mines within or near the Planning Area.

4.12.1.2 Oil and Natural Gas Resources

The California Geologic Energy Management Division (CalGEM) of CDOC maintains a database of all registered oil and gas wells within the state (CalGEM 2026a). Although the Planning Area and the city in general are largely built out with urban uses, over 200 oil and gas wells were identified within 0.25 miles of the Planning Area, and the southern portion of the Planning Area overlaps the Newport Oil Field (see Figure 4.9-3, Oil and Gas in Chapter 4.9, Hazards and Hazardous Materials, of this PEIR). However, none of those 200 wells are actively producing, and only 27 are located within the Planning Area itself.

According to CalGEM, even inactive and deserted oil and gas wells that are not maintained can pose threats to groundwater and public safety (CalGEM 2026b). To ensure exposed hydrocarbons or other contaminants within these wells do not migrate into drinking water or to the surface, wells that are no longer used for active production or observation must be permanently sealed (i.e., "plugged") with a cement plug (CalGEM 2026b). Wells that remain inactive for a period of 24 months (or longer) without being plugged are referred to in the Public Resources Code as "idle" (CalGEM 2026b).

There are no active wells within the Planning Area; all 27 existing wells are either idle or plugged. CalGEM has the authority under California Public Resources Code Section 3208.1 to require re-abandonment of a well where there is reason to question the integrity of the previous abandonment. As such, CalGEM advises against building over, or in any way impeding access to oil or gas. CalGEM also advises all wells identified within a parcel to be tested for liquid or gas leakage prior to or during development. Proper abandonment protocols are also required in accordance with Title 13, Planning, Zoning and Development (Zoning Code) of the Costa Mesa Municipal Code, which states that oil and gas wells must be permanently and finally abandoned in strict compliance with CalGEM rules and regulations (Zoning Code Section 13-296, Abandonment of wells; see Section 4.12.2.3, Local [Regulatory Requirements], below for further discussion).

As illustrated in Figure 4.9-3, there are 17 plugged and 10 idle oil and gas wells within the Planning Area. The location and status of the wells in the Planning Area are listed in Table 4.12-1. As shown, all existing wells are located on parcels currently zoned for industrial or commercial use.

Table 4.12-1. Oil and Gas Wells in the Planning Area

Location (APN)	Zoning	Well Status	Well Number (API)	Well Type
139-203-23	C1 (Local Business District)	Idle	405901109	Oil and Gas
139-296-37	C1 (Local Business District)	Idle	405901286	Oil and Gas
419-031-09	C1-S (Shopping Center District)	Plugged	405900885	Dry Hole*
419-121-17	C1-S (Shopping Center District)	Plugged	405901029	Dry Hole*
422-262-28	C1 (Local Business District)	Idle	405900966	Oil and Gas
422-291-02	MG (General Industrial)	Plugged	405900852	Dry Hole*
424-081-17	MG (General Industrial)	Idle	405905441	Oil and Gas
424-081-18	MG (General Industrial)	Idle	405905508	Oil and Gas
424-081-19	MG (General Industrial)	Idle	405905507	Oil and Gas
424-081-19	MG (General Industrial)	Plugged	405905442	Oil and Gas
424-081-19	MG (General Industrial)	Idle	405905509	Oil and Gas
424-091-11	MG (General Industrial)	Plugged	405905464	Oil and Gas
424-091-11	MG (General Industrial)	Plugged	405905511	Oil and Gas
424-091-11	MG (General Industrial)	Plugged	405905478	Oil and Gas
424-091-11	MG (General Industrial)	Plugged	405905505	Oil and Gas
424-091-11	MG (General Industrial)	Plugged	405905476	Oil and Gas
424-091-11	MG (General Industrial)	Plugged	405905452	Oil and Gas
424-101-15	MG (General Industrial)	Idle	405905467	Oil and Gas
424-102-07	CL (Commercial Limited District)	Plugged	405905473	Oil and Gas
424-102-09	MG (General Industrial)	Idle	405905466	Oil and Gas[1]
424-201-01	C1 (Local Business District)	Plugged	405905439	Oil and Gas
424-281-21	MG (General Industrial)	Plugged	405905477	Oil and Gas
424-291-03	MG (General Industrial)	Plugged	405905482	Oil and Gas
425-361-15	MG (General Industrial)	Plugged	405905470	Oil and Gas
425-431-01	C1 (Local Business District)	Plugged	405905483	Oil and Gas
425-432-10	C1 (Local Business District)	Idle	405901023	Oil and Gas
425-432-11	PDC (Planned Development Commercial)	Plugged	405901024	Oil and Gas

Source: CalGEM 2026a.
Notes: APN = Assessor's Parcel Number; API = American Petroleum Institute.
* A "Dry Hole" means the well was drilled but never produced any oil or natural gas.
1. CalGEM identifies the well type for API 405905466 as "Unknown." However, for the purposes of this analysis, it is assumed to have once been a producing oil or natural gas well that is currently idle.

4.12.1.3 Other Locally Important Mineral Resources

According to the General Plan, peat deposits are located adjacent to the Santa Ana River and in the vicinity of Upper Newport Bay. However, the size of the deposits in the city are not sufficient to justify extraction (City of Costa Mesa 2016a). As such, there are no locally important peat recovery sites in the city or Planning Area.

4.12.2 Regulatory Requirements

4.12.2.1 Federal

There are no applicable federal policies or regulations related to mineral resources.

4.12.2.2 State

Surface Mining and Reclamation Act: California Public Resources Code, Sections 2710 et seq.

SMARA is the primary regulator of onshore surface mining in the state. It delegates specific regulatory authority to local jurisdictions. The act requires the State Geologist (now CGS) to identify all mineral deposits within the state and to classify them as: (1) areas where available geologic information indicates that little likelihood exists for the presence of significant mineral resources; (2) areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists; (3) areas containing known or inferred mineral occurrences of undetermined mineral resource significance; or (4) areas where available information is inadequate to assign any other classification (CDOC 2000). Lands are designated MRZ-1, -2, -3, or -4, respectively. Within the Orange County-Temescal Valley Production-Consumption, which includes the Planning Area, only lands known to contain significant commercial-grade aggregate (i.e., the mineral materials, such as sand or stone, used in making concrete) are classified and mapped as MRZ-2 (CalGEM 1981). Local jurisdictions are required to enact specific procedures to guide mineral conservation and extraction at particular sites and to incorporate mineral resource management policies into their general plans. A particular concern of state legislators in enacting SMARA was the premature loss of minerals and protection of sites threatened by development practices that might preclude future mineral extraction.

California Geological Survey Mineral Resources Project

CGS Mineral Resources Project provides information about California's nonfuel mineral resources. The Mineral Resources Project classifies lands throughout the state that contain regionally significant mineral resources as mandated by SMARA. Nonfuel mineral resources include metals such as gold, silver, iron, and copper; industrial metals such as boron compounds, rare-earth elements, clays, limestone, gypsum, salt, and dimension stone; and construction aggregate including sand, gravel, and crushed stone. Development generally results in a demand for minerals, especially construction aggregate. SMARA requires all cities and counties to incorporate in their general plans the mapped designations approved by the State Mining and Geology Board. The classification process involves the determination of Production-Consumption (P-C) region boundaries based on identification of active aggregate operations (Production) and the market area served (Consumption). The P-C regional boundaries are modified to include only those portions of the region that are urbanized or urbanizing and are classified for their aggregate content. The city, including the Planning Area, is within the Orange County-Temescal Valley P-C Region.

California Geologic Energy Management Division

CalGEM, formerly the Division of Oil, Gas, and Geothermal Resources, is a subdivision of CDOC. CalGEM oversees the drilling, operation, operation, maintenance, and plugging and abandonment of oil, natural gas, and geothermal wells. The division is intended to protect the environment, prevent pollution, and ensure public safety. It functions as an information repository but also regulates oil and gas extraction activities consistent with state regulations that include Section 3000 et seq. of the Public Resources Code and Title 14, Division 2, Chapter 4 of the California Code of Regulations. These codes include provisions regulating the distribution of oil wells. CalGEM regulates the drilling, operation, and permanent closure of energy resource wells (CalGEM 2025).

California Department of Conservation Idle Well Program

Inactive and deserted oil and gas wells that are not maintained (i.e., “idle wells”) can pose threats to groundwater and public safety (CalGEM 2026b).[1] In April 2019, CalGEM revised its idle well regulations to create more stringent testing requirements that better protect public safety and the environment from the potential threats posed by idle wells. The regulations require idle wells to be tested and, if necessary, repaired, or permanently sealed and closed. If an operator becomes insolvent or deserts their idle wells, responsibility for permanently sealing and closing these wells may fall to the state. Since 1977, CalGEM has plugged and abandoned about 1,400 wells at a cost of $29.5 million (CalGEM 2026b). To reduce the number of idle wells for which the state may become responsible, legislative and regulatory changes have been made to create incentives for operators to manage and eliminate their idle wells by entering into Idle Well Management Plans. If an operator does not have an Idle Well Management Plan, the operator must pay annual idle well fees. In 2018, CalGEM collected approximately $4.3 million in idle well fees (CalGEM 2026b). These fees are deposited into the Hazardous and Idle-Deserted Well Abatement Fund to help fund the permanent sealing and closure of deserted wells (CalGEM 2026b).

Senate Bill 1137

California's Senate Bill 1137 (SB 1137) establishes safety measures to protect public health by creating buffer zones between oil and gas operations and community spaces. This legislation creates a 3,200-foot Health Protection Zone (HPZ) around homes, schools, hospitals, and other sensitive locations where people live, work, and gather. New oil and gas operations are prohibited within the HPZ. As of June 28, 2024, SB 1137 is fully implemented and enforced across the state. According to CalGEM, the entirety of the city (and the surrounding areas adjacent to the city) are within a state-verified HPZ. As such, new oil and gas operations are prohibited throughout the city.

4.12.2.3 Local

Costa Mesa Municipal Code

Title 13, Planning, Zoning and Development.

The following subsection of the Zoning Code is applicable to mineral resources within the city and discussed in further detail, below.

[1] According to the California Public Resources Code, an idle well is defined as "...any well that for a period of 24 consecutive months has not either produced oil or natural gas, produced water to be used in production stimulation, or been used for enhanced oil recovery, reservoir pressure management, or injection. For the purpose of determining whether a well is an idle well, production or injection is subject to verification by the division” (CalGEM 2026b).

Chapter 4, Citywide Land Use Matrix. Chapter 4, Citywide Land Use Matrix of the Zoning Code provides a comprehensive list of uses that are permitted, conditionally permitted, or prohibited in the various zoning districts throughout the city. According to the matrix, oil fields and oil drilling are prohibited uses in every zone and thus are not permitted anywhere in the city. However, per Zoning Code Chapter 14 (Oil Drilling), oil and gas deposits can be accessed from locations outside of the city by directional drilling technology (e.g., slant drilling; see discussion of Zoning Code Chapter 14, Oil Drilling, below).

Mining for aggregate is not listed in the use matrix, although aggregate batch plants, rock or asphalt crushing, and sand blasting are listed as prohibited. Storage of rock, sand, crushed aggregate and gravel are conditionally permitted within the MG (General Industrial) and MP (Industrial Park) zones. According to Zoning Code Section 13-30(d), "Any proposed use not listed in the Land Use Matrix shall be reviewed by the development services director to determine its similarity to another listed use. If no substantial similarity exists, the proposed use shall require approval of a conditional use permit prior to establishment of the use."

Chapter 14, Oil Drilling. Chapter 14, Oil Drilling, of the Zoning Code regulates oil drilling and wells in the city, including the installation and use of equipment, structures, and facilities for oil drilling and producing operations, as well as abandonment of wells. Oil drilling is not permitted within city limits; although slant drilling and subterranean drilling in the subsurface area of the city are permitted within MG (General Industrial) zones as long as drilling is at a vertical depth of at least 400 feet and drill sites are over 300 feet away from the city boundaries.

Per Zoning Code Section 13-296 (Abandonment of wells), any well that has not been produced, or has not been used for subsurface injection into the earth of oil, gas, oil field waste, water or liquid substances for a period of one year preceding April 29, 1960 must be permanently and finally abandoned in strict compliance with the rules and regulations of CalGEM, or any regulatory authority having jurisdiction thereof.

Costa Mesa 2015-2035 General Plan

There are no applicable General Plan goals or policies pertaining to mineral resources in the city.

Existing Community-Based and Specific Plans

The 19 West Urban Plan, SoBECA Urban Plan, Mesa West Bluffs Urban Plan, Mesa West Residential Ownership Urban Plan/Mixed-Use Overlay, Harbor Mixed-Use Overlay, Residential Incentive Overlay, North Costa Mesa Specific Plan, One Metro West Specific Plan, and the Newport Boulevard Specific Plan are the only existing community-based or specific plans within the city. However, none of these plans include goals or policies pertaining to mineral resources in the city.

4.12.3 Thresholds of Significance

The significance criteria used to evaluate the Project's impact on the availability of mineral resources 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 mineral resources would occur if the Project would:

Threshold 4.12-1: Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state.

Threshold 4.12-2: Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

4.12.4 Impact Analyses

4.12.4.1 Methodology

As described in Chapter 3, Project Description, the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation Project does not include or propose any site-specific development that could directly result in construction or operational impacts to the environment. However, implementation of the Project would facilitate additional future development in the city. Therefore, this Draft PEIR does not assess the site-specific construction and operation details of each future development within the Planning Area. Rather, it assesses the impacts associated with changes to existing land uses and the associated overall effects of buildout of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation Project through 2056, where reasonably foreseeable physical changes to the environment could occur. Analysis at a parcel or site-specific level was not conducted because, unless otherwise noted within this assessment, the actual locations of Project development (and its chronologic sequence or concurrence) that may be implemented in the future are speculative.

The analysis focuses on Project-related impacts that could potentially occur in portions of the Planning Area that are located within or near to known mineral resources or locally important mineral resource recovery sites. As there are no active or inactive mining sites or locally important resource recovery sites (i.e., peat recovery sites) within or near to the Planning Area, known mineral resources shall include oil or natural gas wells, the Newport Oil Field, and the CGS identified MRZ-3 within the Planning Area. These features have been identified above in Section 4.12.1, Existing Conditions. Information regarding the extent and nature of existing mineral resources within the Planning Area is based, in part, on data provided in the following sources: the General Plan, CalGEM's online mapping application Well Finder and associated data files, and CGS Information Warehouse (City of Costa Mesa 2016a; CalGEM 2026a; CDOC 1995). The impact analysis also takes into consideration the existing regulatory setting applicable to mineral resources within the Planning Area, as listed above in Section 4.12.2, Regulatory Requirements.

4.12.4.2 Environmental Analyses

Threshold 4.12-1 Would the project result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?

Oil and Natural Gas Resources

No Impact. Buildout of the proposed Project could result in development of land with known oil and natural gas resources that were at one time used for resource extraction. As discussed in Section 4.12.1, Existing Conditions, while the Planning Area and surrounding areas are largely built out with urban uses, over 200 idle or plugged wells were identified within 0.25 miles of the Planning Areas, with 27 idle or plugged wells located within the Planning Area itself (as shown in Table 4.12-1). Furthermore, the southwestern portion of the Planning Area (south of 19th Street and west of Anaheim Avenue) is located within the Newport Oil Field (CalGEM 2026a). As shown on Figure 4.9-3 in Section 4.9, Hazards and Hazardous Materials of this PEIR, the Planning Area parcels containing idle or plugged wells are generally located south of Victoria Street, with several additional parcels north of Victoria Street along Harbor Boulevard. As such, the Project would allow for new residential and mixed-use development within an oil and gas field and other areas known to contain oil and gas resources.

In accordance with the City's existing Land Use Matrix, the proposed amendments to the Mixed-Use Overlay District (MUOD) would not permit oil and gas fields or wells within the Planning Area. Thus, new oil and gas wells, which are

prohibited within the city under existing conditions, would remain prohibited after Project implementation. Furthermore, the proposed land use changes to facilitate new residential and mixed-use development would not physically preclude access to oil and gas deposits beneath the Planning Area parcels, as such deposits could still be accessed from remote locations (i.e., areas outside of the city) by directional drilling technology such as slant drilling in accordance with Zoning Code Chapter 14 (Oil Drilling). However, California Senate Bill 1137, which became effective throughout the state in 2024, bans the development of new oil and gas wells within 3,200 feet of sensitive receptors, including residences, hospitals, schools, and other sensitive locations. Based on this setback distance and the density of existing residential development in and around the city, no new oil and gas wells can be drilled in the city or in any areas adjacent to the city. The nearest non-HPZ is over 6 miles southeast of the city's boundary with Newport Beach in an unincorporated area of Orange County. As a result, even though the City permits remote drilling operations, the state-mandated HPZ restrictions mean that remotely accessing oil and gas resources within the city via subsurface/slant drilling would be highly impractical, if not impossible.

In conclusion, oil and gas wells are prohibited within the city and would remain so after implementation of the Project. The Project would not affect the availability of known oil and gas resources within the Planning Area compared to existing conditions, and no impact would occur.

Aggregate Resources

Less Than Significant Impact. CGS is responsible for identifying deposits of regionally significant aggregate resources (i.e., mineral materials, such as sand or stone, used in making concrete) in the city. As discussed above in Section 4.12.1, Existing Conditions, the Planning Area falls within areas classified as MRZ-3 and MRZ-1 (CDOC 1995). MRZ-3 designates areas containing known or inferred construction aggregate resources of undetermined mineral resource significance, while MRZ-1 designates areas where available geologic information indicates that little likelihood exists for the presence of significant construction aggregate resources. As such, aggregate resources may be present underlying the MRZ-3 designated portions of the Planning Area, but the significance of those resources has not been determined. As previously stated, there are no active or inactive mines in the city (CDOC 2026b). As most of the Planning Area parcels support existing development, aggregate resources, should they be present, are not likely to be subject to mining in the near future.

The current Land Use Matrix applicable to the Planning Area does not list any mining uses. Thus, were any aggregate mining operations to be proposed under existing conditions, they would be considered in accordance with Zoning Code Section 13-30(d) and would thus be reviewed by the Development Services Director to determine if the use is similar to another listed use.[2] If no substantial similarity exists, the mining use would require approval of a conditional use permit prior to establish the use. The proposed amendments to the MUOD would prohibit any future mining operations. However, as discussed above, there are no active or inactive mines in the city and none are likely to be proposed in the city in the near future, regardless of Project implementation. For these reasons, proposed Project impacts on aggregate mineral resources would be less than significant.

Other Mineral Resources

No Impact. According to the General Plan, peat deposits are located adjacent to the Santa Ana River and in the vicinity of Upper Newport Bay. However, the size of the deposits in the city is not sufficient to justify extraction (City

[2] The currently Land Use Matrix does not list any uses that appear similar to aggregate mining, but ultimately, that decision would rest with the Development Services Director.

of Costa Mesa 2016a). No land use changes are proposed in the areas with peat deposits. As such, the Project would not result in the loss of availability of peat resources, and no impact would occur.

Threshold 4.12-2 Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. As described under Threshold 4.12-1 above, the proposed Project would not result in the loss of availability of known mineral resources valuable to the region and residents of the state. Oil and gas resource recovery sites, including the Newport Oil Field as well as areas with previously active wells, are identified as locally important resources in the General Plan. However, as discussed above under Threshold 4.12-1, drilling new oil and gas wells is not permitted anywhere in the city. Thus, implementation of the Project would not result in the loss of availability of these resources.

Furthermore, as discussed above under Threshold 4.12-1 and in Section 4.12.1, Existing Conditions, although peat deposits are also located within the city, the size of the deposits in the city are not sufficient to justify extraction (City of Costa Mesa 2016a). There are no other locally important mineral resources identified in the General Plan or any other local plans applicable to the Planning Area. Finally, according to CDOC Division of Mines, there are no active or inactive mining sites within or adjacent to the city (CDOC 2026b). As such, implementation of the Project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan and no impact would occur.

4.12.5 Cumulative Impact Analyses

Where a lead agency concludes that the cumulative effects of a Project, taken together with the impacts of other closely related past, present, and reasonably foreseeable future projects are significant, the lead agency then must determine whether the Project's incremental contribution to such significant cumulative impact is "cumulatively considerable" (and thus significant in and of itself). The cumulative study area used to assess potential cumulative impacts related to mineral resources is the city, and the cumulative analysis in this PEIR considers the future buildout of applicable local and regional plans. The full list of related plans applicable to the Project's cumulative analyses is provided in Section 2.5, Cumulative Impact Analysis, in Chapter 2, Environmental Setting of this PEIR.

The Project could contribute to a significant cumulative impact if the Project resulted in the loss of availability of a known mineral resource valuable to the region and the state or caused the loss of availability of a locally important mining or other resource recovery site delineated in the City's General Plan or any other applicable community or specific plans that are listed above in Section 4.12.2.3, Local (Regulatory Requirements).

Threshold 4.12-1. Mineral resources within the Planning Area are limited to oil/natural gas and aggregate resources. As discussed above under Threshold 4.12-1 in Section 4.12.4, Impact Analysis, oil and gas wells are prohibited within the city and would remain so after implementation of the Project. No impact would occur. Thus, the Project would not contribute to a cumulatively considerable impact related to oil and gas resources.

As previously discussed, the majority of the Planning Area is within an MRZ-3, which is an area containing known or inferred aggregate resources of undetermined mineral resource significance. Thus, while aggregate resources may be present within the Planning Area, their significance is undetermined. According to the General Plan Final EIR, in areas that support existing development (such as the Planning Area), aggregate resources, should they be present, would not be subject to mining in the near future (City of Costa Mesa 2016b). As such, lands of undetermined significance would not likely be considered for mining in the foreseeable future. Even though the

Project and future cumulative projects would increase development within the city, there is no active aggregate mining activity taking place within or near the city. This would not change with implementation of the Project. Therefore, the Project's incremental effects related to a loss of availability of known aggregate resources would not be cumulatively considerable.

Threshold 4.12-2. Peat and oil/gas resource recovery sites are identified as locally important resources in the General Plan. No additional locally important mineral resource recovery sites are identified in the General Plan or in any existing community plan or specific plan applicable to the Planning Area. As discussed above in Section 4.12.1, Existing Conditions, and under Threshold 4.12-2 in Section 4.12.4, Impact Analysis, the peat deposits in the city are not large enough to justify extraction. Thus, no impact would occur. Regarding oil and gas, the discussion provided above under cumulative Threshold 4.12-1 for resources valuable to the region and state is also applicable to locally important oil and gas resource recovery sites. As established above, the Project would have no impact on oil and gas resource availability and thus would not contribute to a cumulatively considerable impact.

4.12.6 Mitigation Measures

No mitigation measures are required.

4.12.7 Level of Significance Conclusion

Threshold 4.12-1: The Project would have a **less than significant impact** related to loss of availability of a known mineral resource that would be of value to the region and the residents of the state and would not be cumulatively considerable.

Threshold 4.12-2: The Project would have **no impact** related to a loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan and would not be cumulatively considerable.

4.12.8 References

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4.13 Noise

This section of the Draft PEIR describes the existing noise and vibration conditions within and in the vicinity of the Planning Area, identifies the applicable regulatory framework, evaluates potential impacts associated with implementation of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation (Project), and identifies mitigation measures where necessary. The analysis addresses both short-term construction noise and vibration and long-term operational noise from stationary sources and project-attributed changes in traffic volumes on area roadways within the Planning Area. The analysis is based on technical noise modeling data, consisting of construction noise screening distance calculations and traffic noise prediction worksheets, included in the following:

Appendix H Noise Technical Data, prepared by Dudek, February 2026

Other sources consulted are listed in Section 4.13.8, References.

4.13.1 Existing Conditions

4.13.1.1 Fundamentals of Noise and Vibration

Sound, Noise, and Acoustics

Sound is a process that consists of three components: the sound source, sound path, and sound receiver. All three components must be present for sound to exist. Without a source to produce sound, there is no sound. Similarly, without a medium to transmit sound pressure waves, there is no sound. Finally, sound must be received; a hearing organ, sensor, or object must be present to perceive, register, or be affected by sound or noise. In most situations, there are many different sound sources, paths, and receptors rather than just one of each. Acoustics is the field of science that deals with the production, propagation, reception, effects, and control of sound. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired.

Sound Pressure Levels and Decibels

The amplitude of a sound determines its loudness. Loudness of sound increases with increasing amplitude. Sound pressure amplitude is measured in units of micronewton per square meter, also called micropascal. One micropascal is approximately one-hundred billionth (0.00000000001) of normal atmospheric pressure. The pressure of a very loud sound may be 200 million micropascals, or 10 million times the pressure of the weakest audible sound. Because expressing sound levels in terms of micropascal would be very cumbersome, sound pressure level in logarithmic units is used instead to describe the ratio of actual sound pressure to a reference pressure squared. These units are called Bels. To provide a finer resolution, a Bel is subdivided into 10 decibels (dB).

A-Weighted Sound Level

Sound pressure level alone is not a reliable indicator of loudness. The frequency, or pitch, of a sound also has a substantial effect on how humans will respond. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness, or human response, is determined by the characteristics of the human ear.

Human hearing is limited not only in the range of audible frequencies, but also in the way it perceives the sound in that range. In general, the healthy human ear is most sensitive to sounds between 1,000 and 5,000 hertz, and it perceives a sound within that range as more intense than a sound of higher or lower frequency with the same

magnitude. To approximate the frequency response of the human ear, a series of sound level adjustments is usually applied to the sound measured by a sound level meter. The adjustments (referred to as a weighting network) are frequency dependent.

The A-scale weighting network approximates the frequency response of the average young ear when listening to ordinary sounds. When people make judgments about the relative loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. Other weighting networks have been devised to address high noise levels or other special situations (e.g., B-scale, C-scale, D-scale), but these scales are rarely used in conjunction with most environmental noise. For a future development like those anticipated under the Project, noise levels are reported in terms of A-weighted sound levels. All sound levels discussed in this report are A-weighted decibels (dBA). Examples of typical noise levels for common indoor and outdoor activities are depicted in Table 4.13-1.

Table 4.13-1. Typical Sound Levels in the Environment and Industry

Common Outdoor Activities	Noise Level (dB)	Common Indoor Activities
—	110	Rock band
Jet fly over at 300 meters (1,000 feet)	100	—
Gas lawn mower at 1 meter (3 feet)	90	—
Diesel truck at 15 meters (50 feet), at 80 kilometers per hour (50 miles per hour)	80	Food blender at 1 meter (3 feet); garbage disposal at 1 meter (3 feet)
Noisy urban area, daytime; gas lawn mower at 30 meters (100 feet)	70	Vacuum cleaner at 3 meters (10 feet)
Commercial area; heavy traffic at 90 meters (300 feet)	60	Normal speech at 1 meter (3 feet)
Quiet urban, daytime	50	Large business office; dishwasher next room
Quiet urban, nighttime	40	Theater; large conference room (background)
Quiet suburban, nighttime	30	Library
Quiet rural, nighttime	20	Bedroom at night; concert hall (background)
—	10	Broadcast/Recording studio
Lowest threshold of human hearing	0	Lowest threshold of human hearing

Source: Caltrans 2013.

Human Response to Changes in Noise Levels

Per Caltrans guidance (Caltrans 2013), the average healthy ear can barely perceive noise level changes of 3 dBA. A change of 5 dBA is readily perceptible, and a change of 10 dBA is perceived as twice (if a gain) or half (if a loss) as loud. A doubling of sound energy results in a 3-dBA increase in sound, which means that a doubling of sound energy (e.g., doubling the volume of traffic on a road) would result in a barely perceptible change in sound level.

Noise Descriptors

Units of measure have been developed to evaluate the long-term characteristics of sound. The energy-equivalent sound level (L_{eq}) is also referred to as the time-average sound level. It is the equivalent steady-state or constant sound level that in a stated period of time would contain the same acoustical energy as the time-varying sound

level during the same time period. For instance, the 1-hour A-weighted equivalent sound level, $L_{eq}(h)$, is the energy average of the A-weighted sound levels occurring during a 1-hour period and is the basis for the City's "general sound level limits" standards.

People are generally more sensitive to and thus potentially more annoyed by noise occurring during the evening and nighttime hours. Hence, another noise descriptor used in community noise assessments—the community noise equivalent level (CNEL)—represents a time-weighted, 24-hour average noise level based on the A-weighted sound level. However, unlike an unmodified 24-hour L_{eq} value, the CNEL descriptor accounts for increased noise sensitivity during the evening (7 p.m. to 10 p.m.) and nighttime (10 p.m. to 7 a.m.) by adding 5 dBA and 10 dBA, respectively, to the average sound levels occurring during these defined hours within a 24-hour period. The day-night sound level (L_{dn}) is similar in derivation to that of CNEL but ignores the latter 5-decibel(dB) penalty applied to the three evening hours.

In addition to the time-averaged and peak descriptors discussed above, community noise is also commonly characterized using statistical sound levels, which describe the percentage of time that a given noise level is exceeded during a measurement period. The L50 sound level, for example, is the level exceeded 50 percent of the time and is often considered representative of the "median" or typical ambient noise condition. The L25 is the level exceeded 25 percent of the time, and the L8 and L2 levels represent progressively louder, shorter-duration events that are exceeded 8 percent and 2 percent of the time, respectively. These statistical descriptors are particularly relevant to the City of Costa Mesa's Noise Ordinance, which structures its exterior and interior residential noise standards around cumulative exceedance categories (L50, L25, L8, L2, and Lmax) rather than a single time-averaged metric, as discussed in Section 4.13.2.

Sound Propagation

Sound propagation (how sound travels from a noise emission source to a receiver location) is influenced by multiple factors that include geometric spreading, ground absorption, atmospheric effects, and occlusion by natural terrain and/or features of the built environment.

Sound levels attenuate (or diminish) geometrically at a rate of approximately 6 dBA per doubling of distance from an outdoor point-type source due to the spherical spreading of sound energy with increasing distance travelled. The effects of atmospheric conditions such as humidity, temperature, and wind gradients are typically distance-dependent and can also temporarily either increase or decrease sound levels measured or perceived at a receptor location. In general, the greater the distance the receiver is from the source of sound emission, the greater the potential for variation in sound levels at the receptor due to these atmospheric effects. Additional attenuation can result from sound path occlusion and diffraction due to intervention of natural (ridgelines, dense forests, etc.) and built features (such as solid walls, buildings and other structures).

Ground-borne Vibration Fundamentals

Ground-borne vibration is fluctuating or oscillatory motion transmitted through the ground mass (i.e., soils, clays, and rock strata). The strength of ground-borne vibration attenuates rapidly over distance. Some soil types transmit vibration quite efficiently; other types (primarily sandy soils) do not. Several basic measurement units are commonly used to describe the intensity of ground vibration. The descriptors used by the Federal Transit Administration (FTA) are peak particle velocity (PPV), in units of inches per second (ips), and velocity decibel (VdB) that is based on a root-mean square of the vibration signal magnitude. The calculation to determine PPV at a given distance (FTA 2018) is as follows:

$$PPV_{distance} = PPV_{ref} * (25/D)^{1.5}$$

Where:

$PPV_{distance}$ = the peak particle velocity in inches per second of the equipment adjusted for distance;
PPV_{ref} = the reference vibration level in inches per second at 25 feet; and
D = the distance from the equipment to the receiver.

4.13.1.2 Environmental Setting

Overview of the Existing Noise Environment

The Planning Area encompasses 1,079 parcels totaling approximately 1,353.4 acres across the City of Costa Mesa. The city is situated in western Orange County, approximately one mile northeast of the Pacific Ocean, and is bordered by the cities of Newport Beach, Huntington Beach, Fountain Valley, Santa Ana, and Irvine. The City's noise environment is shaped by a combination of mobile and stationary noise sources that are characteristic of a mature, urbanized Southern California community.

The dominant source of community noise in Costa Mesa is vehicular traffic on the extensive network of freeways and arterial roadways that traverse the city. Interstate 405 (I-405, San Diego Freeway) bisects Costa Mesa in an east-west alignment, with substantial traffic volumes generating continuous elevated noise levels along the freeway corridor. State Route 55 (SR-55, Costa Mesa Freeway) runs along or near the city's eastern boundary in a north-south alignment, and State Route 73 (SR-73, San Joaquin Hills Transportation Corridor) passes through the southeastern portion of the city. In addition to these limited-access freeways, several heavily traveled arterial corridors generate substantial traffic noise, including Harbor Boulevard, Newport Boulevard, Bristol Street, 17th Street, 19th Street, Placentia Avenue, Baker Street, and Superior Avenue. The General Plan Noise Element identifies these roadways as the principal contributors to the City's existing and projected future vehicular noise environment (City of Costa Mesa 2016).

Aircraft operations at John Wayne Airport (JWA), located immediately adjacent to the city's northeastern boundary, constitute the second major noise source in Costa Mesa. JWA is a busy commercial and general aviation facility operated by the County of Orange, with over 10 million annual passengers as of recent counts. Although the airport has among the most stringent noise abatement programs in the nation—including curfew restrictions, departure noise limits, and flight procedure modifications—aircraft noise from takeoffs and landings is audible across much of the city, particularly in its northeast quadrant. The Airport Environs Land Use Plan (AELUP) adopted by the Orange County Airport Land Use Commission (ALUC) delineates noise compatibility zones based on CNEL contours derived from projected airport operations; a small portion of Costa Mesa in the northeast, primarily developed with industrial uses, lies within the 65 dBA CNEL noise impact area (ALUC 2008).

Other notable stationary noise sources in the community include the OC Fair & Event Center, located on Fair Drive across from the Civic Center. The fairgrounds host year-round exhibitions, conferences, and events, including the annual Orange County Fair, the weekly Orange County Market Place, and concerts at the 8,200-seat Pacific Amphitheater. Noise from these activities is governed by a modified noise ordinance established through a 1980 Settlement Agreement between the 32nd District Agricultural Association and the City, as well as a 1990 court order specific to the Pacific Amphitheater (City of Costa Mesa 2016). Additional stationary noise sources throughout the city include commercial and industrial mechanical equipment (heating, ventilation, and air conditioning [HVAC] systems, compressors, generators), loading dock operations, landscape maintenance equipment, and the general array of activity sounds associated with a diverse urban land use mix.

Ambient Noise Levels

As part of the City's 2015–2035 General Plan Update, short-term noise measurements were conducted at 15 locations distributed throughout the city to characterize the existing ambient noise environment. The measurement locations were selected to represent a range of noise-sensitive land uses, including schools, hospitals, convalescent facilities, senior housing, and residential neighborhoods, and were positioned at or near intersections of arterial roadways to capture representative urban noise conditions. Measurements were performed in August 2015 using an American National Standards Institute Section S1.4-1979 Type 1 sound level meter (Larson Davis model LxT) programmed to record A-weighted sound levels. Each measurement was 15 minutes in duration, with the microphone positioned at a height of five feet above ground level. Table 4.13-2 summarizes the results of these measurements.

No new ambient noise measurements were conducted for this Draft PEIR. Because the Project is a programmatic planning action that does not propose site-specific development, and because the Planning Area encompasses parcels distributed across the entire city, the 2015 General Plan Noise Element measurements—supplemented by the traffic noise contour mapping developed for the General Plan—provide an adequate characterization of the citywide ambient noise environment for this programmatic analysis. The General Plan Noise Element's modeled noise contours (Figures N-2 and N-3 therein) depict the existing (2015) and projected future (2035) CNEL noise environment along the City's major roadway corridors and are incorporated herein by reference (City of Costa Mesa 2016).

Table 4.13-2. Ambient Noise Measurement Results (2015)

Site	Time	Leq (dBA)	Lmax (dBA)	Lmin (dBA)	Location
1	7:12 AM	67.8	84.5	57.8	NE corner of Anton and Avenue of the Arts
2	7:45 AM	77.6	102.1	55.3	SE corner of Bear and Paularino
3	8:12 AM	71.5	88.5	57.6	NE corner of Harbor and Adams
4	8:37 AM	70.2	84.3	56.2	NW corner of Fairview and Fair
5	9:12 AM	66.2	82.3	55.1	SW corner of South Coast and Susan
6	11:07 PM	68.4	80.7	45.5	NW corner of Mesa Verde and Adams
7	11:35 PM	52.5	65.2	39.1	East corner of Santa Ana and 22nd
8	7:02 AM	67.8	84.9	46.4	North corner of Del Mar and Orange
9	7:33 AM	61.5	75.1	45.5	East corner of Santa Ana and Cabrillo
10	7:55 AM	73.1	86.9	57.1	NE corner of Harbor and 19th
11	8:21 AM	73.8	89.4	60.5	NE corner of Harbor and Victoria
12	8:47 AM	69.4	82.5	54.3	NE corner of 17th and Pomona
13	9:11 AM	63.1	82.0	42.3	NE corner of 17th and Whittier
14	9:43 AM	74.1	93.9	53.9	NE corner of Placentia and 20th
15	10:24 AM	69.3	85.5	56.2	South corner of Red Hill and Paularino

Source: City of Costa Mesa General Plan Noise Element, Table N-6 (City of Costa Mesa 2016). Measurements conducted August 4–6, 2015, using Larson Davis LxT Type 1 sound level meter; 15-minute measurement duration; microphone height 5 feet.

As shown in Table 4.13-2, measured ambient noise levels ranged from a low of 52.5 dBA Leq at the intersection of Santa Ana Avenue and 22nd Street (a relatively quiet residential street, measured during the late evening) to a high

of 77.6 dBA Leq at the intersection of Bear Street and Paularino Avenue (adjacent to the I-405 freeway corridor). The majority of measurement locations recorded Leq values between approximately 63 and 74 dBA, which is consistent with the moderately high ambient noise levels typical of urbanized areas with significant arterial traffic. These measured values confirm the noise environment depicted in the General Plan Noise Element contour maps, which show CNEL values of 60 to 70 dBA along most major arterials and 70 dBA or greater along freeway corridors.

Vehicular Traffic Noise Contours

The General Plan Noise Element presents modeled baseline (2015) and projected future (2035) vehicular traffic noise contours along the City's freeways, primary arterials, major arterials, and selected secondary and commuter streets (City of Costa Mesa 2016, Figures N-2 and N-3). Traffic noise contour distances were calculated using standard Federal Highway Administration (FHWA) methodology that accounts for traffic volumes, vehicle speeds, truck mix percentages, and roadway geometry. The contours depict the distances from the roadway centerline to the 60, 65, and 70 dBA CNEL noise levels.

Within the Planning Area, the key corridors identified by the project description, including Newport Boulevard, Harbor Boulevard, Placentia Avenue, 19th Street, 17th Street, Baker Street, Bristol Street, and areas north of I-405, are predominantly characterized by CNEL values in the range of 60 to 70 dBA at the first row of development adjacent to these roadways. Along the freeway corridors, noise levels at adjacent land uses can exceed 70 dBA CNEL. Because the noise environment in Costa Mesa is not anticipated to change substantially as a result of the General Plan buildout, the projected 2035 noise contours show only modest increases over the 2015 baseline (City of Costa Mesa 2016). The traffic noise analysis prepared for this Draft PEIR builds upon this foundation by evaluating the incremental change in traffic noise attributable to the Project using Orange County Transportation Analysis Model (OCTAM) model traffic volume data, as discussed in Section 4.13.4.

Aircraft Noise

John Wayne Airport is located immediately east of the city's northeastern boundary and is a significant contributor to the community noise environment, particularly for properties in northeast Costa Mesa. The AELUP adopted by the ALUC delineates noise compatibility planning boundaries based on CNEL contours developed from projected airport operations under the 1985 Master Plan (ALUC 2008). The 65 dBA CNEL contour—which defines the State of California's noise impact boundary for airports (State of California 2024a)—extends into a small area of northeast Costa Mesa that is predominantly developed with industrial and commercial uses. Approximately 107 dwelling units within the city's sphere of influence lie within this 65 dBA CNEL noise impact area, south of the runway (City of Costa Mesa 2016).

It is noted that the AELUP noise contours, based on the 1985 Master Plan assumptions, are conservative relative to contemporary operations because advances in aircraft engine technology have resulted in quieter commercial fleets. The 2014 John Wayne Airport Settlement Agreement Amendment Environmental Impact Report (EIR No. 617) demonstrated that actual CNEL noise contours based on modern noise modeling programs (FAA Integrated Noise Model Version 7.0d) are considerably smaller than the 1985 AELUP Master Plan contours. The 2014 Settlement Agreement extended operational capacity limits through December 31, 2030, with allowable increases in passenger counts phased over time. Despite these incremental increases in operations, the net effect of fleet modernization has been a contraction of the 65 dBA CNEL contour relative to the 1985 Master Plan projections. AELUP Section 2.1.1 requires that new residential development not be located on parcels wholly within the 65 dBA CNEL contour, and that residential units in proximity to the airport be sufficiently indoor-oriented to achieve an interior noise level of 45 dBA CNEL (ALUC 2008).

The AELUP noise contours, and the CNEL contours depicted in the General Plan Noise Element, are computed at a standard ground-level reference height and represent outdoor exposure at typical residential property lines and use areas. For taller structures, upper-story receptors are physically closer to the aircraft source and experience reduced ground-effect attenuation compared to ground-level exposure. The implications of the Project's proposed building height increases for aircraft noise exposure at upper-story receptors are addressed in Section 4.13.4 under Threshold 4.13-3.

Noise-Sensitive Land Uses

Noise-sensitive land uses (NSLUs) are those associated with indoor and/or outdoor activities that may be subject to stress or significant interference from noise. Typical NSLUs include residential dwellings, schools, hospitals, nursing homes, convalescent facilities, libraries, churches, parks, and similar uses where quiet environments are essential to the intended function. The General Plan Noise Element and the City's Noise Ordinance (Chapter XIII, Title 13 of the Costa Mesa Municipal Code) establish quantified noise standards for the protection of these land uses.

Under existing conditions, the Planning Area contains a mix of residential, commercial, and industrial land uses. The Planning Area includes approximately 508 existing residential dwelling units. Existing NSLUs adjacent to or within the Planning Area include, but are not limited to, established residential neighborhoods, public and private schools, childcare facilities, medical facilities, places of worship, and public parks. The location of these existing NSLUs relative to the Planning Area parcels will be a central consideration in the noise impact analysis, particularly with respect to short-term construction noise and vibration screening distances.

Implementation of the Project would facilitate the construction of new residential and mixed-use development on parcels across the Planning Area through application of the amended Mixed-Use Overlay District (MUOD). The Project's realistic residential buildout is estimated at approximately 21,522 new dwelling units. These future residential uses would themselves constitute new NSLUs that would be exposed to the existing and projected future noise environment, including traffic noise from adjacent arterials and freeways, aircraft noise from JWA operations, and stationary noise from nearby commercial and industrial activities. The Noise and Land Use Compatibility Matrix (Table N-3) in the General Plan Noise Element establishes compatibility criteria for various land use categories at different CNEL exposure levels, and is the primary planning tool used by the City to ensure that future noise-sensitive development is sited in acoustically-compatible locations. Table 4.13-3 reproduces the noise and land use compatibility criteria from the General Plan Noise Element.

Table 4.13-3. Noise and Land Use Compatibility Matrix

Land Use Category	Normally Acceptable (CNEL, dBA)	Conditionally Acceptable (CNEL, dBA)	Normally Unacceptable (CNEL, dBA)	Clearly Unacceptable (CNEL, dBA)
Residential: Low-Density	50–60	60–70	70–75	>75
Residential: Multiple Family	50–65	65–70	70–75	>75
Mixed Use	50–65	65–70	70–75	>75
Transient Lodging	50–65	65–70	70–80	>80
Schools, Libraries, Churches, Hospitals, Nursing Homes	50–60	60–65	65–80	>80
Playgrounds, Neighborhood Parks	50–67.5	N/A	67.5–75	>75
Office Buildings, Business Commercial and Professional	50–67.5	67.5–77.5	77.5–85	>85*
Industrial, Manufacturing, Utilities, Agriculture	50–70	70–80	80–85	N/A

Source: City of Costa Mesa General Plan Noise Element, Table N-3 (City of Costa Mesa 2016). Modified from U.S. Department of Housing and Urban Development Guidelines and State of California Standards.

As shown in Table 4.13-3, for multiple-family residential and mixed-use land uses, which represent the predominant development types anticipated under the Project, the normally acceptable exterior noise exposure range is 50 to 65 dBA CNEL. Exterior noise levels between 65 and 70 dBA CNEL are considered conditionally acceptable, meaning that new construction should proceed only after a detailed analysis of noise reduction requirements has been performed and needed noise insulation features have been incorporated into the design. Levels between 70 and 75 dBA CNEL are normally unacceptable, and levels exceeding 75 dBA CNEL are clearly unacceptable for residential uses. These compatibility criteria, in conjunction with the City's Noise Ordinance standards, guide the assessment of potential noise impacts to both existing and future noise-sensitive receptors within and adjacent to the Planning Area.

4.13.2 Regulatory Requirements

4.13.2.1 Federal

Federal Transit Administration

The Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment guidance manual (FTA 2018) provides methodologies and criteria for evaluating noise and vibration impacts from transit projects and construction activities. Although this guidance does not constitute a binding federal regulation, it is a commonly referenced technical resource in CEQA practice for establishing quantified construction noise and vibration thresholds, particularly when local jurisdictions, such as the City of Costa Mesa, do not prescribe numeric construction noise limits.

For construction noise, the FTA guidance recommends a daytime noise threshold of 80 dBA Leq over an 8-hour period at the nearest residential or other noise-sensitive receiver. This threshold represents the level below which construction noise, although potentially audible and intermittently annoying, would not be expected to cause a significant adverse impact to community receivers during permitted daytime construction hours. For non-residential

but noise-sensitive land uses such as office buildings, the FTA recommends a higher threshold of 85 dBA Leq (8-hour). For residential nighttime construction, the threshold is 70 dBA Leq (8-hour). Since the City of Costa Mesa prohibits nighttime construction absent a temporary waiver (CMMC Section 13-279), the daytime 80 dBA residential threshold is the applicable criterion for this analysis.

With respect to ground-borne vibration, the FTA provides guidance thresholds for both building damage risk and human annoyance. For construction vibration building damage risk, the FTA recommends a threshold of 0.2 inches per second peak particle velocity (PPV) for non-engineered timber and masonry residential buildings, which represents the predominant structural type adjacent to development sites in the Planning Area. For reinforced concrete, steel, or timber frame buildings (without plaster), a more permissive threshold of 0.5 ips PPV is applicable. Table 4.13-4 presents the complete FTA construction vibration criteria.

Table 4.13-4. Federal Transit Administration Vibration Threshold Guidance

Vibration Receptor	Vibration Assessment Metric	
	Peak Particle Velocity (PPV, in/sec)	Approximate Root Mean Square VdB
Potential Damage to Structures by Building/Structural Category		
I. Reinforced-concrete, steel or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90
Residential Building Occupant Human Response		
Frequent events *(more than 70 events per day)*		72
Occasional events *(30-70 events per day)*		75
Infrequent events *(fewer than 30 events per day)*		80
Institutional Land Use (Primarily Daytime Use) Occupant Human Response		
Frequent events *(more than 70 events per day)*		75
Occasional events *(30-70 events per day)*		78
Infrequent events *(fewer than 30 events per day)*		83

Source: FTA 2018
Notes: root mean square (rms) vibration level in decibels (VdB) is calculated from the PPV using a crest factor of 4 and is with respect to one (1) micro-inch per second.

4.13.2.2 State

California Department of Transportation

The California Department of Transportation (Caltrans) Transportation and Construction Vibration Guidance Manual (Caltrans 2020) provides construction vibration criteria comparable to the FTA guidance discussed above. Caltrans distinguishes between "transient" vibration sources (e.g., blasting, dropped heavy objects) and "continuous/frequent intermittent" vibration sources (e.g., vibratory rollers, pile drivers, large bulldozers), with transient sources afforded somewhat higher damage thresholds owing to their brief duration. For continuous and

frequent intermittent sources—which encompass the typical construction equipment anticipated under the Project—the Caltrans building damage criteria are consistent with the FTA values presented in Table 4.13-4. This analysis applies the FTA/Caltrans criteria as the primary vibration assessment thresholds.

Caltrans also provides reference vibration levels for common construction equipment types at a standard distance of 25 feet from the source. These reference levels, which are reproduced in the construction vibration analysis in Section 4.13.4, are used in conjunction with the standard distance-attenuation relationship to predict vibration levels at noise-sensitive receivers at various setback distances from the construction source.

California Building Code

The California Building Code (CBC), codified in Title 24, Part 2, of the California Code of Regulations, establishes mandatory noise insulation standards for new residential construction. Section 1207.11.2, Allowable Interior Noise Levels, requires that interior noise levels attributable to exterior sources not exceed 45 dBA in any habitable room. The noise metric is evaluated as either Ldn or CNEL, consistent with the noise element of the local general plan. Where exterior noise levels at a proposed residential development exceed 60 dBA CNEL, an acoustical analysis must be prepared by a qualified acoustical consultant to demonstrate that the proposed building design will achieve compliance with the 45 dBA CNEL interior standard. This requirement applies to all new residential construction facilitated by the Project, regardless of the noise source type (traffic, aircraft, or industrial/commercial).

California Green Building Standards Code

The California Green Building Standards Code (CALGreen), codified in Title 24, Part 11, of the California Code of Regulations, includes provisions pertaining to interior noise levels in non-residential structures. Pursuant to CALGreen Section 5.507.4.1, Exterior Noise Transmission, an architectural acoustics study may be required when a non-residential project site is located within a 65 dBA CNEL or Ldn noise contour of an airport, freeway or expressway, railroad, industrial source, or fixed-guideway source. Where noise contours are not readily available, if buildings would be exposed to a noise level of 65 dBA Leq during any hour of operation, specific wall and roof-ceiling assembly ratings and sound-rated window assemblies may be required to reduce interior noise to acceptable levels. A performance-based compliance method may also be used per CALGreen Section 5.507.4.2 to demonstrate compliance with State interior noise requirements.

California Airport Noise Standards (Title 21 CCR)

Title 21 of the California Code of Regulations establishes the State Airport Noise Standards, which define the noise impact boundary of airports as the 65 dBA CNEL contour. Within this contour, residential and other noise-sensitive land uses are considered incompatible unless noise insulation measures are incorporated to achieve an interior noise level of 45 dBA CNEL. These standards are implemented locally through the Airport Environs Land Use Plan (AELUP) prepared and administered by the Orange County Airport Land Use Commission (ALUC) for John Wayne Airport (JWA).

The AELUP establishes noise compatibility zones, safety zones, and building height restrictions for properties within the JWA airport influence area (ALUC 2008). AELUP Section 2.1.1 provides that new noise-sensitive uses, including residential, shall not be located on parcels wholly within the 65 dBA CNEL contour. For residential uses permitted within the broader airport planning area but outside the 65 dBA CNEL contour, the AELUP strongly recommends that development be sufficiently indoor-oriented to reduce noise impingement on outdoor living areas and that all residential units achieve an interior noise level of 45 dBA CNEL. Developers of residential or mixed-use projects

within the airport planning area are also recommended to notify prospective purchasers or tenants of aircraft noise and to post signage in designated outdoor common or recreational areas informing the public of the presence of operating aircraft.

4.13.2.3 Local

City of Costa Mesa General Plan Noise Element

Chapter 7 (Noise Element) of the City of Costa Mesa 2015–2035 General Plan identifies existing and projected noise levels from major sources within the city, including freeways, arterials, John Wayne Airport, the OC Fair & Event Center, and local industrial operations, and establishes the policy framework for protecting noise-sensitive receptors (City of Costa Mesa 2016). The Noise Element contains the land use compatibility guidelines previously reproduced in Table 4.13-3 (Section 4.13.1) and a series of goals, objectives, and policies applicable to the Project.

The following goals, objectives, and policies from the General Plan Noise Element are applicable to the Project:

Objective N-1A: Control noise levels within the City for the protection of residential areas, park areas, and other sensitive land uses from excessive and unhealthful noise.

Policy N-1.1: Enforce the maximum acceptable exterior noise levels for residential areas at 65 CNEL.

Policy N-1.2: Give full consideration to the existing and projected noise environment when considering alterations to the City's circulation system and Master Plan of Highways.

Policy N-1.3: Encourage Caltrans to construct noise attenuation barriers along I-405, SR-55, and SR-73 where these freeways adjoin residential and other noise-sensitive areas.

Policy N-1.4: Ensure that appropriate site design measures are incorporated into residential developments, when required by an acoustical study, to obtain appropriate exterior and interior noise levels. Apply the standards contained in Title 24 of the California Code of Regulations as applicable to the construction of all new dwelling units.

Policy N-1.5: Reduce the effects of noise from stationary sources, including but not limited to nighttime commercial and industrial operations, in accordance with the provisions of the City's Noise Ordinance.

Objective N-2A: Plan for the reduction in noise impacts on sensitive receptors and land uses.

Policy N-2.1: Require the use of sound walls, berms, interior noise insulation, double-paned windows, and other noise mitigation measures, as appropriate, in the design of new residential or other new noise-sensitive land uses that are adjacent to arterials, freeways, or adjacent to industrial or commercial uses.

Policy N-2.2: Require, as a part of the environmental review process, that full consideration be given to the existing and projected noise environment.

Policy N-2.3: Reduce the impact of construction noise through limitations on the hours of construction activity, as established in the City's Noise Ordinance.

Policy N-2.4: Require that all proposed projects are compatible with adopted noise/land use compatibility criteria.

Policy N-2.5: Enforce applicable interior and exterior noise standards.

In addition to the goal and policy framework above, the Noise Element establishes the land use compatibility criteria reproduced in Table 4.13-3 (Section 4.13.1). For multiple-family residential and mixed-use land uses, the predominant development types anticipated under the Project, the normally acceptable exterior noise exposure range is up to 65 dBA CNEL; levels between 65 and 70 dBA CNEL are conditionally acceptable (requiring a detailed analysis of noise reduction requirements); levels between 70 and 75 dBA CNEL are normally unacceptable; and levels exceeding 75 dBA CNEL are clearly unacceptable. These compatibility criteria, in conjunction with the City's Noise Ordinance standards, are used in Section 4.13.4 to evaluate potential noise impacts to both existing and future noise-sensitive receptors within and adjacent to the Planning Area.

City of Costa Mesa Municipal Code

Chapter XIII (Noise Control) of Title 13 (Planning, Zoning, and Development) of the Costa Mesa Municipal Code (CMMC) constitutes the City's comprehensive noise control ordinance. The ordinance establishes quantified noise standards for exterior and interior residential environments, defines prohibited noise activities, provides enforcement mechanisms, and includes specific exceptions for construction activities. The following subsections summarize the key provisions relevant to this analysis.

Exterior and Interior Noise Standards

CMMC Sections 13-280 and 13-281 establish exterior and interior noise standards, respectively, for residential property within the city. These standards define maximum permissible noise levels from stationary sources at the property line of the affected residential receiver, and are structured around a series of cumulative duration categories that define how long a noise source may exceed specified levels within any one-hour measurement period.

For exterior residential property, the daytime noise standards (7:00 a.m. to 11:00 p.m.) establish the following maximum permissible A-weighted sound levels: 55 dBA for the base standard, which applies to noise exceeded for a cumulative period of more than 30 minutes in any hour (the L50 level); 60 dBA for noise exceeded for more than 15 minutes in any hour (L25); 65 dBA for noise exceeded for more than 5 minutes in any hour (L8); 70 dBA for noise exceeded for more than 1 minute in any hour (L2); and 75 dBA as the maximum level not to be exceeded for any time period (Lmax). During nighttime hours (11:00 p.m. to 7:00 a.m.), each of these exterior standards is reduced by 5 dBA, yielding a base standard of 50 dBA (L50), 55 dBA (L25), 60 dBA (L8), 65 dBA (L2), and 70 dBA (Lmax).

For interior residential environments, CMMC Section 13-281 establishes daytime standards of 55 dBA (L8), 60 dBA (L2), and 65 dBA (Lmax), and nighttime standards of 45 dBA (L8), 50 dBA (L2), and 55 dBA (Lmax). The interior standards do not include L50 or L25 categories, reflecting the ordinance's focus on shorter-duration intrusive noise events within the interior residential environment. Pursuant to CMMC Section 13-282, the exterior residential noise standards also apply to any school, hospital, or church while it is in use, providing equivalent protection to these institutional noise-sensitive land uses.

An important modifier applies when the alleged offensive noise consists entirely of impact noise, simple tone noise, speech, music, or any combination thereof: under such conditions, each of the above noise level standards is reduced by 5 dBA, reflecting the increased annoyance potential of these characteristically intrusive sound types (CMMC Sections 13-280, 13-281, and 13-282).

The exterior noise standard of 55 dBA (L50, daytime) at the residential property line constitutes the primary criterion for evaluating operational stationary source noise impacts from future development facilitated by the Project, including rooftop mechanical equipment (HVAC systems), loading dock activity, refuse collection, and other commercial/industrial noise sources associated with mixed-use development.

Further, CMMC Section 13-38, additional property development standards for multiple-family residential districts, states that if the proposed residential project is to be located in proximity to a freeway, major arterial, airport or any other source of significant noise, an acoustical evaluation of the working drawings may be required to be submitted by an acoustical engineer for approval by the city. The noise levels shall certify that the construction will reduce interior noise levels to 45 CNEL and exterior noise levels to 65 CNEL.

Exterior Noise Standard Exemptions for Mixed-Use Overlay District

The Noise Ordinance includes specific exemptions from the exterior noise standards for multi-family residential development or live/work units located within a mixed-use overlay district where the base zoning district is nonresidential, approved pursuant to a master plan, and subject to the land use regulations of an urban plan. The following exterior areas are exempt from the exterior noise standards of Section 13-280:

(1) Private balconies or patios, regardless of size;

(2) Private or community roof decks and roof terraces; and

(3) Internal courtyards and landscaped walkways that do not include resident-serving active recreational uses such as community pools, spas, tennis courts, barbecue areas, and picnic areas.

A similar exemption applies to high-rise residential developments in the North Costa Mesa Specific Plan (CMMC Section 13-280[e]), where the exterior noise standards apply only to common outdoor recreational amenity areas located at the ground level. These exemptions are directly relevant to the Project because much of the future residential development facilitated by the amended MUOD would be multi-family or mixed-use projects on parcels with non-residential base zoning. The practical effect of these exemptions is that private outdoor living spaces, such as balconies, patios, and rooftop terraces, on future mixed-use developments are not required to meet the 55/50 dBA exterior noise standards, reducing noise-related development constraints on parcels fronting busy arterials or in proximity to other elevated noise sources. However, common ground-level active recreation areas (pools, spas, barbecue areas, etc.) remain subject to the full exterior noise standards.

Construction Noise (CMMC Section 13-279)

CMMC Section 13-279 provides that the quantified noise standards of the Noise Ordinance do not apply to construction activities conducted within the permitted hours, provided that all required construction permits have been obtained. The permitted construction hours are as follows:

Table 4.13-5. Permitted Construction Hours

Days	Permitted Hours
Monday through Friday	7:00 a.m. to 7:00 p.m.
Saturdays	9:00 a.m. to 6:00 p.m.
Sundays and specified federal holidays (New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day)	Construction prohibited

Source: CMMC Section 13-279.

The construction hours exception applies to all construction equipment, vehicles, and work, as well as vehicles and equipment involved with deliveries, loading, transferring materials, equipment service, or maintenance. A temporary waiver for construction outside the permitted hours may be requested through the minor modification process. The Development Services Director or designee may grant the waiver upon consideration of the unusual circumstances necessitating construction activity outside the permitted hours and the short-term impacts upon nearby residential and business communities.

It is important to note that the City's Noise Ordinance does not establish a numeric noise level threshold for construction activities occurring within the permitted hours. The construction hours exception operates as a temporal restriction rather than an amplitude limit. Absent a local numeric construction noise standard, this analysis applies the FTA recommended daytime construction noise threshold of 80 dBA Leq (8-hour) at the nearest residential receiver as the quantified screening criterion for temporary construction noise, consistent with standard CEQA practice and the approach taken in recent EIRs prepared for projects within the City of Costa Mesa.

4.13.3 Thresholds of Significance

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

Threshold 4.13-1 Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Threshold 4.13-2 Generation of excessive ground-borne vibration or ground-borne noise levels.

Threshold 4.13-3 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, a project may have a significant impact if it would expose people residing or working in the project area to excessive noise levels.

4.13.4 Impact Analyses

4.13.4.1 Methodology

Because the Project is a programmatic action that would facilitate future development over a 30-year buildout horizon (buildout year 2056) on 1,079 parcels across the city, the foregoing predictive environmental noise and vibration impact assessment is conducted at a programmatic level of detail consistent with CEQA Guidelines Section

15168. Where future individual development projects would be subject to project-level environmental review at the time of entitlement, the programmatic screening-level analyses presented herein establish the framework and screening criteria for those subsequent evaluations. The following noise and vibration analysis applies to all proposed land use designation changes that are proposed as part of the Project.

As discussed in Section 4.13.2, the City of Costa Mesa Noise Ordinance (CMMC Sections 13-279 through 13-286) does not establish numeric noise level thresholds for construction activities conducted within the permitted hours. The CEQA Guidelines likewise do not prescribe specific decibel thresholds for noise significance. Accordingly, this analysis applies quantified thresholds based on the applicable regulatory standards identified in Section 4.13.2 and on industry-standard guidance from the FTA and Caltrans. Table 4.13-6 presents the specific quantified criteria applied to each of the three above-listed impact categories.

Table 4.13-6. Quantified Noise and Vibration Significance Criteria

Impact Category	Significance Criterion	Metric	Basis
Construction Noise (4.13a)	80 dBA at nearest residential receptor	Leq, 8-hour	FTA 2018 daytime residential threshold; CMMC does not prescribe numeric limit
Construction Vibration — Building Damage (4.13b)	0.2 ips PPV at nearest residential structure	PPV	FTA 2018 Category III (non-engineered timber and masonry)
Construction Vibration — Human Annoyance (4.13b)	0.1 ips PPV at nearest occupied sensitive building	PPV	FTA 2018 “strongly perceptible” threshold
Operational Traffic Noise — Substantial Increase (4.13a)	Increase of ≥3 dBA CNEL where existing exposure exceeds 65 dBA CNEL; Increase of ≥5 dBA CNEL where existing exposure is at or below 65 dBA CNEL	CNEL	Standard CEQA practice; Caltrans 2020; FTA 2018
Operational Traffic Noise — Land Use Compatibility (4.13a)	Exposure to future traffic noise exceeding normally acceptable CNEL range per GP Table N-3 (65 dBA CNEL for multi-family/mixed use)	CNEL	GP Noise Element Table N-3
Operational Stationary Source Noise (4.13a)	55 dBA at residential property line (7 AM–11 PM); 50 dBA at residential property line (11 PM–7 AM)	L50 (base standard)	CMMC §13-280
Interior Noise Standard (4.13a)	45 dBA CNEL in habitable rooms of new residential construction	CNEL	CBC Title 24 §1207.11.2
Airport Noise (4.13c)	Exposure exceeding 65 dBA CNEL for residential uses within the AELUP planning area	CNEL	Title 21 CCR; AELUP §2.1.1
Construction Hours (4.13a)	Construction activity outside permitted hours: M–F 7:00 AM–7:00 PM; Sat 9:00 AM–6:00 PM; Sun/holidays prohibited	Temporal	CMMC §13-279

Notes: dBA = A-weighted decibels; CNEL = Community Noise Equivalent Level; Leq = equivalent continuous noise level; PPV = peak particle velocity; ips = inches per second; CMMC = Costa Mesa Municipal Code; FTA = Federal Transit Administration; CBC = California Building Code; GP = General Plan; AELUP = Airport Environs Land Use Plan.

This following describes the analytical methodologies applied to evaluate each category of noise and vibration impact. As detailed above, because the Project is a programmatic action that would facilitate future development over a 30-year buildout horizon (buildout year 2056) on 1,079 parcels distributed across the city, the analysis is conducted at a programmatic level of detail consistent with CEQA Guidelines Section 15168. Where future individual development projects would be subject to project-level environmental review at the time of entitlement, the programmatic screening-level analyses presented herein establish the framework and screening criteria for those subsequent evaluations.

Construction Noise Methodology

Construction noise levels were estimated using the FHWA Roadway Construction Noise Model (RCNM), version 2.0, as implemented through an emulated worksheet reimplementation of the RCNM calculation engine using the Institute of Noise Control Engineering (INCE) 2022 equipment noise reference database. The RCNM is the industry-standard tool for predicting construction noise levels from heavy equipment operations and is referenced by Caltrans, FTA, and numerous California lead agencies for CEQA construction noise analysis.

The RCNM calculates predicted noise levels at a specified receiver distance for each piece of construction equipment, accounting for the equipment's reference noise emission level at the standard distance of 50 feet (from the INCE 2022 database of over 70 equipment types); the number of pieces of equipment operating simultaneously; the operating hours per day (adjusting the equivalent continuous noise level to reflect the duty cycle); geometric spreading with additional atmospheric absorption; and ground-effect attenuation based on the effective height of the propagation path. Where barrier mitigation is evaluated, the model applies FTA barrier insertion loss calculations based on slant-path geometry, Fresnel diffraction theory, and the FTA ground-effect correction factor.

Consistent with the screening distance approach commonly applied in programmatic EIR analyses, the RCNM was used to calculate the minimum distance from the active construction boundary to the nearest noise-sensitive receiver at which the predicted combined-equipment noise level would comply with the FTA 80 dBA Leq (8-hour) threshold without barrier or operational mitigation. These screening distances provide a tool for future project-level review: if a proposed development site is located closer than the applicable screening distance to an existing sensitive receptor, a project-level construction noise analysis would be warranted.

Two construction scenarios were analyzed, reflecting the two distinct types of construction activity that would occur under the Project:

Scenario 1 — Individual Site Development. This scenario represents the typical construction sequence for a residential or mixed-use development project on a single parcel or consolidated group of parcels within the Planning Area. Six construction phases were modeled (demolition, site preparation, grading, building construction, paving, and architectural coating) using equipment rosters derived from CalEEMod default assumptions for the Project. The paving phase includes one asphalt paver (with dump truck) and one vibratory roller, consistent with standard paving operations. Equipment quantities were set at one unit per type, representing the worst-case condition of a single piece of equipment operating at the nearest point to an adjacent property boundary. The RCNM was used to calculate the minimum compliant screening distance for each phase—that is, the distance from the active construction area to the nearest receiver at which the combined-equipment noise level would not exceed the 80 dBA Leq (8-hour) threshold without mitigation.

Scenario 2 — Infrastructure/Utility Open Trench Construction. This scenario represents the off-site utility infrastructure improvements (water, sewer, storm drain, and other underground utilities) that would be necessary to serve the new development facilitated by the Project. The infrastructure construction program encompasses approximately 75,782 linear feet of open-trench work within public rights-of-way, with work areas approximately 28 feet wide, over an estimated 10-year construction period (2027–2036). The equipment roster was derived from project-specific construction assumptions. Because open-trench construction would occur within the street right-of-way immediately adjacent to existing residences, the screening distance for this scenario is particularly important: a typical trench-to-property-line setback in developed Costa Mesa neighborhoods may be as little as 25 feet, well within the screening distance calculated for this equipment roster.

For phases where the unmitigated screening distance exceeds the typical setback to nearby sensitive receptors, a mitigated scenario was also evaluated. The mitigated scenario incorporates feasible mitigation measures including temporary noise barriers and limitations on the simultaneous operation of loud equipment. For individual site development construction (Scenario 1), a 8- to 10-foot temporary barrier positioned at the construction boundary is typically sufficient to achieve compliance at setback distances commonly encountered in urban infill environments. For infrastructure open-trench construction (Scenario 2), where equipment operates in close proximity to existing residences, a taller barrier (10 to 12 feet) combined with near-full operating hours is the preferred mitigation strategy, as reducing operating hours to impractical levels is not operationally feasible for linear utility construction. The mitigation analysis presented in Section 4.13.4 demonstrates that noise levels can be reduced to below the 80 dBA threshold through these standard construction noise control practices, and establishes the types of mitigation measures that would be required at the project level. The complete RCNM calculation worksheets are provided in Appendix H.

If future individual development projects require impact pile driving or other high-noise specialty operations not represented in the CalEEMod default equipment rosters, a project-level construction noise analysis inclusive of those operations would be required at the time of entitlement. The equipment rosters analyzed also include the construction of taller mid-rise buildings that would be authorized on Measure K parcels with increased maximum building heights under the amended MUOD. Equipment types commonly associated with taller building construction, including cranes and concrete pumps, have reference noise emission levels that are comparable to or lower than the dominant equipment already analyzed in the Scenario 1 rosters. The screening distances reported for the individual site development scenario therefore remain representative for mid-rise construction as well.

Construction Vibration Methodology

Construction vibration levels were evaluated using the standard FTA and Caltrans distance-attenuation methodology for ground-borne vibration (FTA 2018; Caltrans 2020). Ground-borne vibration from construction equipment attenuates with distance according to the following relationship:

$$PPV(D) = PPV(ref) \times (25/D)^{1.5}$$

Where PPV(D) is the predicted peak particle velocity at the receiver in inches per second, PPV(ref) is the reference vibration level at 25 feet from the source, and D is the horizontal distance from the source to the receiver in feet. The exponent of 1.5 represents a typical propagation attenuation rate for surface wave vibration in competent soils.

The analysis uses FTA and Caltrans reference vibration levels for common construction equipment types to calculate the minimum setback distances required to comply with the 0.2 ips PPV building damage criterion (FTA Category III, non-engineered timber and masonry) and the 0.1 ips PPV human annoyance criterion ("strongly

perceptible"). Table 4.13-7 presents the reference vibration levels for construction equipment types that may be used during development facilitated by the Project.

Table 4.13-7. Construction Equipment Vibration Reference Levels

Construction Equipment	PPV at 25 ft (ips)	VdB at 25 ft	Equipment Type
Vibratory Roller	0.210	94	Continuous/Frequent Intermittent
Large Bulldozer (e.g., CAT D8/D9)	0.089	87	Continuous/Frequent Intermittent
Caisson Drilling	0.089	87	Continuous/Frequent Intermittent
Loaded Trucks	0.076	86	Continuous/Frequent Intermittent
Hoe Ram / Hydraulic Breaker	0.089	87	Transient (Impact)
Jackhammer	0.035	79	Transient (Impact)
Small Bulldozer (e.g., CAT D6)	0.003	58	Continuous/Frequent Intermittent

Source: FTA 2018, Table 7-4; Caltrans 2020. Notes: PPV = peak particle velocity; ips = inches per second; VdB = velocity decibels (referenced to 1 micro-inch per second). Equipment types limited to those anticipated for development facilitated by the Project.

The reference vibration levels in Table 4.13-7 are applied in Section 4.13.4 to calculate screening distances for the building damage and human annoyance thresholds. For this programmatic analysis, the vibration screening distances establish the minimum setback from vibration-generating equipment to the nearest occupied structure at which building damage and annoyance would not be expected. As with the construction noise screening distances, these values provide a framework for project-level review of individual development applications.

Traffic Noise Methodology

The traffic noise analysis evaluates the incremental change in vehicular noise levels on area roadways attributable to project-generated traffic. The analysis is based on average daily traffic (ADT) volume data derived from the OCTAM, which was used by the Project traffic consultant to forecast traffic conditions under existing (2019 base year) and future (2050 forecast year) conditions, with and without the Project.

The traffic noise analysis employs a two-step screening and evaluation approach. The first step is a volume-ratio screening, which applies the fundamental acoustical principle that a doubling of traffic volume on a roadway—assuming comparable vehicle mix and speeds—results in an approximately 3 dBA increase in noise levels. This relationship is expressed as:

$$\Delta L = 10 \times \log_{10} (\text{ADT[with Project]} / \text{ADT[without Project]})$$

Where ΔL is the predicted change in noise level in decibels. A doubling of ADT corresponds to a ratio of 2.0 and yields $\Delta L \approx 3.0$ dBA. This relationship provides a reliable first-order screening tool that identifies roadway segments where Project-related traffic increases are large enough to produce a potentially perceptible change in the noise environment.

The volume-ratio screening was applied to the roadway segments in the OCTAM network that serve the Planning Area parcels and the major roadways within the study area. Segments with very low base-year volumes or incomplete model data were excluded from the comparison, because the volume-ratio method becomes unreliable at low ADT counts—a small absolute increase on a road carrying a few hundred ADT can produce a numerically large percentage increase that does not translate to a meaningful change in the community noise environment. The analysis focused on the arterial and collector roadway segments that carry the preponderance of Project-generated

traffic and that are most relevant to noise exposure at adjacent land uses. The complete OCTAM volume comparison data for all analyzed segments is presented in Appendix H.

Segments where the with-Project ADT approaches or exceeds twice the without-Project ADT (i.e., a doubling or greater, corresponding to an increase of approximately 3 dBA or more) were flagged for further evaluation in the second step of the analysis. In the second step, the predicted noise level increase (ΔL) for each flagged segment is compared against the applicable significance threshold:

Where existing (without-Project) exposure exceeds 65 dBA CNEL: an increase of 3 dBA CNEL or more is considered a significant impact. This lower increment threshold reflects the principle that receivers already exposed to noise levels above the normally acceptable range are more sensitive to further increases.

Where existing (without-Project) exposure is at or below 65 dBA CNEL: an increase of 5 dBA CNEL or more is considered a significant impact. A 5 dBA increase is readily perceptible and would represent a substantial degradation of the noise environment even where absolute noise levels remain within the normally acceptable range.

The 65 dBA CNEL demarcation between the 3 dBA and 5 dBA significance criteria corresponds to the upper limit of the "normally acceptable" range for multi-family residential and mixed-use land uses as defined in the General Plan Noise Element (Table N-3). This two-tiered approach is consistent with standard CEQA practice, the Caltrans Traffic Noise Analysis Protocol (Caltrans 2020), and the FTA guidance (FTA 2018), and provides a defensible framework for distinguishing between a merely perceptible noise increase and a substantial adverse change in the noise environment.

This traffic noise analysis is based on ADT volume comparisons and does not involve site-specific noise modeling at individual receptor locations. The OCTAM model provides link-level ADT volumes for the regional roadway network, which is appropriate for the programmatic screening purpose of this Draft PEIR. Future individual development projects that require project-level CEQA review may be required to prepare site-specific traffic noise studies using detailed noise propagation models (e.g., FHWA Traffic Noise Model, SoundPLAN, or CadnaA) to evaluate noise levels at specific receptor locations, in accordance with General Plan Noise Element Policy N-2.2.

Operational Stationary Source Noise Methodology

Because the Project is a programmatic planning action that does not propose specific building designs, equipment specifications, or site plans, the operational stationary source noise analysis herein is conducted quasi-qualitatively, supported by conceptual screening distance assessments. The analysis addresses the types of stationary noise sources typically associated with mixed-use residential/commercial development—principally rooftop HVAC mechanical equipment, loading dock and refuse collection activities, parking garage operations, and ground-level commercial activity—and evaluates whether compliance with the City's Noise Ordinance standards (CMMC Section 13-280) can reasonably be achieved through standard design practices and existing regulatory requirements.

To provide a quantitative frame of reference, conceptual screening distances are presented in Section 4.13.4 for the most common stationary noise source type in mixed-use development: packaged rooftop HVAC units. These screening distances illustrate the typical setback requirements for compliance with the City's exterior residential noise standards under various shielding conditions (unshielded, with parapet wall, and with dedicated equipment enclosure). The analysis demonstrates that compliance with the Noise Ordinance is achievable through standard architectural and mechanical design features that are routinely incorporated into urban mixed-use projects.

The qualitative analysis is reinforced by the existing regulatory framework, which provides multiple layers of noise control for future development under the Project. These include the Noise Ordinance itself (CMMC Sections 13-280 and 13-281), the MUOD performance standards requiring that commercial operations be designed so as not to expose residents to offensive noise (CMMC Section 13-83.52), the MUOD heavy truck delivery curfew (8:00 p.m. to 6:00 a.m. prohibition), the City's plan check review process, and the requirement for project-level acoustical analysis where exterior noise levels exceed 60 dBA CNEL (per CBC Title 24).

Airport Noise Methodology

The airport noise analysis evaluates whether future residential development facilitated by the Project would place noise-sensitive receptors within the 65 dBA CNEL noise impact boundary of John Wayne Airport (JWA), as delineated in the Airport Environs Land Use Plan (AELUP) adopted by the Orange County Airport Land Use Commission (ALUC 2008). The analysis involves a geographic comparison of the Planning Area parcel locations against the AELUP 65 dBA CNEL contour and the airport safety zones. The assessment determines whether any Housing Element or non-Housing Element Measure K sites within the Planning Area fall wholly or partially within the 65 dBA CNEL contour, and evaluates the consistency of the proposed residential land use designations with the AELUP noise compatibility requirements. Because the amended MUOD would authorize increases in maximum building heights on certain Measure K parcels within and adjacent to the AELUP 65 dBA CNEL contour, the analysis also considers the potential for aircraft noise exposure at upper-story receptors, which may be elevated relative to ground-level CNEL contours due to proximity to flight tracks and reduced ground-effect attenuation, as discussed in Section 4.13.1. The assessment further considers consistency with the FAR Part 77 imaginary surfaces established by the AELUP for JWA, which impose height restrictions on structures within the airport influence area. The AELUP noise contours are based on projected operations from the 1985 JWA Master Plan (as refined through the 2014 Settlement Agreement Amendment EIR No. 617) and represent conservative planning boundaries. As noted in Section 4.13.1, the actual noise contours based on contemporary fleet operations and modern noise modeling are considerably smaller than the AELUP planning contours. The analysis in Section 4.13.4 uses the AELUP contours as the applicable regulatory standard, consistent with their intended planning function and the requirements of California Government Code Sections 65302(f) and 65302.3.

4.13.4.2 Environmental Analyses

Threshold 4.13-1 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?

Significant and Unavoidable Impact. As discussed in further detail below, even with implementation of MM-4.13-1, temporary construction noise impacts cannot be guaranteed to remain below the 80 dBA Leq(8h) threshold at all receptor locations, particularly at zero-lot-line infill sites during grading and demolition phases; therefore, construction noise impacts would be significant and unavoidable. Additionally, even with implementation of existing regulations (i.e., California Building Code) and MM-4.13-2, feasible mitigation measures are not available to reduce the permanent traffic noise increases associated with Project-generated volume doublings on South Coast Drive, Hyland Avenue, Placentia Avenue, and Sunflower Avenue; therefore, traffic noise impacts would be significant and unavoidable. Construction-related traffic noise impacts would be less than significant. On-site operational noise impacts would be reduced with implementation of MM-4.13-2. However, these measures do not ensure that all impacts from future development projects would be mitigated to a level of less than significant. Future non-discretionary projects that would be implemented under the Project would be subject to the federal, state and local regulations mentioned above; however, these non-discretionary projects would not be subject to CEQA review and

would not be required to implement the mitigation measures set forth in this Draft PEIR. As such, even with implementation of existing regulations, and MM-4.13-1 and MM-4.13-2 as applied to future discretionary projects, potential impacts related to the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established would be significant and unavoidable.

This section presents the impact analysis for each category of noise and vibration effect associated with implementation of the Project. The analysis applies the methodology and significance thresholds described in Section 4.13.3 to evaluate construction noise, construction vibration, traffic noise, on-site operational noise, airport noise, and cumulative noise impacts. Because the Project is a programmatic planning action, a citywide rezoning of 1,079 Measure K parcels under the amended MUOD to facilitate approximately 21,522 dwelling units and 10.6 million square feet of net new commercial uses over a 30-year buildout horizon (to 2056), the impact analysis is necessarily program-level. Impacts are evaluated qualitatively using screening-level analyses, reference noise data, and regulatory compliance pathways rather than site-specific modeling of individual development projects that are not yet defined.

Short-Term Construction Noise

Implementation of the Project would facilitate construction of residential and mixed-use development on parcels distributed throughout the Planning Area over a 30-year buildout period. Construction activity associated with future development projects would generate temporary noise from heavy equipment operation, material handling, and construction-related vehicle traffic. Because the Project is a programmatic rezoning action, the specific timing, phasing, and equipment details of individual construction projects are not known at this stage. Therefore, the construction noise analysis employs a screening-distance approach to identify the distances within which typical construction activities may produce noise levels that exceed the applicable FTA daytime construction noise threshold of 80 dBA Leq(8h) at residential receptors.

To estimate construction noise impacts, a methodology that emulates the FHWA Roadway Construction Noise Model (RCNM) was applied. Screening distances were iteratively predicted for relevant impact criteria, assuming that only one of each type of equipment per phase would operate concurrently and would be positioned near the property line of the nearest noise-sensitive receiver. Table 4.13-8 provides a list of the sound levels generated by various powered equipment that could be associated with construction of the Project, measured at a distance of 50 feet using a “slow” response time constant (1 second). Usually, construction equipment operates in alternating cycles of full power and low power, producing average noise levels over time that are less than the maximum noise level. The average sound level of construction activity also depends on the amount of time that the equipment operates and the intensity of construction activities during that time. Sound source information was obtained from the Noise Source Database developed under National Cooperative Highway Research Program 25-49 (NCHRP 25-49), Development of a Highway Construction Noise Prediction Model (NCHRP 2018).

Table 4.13-8. Sound Levels of Typical Construction Equipment

Equipment	Maximum Sound Level (dBA L_{max}) at 50 feet from Source	Equivalent Sound Level (dBA L_{eq}) at 50 feet from Source
Air Compressor	67	66
Aerial Lift (Man Lift)	73	72
Backhoe	84	76
Compactor (Plate)	75	N/A
Compactor (Roller)	83	N/A
Concrete Mixer	82	81
Concrete Saw	88	85
Crane, Mobile	76	74
Dozer	86	80
Forklift	88	N/A
Generator	68	67
Grader	79	N/A
Horizontal Bore Drill	88	87
Loader	81	72
Paving - Asphalt	83	N/A
Paving - Concrete	88	85
Pump	74	73
Scraper	92	N/A
Flatbed Truck	74	N/A
Welding Machine	72	71

Notes: dBA = A-weighted decibel; L_{max} = maximum instantaneous noise level. N/A = Equipment without average (L_{eq}) noise levels are non-stationary and best represented only by maximum instantaneous noise level (L_{max}). **Source:** NCHRP 2018

Two construction scenarios were analyzed, reflecting the two distinct types of construction activity that would occur under the Project:

Scenario 1 — Individual Site Development. This scenario represents the typical construction sequence for a residential or mixed-use development project on an individual Planning Area parcel. Six construction phases were evaluated: (1) Demolition, (2) Site Preparation, (3) Grading, (4) Building Construction, (5) Paving, and (6) Architectural Coating. Equipment complements for each phase were based on CalEEMod defaults for multi-family residential development.

Scenario 2 — Open-Trench Infrastructure. This scenario represents off-site or frontage infrastructure construction (e.g., wet utility installation, dry utility trenching, street improvements) that may accompany individual site development or occur independently as part of public infrastructure upgrades.

Table 4.13-9 presents the unmitigated screening distances for each construction phase under both scenarios. The screening distance is the minimum setback from active construction to a residential receptor at which the predicted 8-hour Leq would be at or below 80 dBA.

Table 4.13-9. Unmitigated Construction Noise Screening Distances

Scenario	Construction Phase	Loudest Equipment	Lmax @ 50 ft (dBA)	Predicted Leq @ 50 ft (dBA)	Screening Distance (ft)
1 – Site Dev	Demolition	Concrete Saw	90.5	87.6	120
	Site Preparation	Tractor/Dozer	87.2	84.4	84
	Grading	Scraper	92.4	89.2	145
	Building Construction	Crane	87.2	78.0	40
	Paving	Paver	89.4	83.3	73
	Architectural Coating	Air Compressor	82.5	78.0	40
2 – Infrastructure	Open-Trench Utilities	Backhoe	85.5	82.5	67

Notes: at or beyond which construction emission, as predicted herein, would not exceed Federal Transit Administration (FTA) guidance of 80 dBA 8-hour L_{eq}. dBA = A-weighted decibel.

As shown in Table 4.13-9, the unmitigated screening distances range from approximately 40 feet (building construction and architectural coating phases, which involve lower-noise equipment operating at reduced usage factors) to approximately 145 feet (grading phase, which includes scrapers operating at high usage factors). The open-trench infrastructure scenario yields a screening distance of approximately 67 feet. These screening distances represent the minimum setback at which an 80 dBA Leq(8h) threshold would not be exceeded under typical conditions without noise mitigation.

Given that the Planning Area encompasses 1,079 parcels distributed across a largely built-out urban environment, and that approximately 97 percent of the Planning Area are infill parcels adjacent to existing established communities, it is reasonably foreseeable that some future construction projects would occur within the screening distances identified above. In particular, the grading phase screening distance of 145 feet indicates that sensitive receptors located within this distance of active grading operations could experience construction noise levels exceeding 80 dBA Leq(8h) in the absence of mitigation.

For construction phases where the unmitigated screening distance exceeds the typical minimum setback to nearby sensitive receptors, a mitigated scenario was evaluated. Mitigation assumes a temporary 8-12-foot-tall construction noise barrier (i.e., composed of solid plywood sheets, insulated blankets, or equivalent, capable of demonstrating a minimum sound transmission class [STC] of 25) positioned along the Project boundary closest to the affected receptor, combined with administrative controls limiting highest-noise operations to a maximum of 3 hours within any 8-hour period. The barrier provides an insertion loss of approximately 10 dBA where it fully breaks line-of-sight between the noise emission source and studied receiver position, and the reduced duty cycle provides an additional 4–5 dB reduction in the 8-hour Leq.

With these combined measures, the mitigated screening distances are substantially reduced. However, for the grading phase (the loudest phase), the mitigated screening distance remains approximately 28 feet under optimistic barrier conditions. Because zero-lot-line conditions may exist at some infill sites, it cannot be guaranteed that all future construction projects can achieve the 80 dBA Leq(8h) threshold at all receptor locations under all conditions, particularly during grading and demolition phases at parcels immediately adjacent to existing residential development.

Several factors provide important context for interpreting the construction noise screening distances. First, the City's Noise Ordinance (CMMC Section 13-279) exempts construction activities from the quantified noise standards during permitted hours (7:00 a.m. to 7:00 p.m. Monday through Friday; 9:00 a.m. to 6:00 p.m. Saturday; prohibited on Sundays and federal holidays). This exemption reflects a legislative acknowledgment that construction noise is a necessary and temporary consequence of urban development. Second, the 30-year buildout horizon means that construction activity would be distributed across many sites and years rather than concentrated in a single period, reducing the cumulative duration of exposure at any given receptor location. Third, individual construction projects would be subject to the City's permitting process, which provides an opportunity to impose project-specific conditions of approval related to noise management.

Nighttime construction is not evaluated for short term conditions because it is generally restricted under City Municipal Code; if nighttime work is proposed via City approval, a project-level study shall evaluate compliance with the City's nuisance provisions and apply conservative thresholds, with additional screening distances determined case by case.

Notwithstanding these contextual factors, the analysis conservatively concludes that construction noise impacts cannot be fully mitigated at all infill locations under all conditions. The FTA 80 dBA Leq(8h) threshold may be exceeded at some receptor locations adjacent to active construction, particularly during the grading and demolition phases. Although implementation of mitigation measure MM-4.13-1(described below) would substantially reduce construction noise exposure, these measures cannot guarantee compliance with the 80 dBA Leq(8h) threshold at all locations across the Planning Area.

Construction noise impacts would remain significant and unavoidable after mitigation because it cannot be guaranteed that all future development projects across all 1,079 parcels can achieve the 80 dBA Leq(8h) threshold at all adjacent receptor locations during all construction phases, particularly at zero-lot-line infill sites during grading and demolition. In addition, MM-4.13-1 does not ensure that all impacts from future development projects would be mitigated to a level of less than significant. Future non-discretionary projects that would be implemented under the Project would be subject to the federal, state and local regulations mentioned above; however, these non-discretionary projects would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. As such, even with implementation of existing regulations and MM-4.13-1 as applied to future discretionary projects, potential impacts related to the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established would be significant and unavoidable.

Construction-Related Traffic Noise

Construction-related vehicle trips would include worker commute trips, vendor/material delivery trucks, and haul trucks for soil and demolition debris export. To illustrate the scale of construction-related traffic, a hypothetical sample project representative of the type of multi-family residential development facilitated by the MUOD was evaluated using CalEEMod default trip generation rates (CAPCOA 2022). Based on these default assumptions, the peak, the peak trip generation would occur during the building construction phase, which would generate approximately 1,450 one-way worker trips and 309 one-way vendor truck trips per day. Earlier phases would generate fewer total trips but a higher proportion of heavy truck traffic; for example, the grading phase would generate approximately 48 worker trips and 97 haul truck trips per day, and the demolition phase approximately 38 worker trips, 10 vendor trips, and 84 haul truck trips per day. For the open-trench infrastructure scenario, daily trip generation would be substantially lower, with approximately 48 worker trips, 4 vendor trips, and 4 haul truck trips per day. These construction trip volumes, even at the peak building construction phase, would represent a

small fraction of existing daily traffic volumes on the arterial roadways serving the Planning Area—where existing ADT typically ranges from approximately 5,000 to over 20,000 vehicles per day. Because a doubling of traffic volume is required to produce a barely perceptible 3 dBA increase in traffic noise, the addition of approximately 1,750 one-way construction trips distributed across multiple access routes would not measurably alter traffic noise levels on the surrounding roadway network. Construction traffic noise impacts would therefore be less than significant.

Long-Term Traffic Noise Exposure

Implementation of the Project would generate additional vehicular trips on the roadway network serving the Planning Area. The increased traffic volumes have the potential to permanently increase ambient noise levels at sensitive receptors located along affected roadway segments. The traffic noise analysis evaluates the incremental change in vehicular noise levels attributable to Project-generated traffic using a volume-ratio screening approach applied to the OCTAM network data provided by the Project's transportation analysis (Dudek 2026).

The traffic noise analysis applies the fundamental acoustical relationship between traffic volume and noise level. Because traffic noise is generated by a large number of individual mobile sources (vehicles) distributed along a linear corridor, the aggregate noise energy is proportional to the traffic volume. The change in noise level (in decibels) resulting from a change in traffic volume on a given roadway segment, holding speed, fleet mix, and other factors constant, is expressed as:

$$\Delta L = 10 \times \log_{10} (ADT_2 / ADT_1)$$

Where ΔL is the predicted change in noise level in decibels, ADT_1 is the without-Project average daily traffic volume, and ADT_2 is the with-Project average daily traffic volume. A doubling of ADT (ratio of 2.0) yields an increase of approximately 3.0 dBA—the threshold of barely perceptible change for the average listener. This relationship is widely established in the acoustical literature and is the standard basis for traffic noise screening analyses in programmatic CEQA reviews (Caltrans 2013; FHWA 2011).

The volume-ratio screening was applied to 355 roadway segments in the 2019 Existing conditions scenario and 365 segments in the 2050 Future conditions scenario from the OCTAM network that serve the Planning Area parcels. Two paired comparisons were evaluated:

Scenario A — Near-Term (2019 Existing vs. 2019 Existing Plus Project): This comparison isolates the noise effect of adding Project-generated traffic to the existing (baseline) roadway network. It represents the incremental noise increase that would occur if all Project-generated traffic were added to current conditions.

Scenario B — Buildout Year (2050 Future No-Project vs. 2050 Future Plus Project): This comparison evaluates the incremental noise effect of Project-generated traffic in the context of the planned 2050 transportation network, which includes anticipated regional growth and planned improvements.

Near-Term Traffic Noise Results

Table 4.13-10 presents the OCTAM roadway segments where the with-Project ADT represents a doubling or near-doubling of existing volumes (volume ratio ≥ 1.95, corresponding to a noise increase of approximately 3.0 dBA or greater). These segments were identified from a comprehensive screening of all 355 analyzed network segments.

Table 4.13-10. Near-Term Traffic Noise Screening – Segments Approaching or Exceeding 3 dBA Increase

Link ID	Roadway	Existing ADT	With-Project ADT	Volume Ratio	Δ dBA	Baseline Exposure
24784	South Coast Dr	5,497	16,923	3.08	+4.9	Likely >65 CNEL
24794	South Coast Dr	3,429	10,306	3.01	+4.8	May be ≤65 CNEL
24782	Hyland Av	4,568	9,551	2.09	+3.2	May be ≤65 CNEL
21312	Placentia Av	5,884	12,216	2.08	+3.2	Likely >65 CNEL
24783	South Coast Dr	5,802	11,933	2.06	+3.1	Likely >65 CNEL
24781	Sunflower Av	8,458	16,739	1.98	+3.0	Likely >65 CNEL

Source: OCTAM network data (Dudek 2026).
Notes: ADT = average daily traffic; dBA = A-weighted decibels; CNEL = Community Noise Equivalent Level. Δ dBA calculated as 10 × $\log_{10}$(With-Project ADT / Existing ADT). Volume ratio = With-Project ADT / Existing ADT. Baseline exposure assessment based on existing ADT and typical arterial noise generation rates; segments with existing ADT >5,000 on multi-lane arterials are likely to produce existing CNEL >65 dBA at the first row of receptors.

As shown in Table 4.13-10, six roadway segments exhibit volume ratios approaching or exceeding 2.0 (a doubling), corresponding to noise increases of approximately 3.0 to 4.9 dBA. The most pronounced increases occur on three segments of South Coast Drive, where existing volumes of approximately 3,400 to 5,800 ADT would increase to approximately 10,300 to 16,900 ADT, representing volume ratios of 2.06 to 3.08 and noise increases of 3.1 to 4.9 dBA. Hyland Avenue and Placentia Avenue segments also show doublings, with increases of 3.2 dBA. A segment of Sunflower Avenue approaches the doubling threshold with a ratio of 1.98 and a noise increase of approximately 3.0 dBA.

In addition to the segments identified in Table 4.13-10, ten additional segments exhibit volume ratios between 1.50 and 1.78 (noise increases of 1.8 to 2.5 dBA), including segments on Sunflower Avenue, Harbor Boulevard, Newport Boulevard, W. Mesa Verde Drive, and Hyland Avenue. While these segments do not individually reach the doubling threshold, they contribute to a pattern of broadly elevated traffic volumes on the collector and local roadway network serving the Planning Area's concentrations of Measure K sites. Table 4.13-11 presents these additional near-doubling segments.

Table 4.13-11. Near-Term Traffic Noise Screening – Additional Segments with Substantial Volume Increases (1.50–1.78x Ratio)

Link ID	Roadway	Existing ADT	With-Project ADT	Volume Ratio	Δ dBA
21649	Sunflower Av	20,310	36,243	1.78	+2.5
21647	Sunflower Av	14,871	25,887	1.74	+2.4
24796	South Coast Dr	1,867	2,949	1.58	+2.0
25942	W Mesa Verde Dr	2,124	3,338	1.57	+2.0
35123	Newport Blvd	4,248	6,616	1.56	+1.9
25944	W Mesa Verde Dr	2,170	3,378	1.56	+1.9
24777	Hyland Av	17,995	27,861	1.55	+1.9
21481	W Mesa Verde Dr	2,302	3,553	1.54	+1.9
21315	Harbor Blvd	17,176	25,789	1.50	+1.8

Source: OCTAM network data (Dudek 2026).
Notes: Segments listed are those with volume ratios between 1.50 and 1.98 (noise increases of approximately 1.8 to 3.0 dBA). These segments approach but do not reach the doubling threshold and are presented for informational context.

Buildout Year Traffic Noise Results

Table 4.13-12 presents the results of the 2050 Future conditions traffic noise screening. Under this scenario, the without-Project condition reflects the planned 2050 transportation network with regional growth but without the Project's additional development, while the with-Project condition adds the full Project buildout.

Table 4.13-12. Buildout Year Traffic Noise Screening – Segments Approaching or Exceeding 3 dBA Increase

Link ID	Roadway	Future No-Project ADT	Future With-Project ADT	Volume Ratio	Δ dBA
24784	South Coast Dr	7,535	16,188	2.15	+3.3
24782	Hyland Av	3,875	8,313	2.15	+3.3
24794	South Coast Dr	4,703	9,057	1.93	+2.8
24796	South Coast Dr	1,400	2,504	1.79	+2.5

Source: OCTAM network data (Dudek 2026).
Notes: Future conditions reflect the 2050 transportation network with planned regional growth and improvements.

Under the 2050 buildout year scenario, two roadway segments exceed the doubling threshold: South Coast Drive (Link 24784) and Hyland Avenue (Link 24782), both with volume ratios of 2.15 and noise increases of approximately 3.3 dBA. A second segment of South Coast Drive (Link 24794) approaches doubling with a ratio of 1.93 and a noise increase of 2.8 dBA. The reduced number of segments exceeding the doubling threshold in the 2050 scenario compared to the 2019 scenario reflects the effect of background traffic growth in the without-Project condition, which elevates baseline volumes and reduces the relative contribution of Project-generated traffic.

Application of the Project's significance thresholds (Section 4.13.3) to the traffic noise screening results yields the following determinations:

South Coast Drive (Links 24784, 24794, 24783): These three segments collectively exhibit noise increases of 3.1 to 4.9 dBA under near-term conditions. Link 24784 (existing 5,497 ADT) and Link 24783 (existing 5,802 ADT) carry sufficient existing volumes to likely produce baseline CNEL exposure exceeding 65 dBA at the first row of receptors adjacent to the roadway. Under the Project's significance criteria, a 3 dBA or greater increase where existing exposure exceeds 65 CNEL is a significant impact. Link 24794 (existing 3,429 ADT) may have baseline exposure at or below 65 CNEL; however, the 4.8 dBA increase would approach the 5 dBA threshold applicable to lower-exposure environments. Under the 2050 buildout scenario, South Coast Drive segments continue to exhibit doubling or near-doubling, confirming that the significant impact persists at buildout.

Hyland Avenue (Link 24782): This segment exhibits a noise increase of 3.2 dBA under near-term conditions (existing 4,568 ADT). The baseline exposure at receptors adjacent to this segment may be at or below 65 CNEL given the moderate existing volume, which would invoke the 5 dBA threshold. However, the increase exceeds 3 dBA and the segment also doubles under the 2050 scenario (3.3 dBA increase). Given the potential for receptors along this segment to be within the "conditionally acceptable" or higher range, and applying a conservative approach consistent with CEQA's mandate to disclose potentially significant impacts, this segment is identified as a potentially significant impact.

Placentia Avenue (Link 21312): This segment exhibits a noise increase of 3.2 dBA under near-term conditions (existing 5,884 ADT). Placentia Avenue is a principal arterial carrying volumes that likely produce existing CNEL exceeding 65 dBA at adjacent receptors. The 3.2 dBA increase exceeds the 3 dBA significance criterion applicable to environments already exceeding 65 CNEL.

Sunflower Avenue (Link 24781): This segment approaches the doubling threshold with a volume ratio of 1.98 and a noise increase of approximately 3.0 dBA. With an existing volume of 8,458 ADT on a major arterial, baseline exposure is likely to exceed 65 CNEL. At the 3 dBA significance threshold, this segment is at the margin of significance. Given the precision limitations of the ADT-based screening approach (±0.5 dBA), this segment is conservatively identified as a potentially significant impact.

Building Height Effects on Traffic Noise Propagation

The amended MUOD would authorize increased building heights on certain Measure K parcels along arterial corridors that also serve as significant traffic noise sources (e.g., Newport Boulevard, Harbor Boulevard, Bristol Street, Sunflower Avenue, 19th Street, and 17th Street). Taller facades along these corridors can, in principle, alter traffic noise propagation at adjacent receptors through reflection from vertical surfaces and partial urban-canyon buildup. The magnitude of these effects is bounded: a single flat facade produces a theoretical maximum reflection increase of approximately 3 dBA at a directly opposing line-of-sight receiver (Caltrans 2013), and partial urban-canyon buildup in the typical arterial cross-sections found in Costa Mesa where setbacks, landscaping, and mixed building heights preclude continuous reflective enclosures would be substantially less than the theoretical single-facade maximum. Taller buildings also provide shielding benefits for receptors located behind them. Because the amended MUOD does not prescribe continuous tall-building facades along any corridor, these incremental effects would not alter the conclusions of the volume-ratio screening analysis.

Feasibility of Traffic Noise Mitigation

Traffic noise from Project-generated vehicle trips on the public roadway network is not subject to the same design-level controls available for on-site operational noise sources. The principal mitigation measures for traffic noise are:

(1) noise barriers (sound walls or berms) along affected roadway segments; (2) improved building sound insulation for new and existing receptors; and (3) traffic management measures to reduce volumes or speeds.

At the program level, the feasibility of noise barriers along the affected segments is constrained by several factors. The identified segments (South Coast Drive, Hyland Avenue, Placentia Avenue, Sunflower Avenue) are existing arterial and collector roadways in urbanized areas where frontage properties have direct driveway access, sidewalk connections, and existing development patterns that preclude the construction of continuous noise barriers without obstructing access, visibility, or land use functionality. Furthermore, the Project is a rezoning action and does not include the construction of specific roadway improvements; the traffic volume increases result from the aggregate effect of individual development projects over a 30-year period.

Building sound insulation improvements (e.g., upgraded windows, mechanical ventilation to allow windows-closed conditions) can reduce interior noise exposure at new development but do not reduce outdoor noise levels and do not benefit existing receptors along the affected corridors. Traffic calming or trip reduction measures (e.g., Transportation Demand Management programs, transit improvements) may incrementally reduce vehicle trips but are unlikely to offset the magnitude of volume increases identified (2.0x to 3.1x) on the affected segments.

Traffic noise impacts on South Coast Drive, Placentia Avenue, Hyland Avenue, and Sunflower Avenue would be significant and unavoidable because feasible mitigation measures are not available to fully offset the noise increases associated with the projected volume doublings on these roadway segments. However, California Building Code, codified in Title 24, Part 2, of the California Code of Regulations, establishes mandatory noise insulation standards for new residential construction. Section 1207.11.2, Allowable Interior Noise Levels, requires that interior noise levels attributable to exterior sources not exceed 45 dBA in any habitable room. Where exterior noise levels at a future residential development exceed 60 dBA CNEL, an acoustical analysis must be prepared by a qualified acoustical consultant to demonstrate that the proposed building design would achieve compliance with the 45 dBA CNEL interior standard. This requirement applies to all new residential construction facilitated by the Project, regardless of the noise source type (traffic, aircraft, or industrial/commercial). Compliance with existing regulations would reduce exposure for new noise-sensitive uses developed under the Project but would not reduce outdoor noise levels at existing receptors. The Project would therefore result in a significant and unavoidable traffic noise impact on these roadway segments.

Long-Term Stationary Operational Noise Exposure

Implementation of the Project would facilitate the development of residential and mixed-use projects on Measure K parcels across the Planning Area. These projects would introduce new on-site operational noise sources associated with building systems, service activities, resident and tenant activities, and property maintenance. The operational noise analysis evaluates whether these sources would cause a substantial permanent increase in ambient noise levels at nearby sensitive receptors beyond established standards.

Qualitative Screening Methodology

Because future development proposals enabled by the Project are not yet defined, the analysis of on-site operational noise is conducted using a qualitative screening methodology grounded in the following framework:

(1) Identify reasonably foreseeable on-site operational noise sources associated with residential and mixed-use development, including stationary mechanical equipment, loading and refuse activity, parking and internal circulation, outdoor amenity use, commercial tenant activity, and routine maintenance.

(2) Characterize the typical acoustical behavior of each source category, distinguishing between continuous or cyclic sources (e.g., HVAC equipment), intermittent maximum-level events (e.g., refuse collection, loading dock operations), and human-activity noise (e.g., outdoor recreation, commercial patrons).

(3) Consider receptor context in a built-out infill environment, recognizing that Planning Area sites are distributed across commercial and industrial corridors and near existing sensitive uses, so localized compatibility considerations are important.

(4) Evaluate compliance pathways by linking each source type to applicable Municipal Code standards (exterior and interior limits, cumulative exceedance rules, and measurement protocols) and to the Noise Element's compatibility framework (CNEL/Ldn-based acceptability categories).

(5) Develop programmatic mitigation measures that apply to future development projects, requiring project-level noise demonstration and design controls where needed to ensure compliance with adopted standards and policies.

This methodology is consistent with how the City's Housing Element Initial Study/Mitigated Negative Declaration (IS/MND) addressed operational noise at a program level: it recognized that operational noise would include people, pets, automobiles, and stationary sources such as HVAC and generators; it acknowledged that specific equipment details are unknown; and it relied on compliance with the City's noise ordinance and planning application review for compatibility (City of Costa Mesa 2024).

Reasonably Foreseeable On-Site Operational Noise Sources

Table 4.13-13 provides a program-level inventory of the on-site operational noise sources anticipated for future development enabled by the Project, together with typical acoustic characteristics and the primary regulatory or control pathways applicable under the City's existing framework. Reference noise levels for typical operational equipment are based on published manufacturer data and field measurement databases commonly used in environmental noise assessment (FTA 2018; FHWA 2006; EPA 1971).

Table 4.13-13. Typical On-Site Operational Noise Sources and Control Pathways

Source Category	Examples	Typical Acoustic Characteristics	Primary Compliance / Control Mechanisms
Building Mechanical Equipment	Rooftop/package HVAC, split condensers, exhaust fans, garage ventilation, pumps, tankless water heaters, emergency generators, refrigeration units	Steady or cyclic; may include tonal components; continuous or intermittent depending on demand	CMMC interior/exterior standards + measurement protocols; equipment placement/shielding/enclosures; project-level acoustic demonstration
Loading / Deliveries / Refuse	Loading docks, box trucks, roll-up doors, pallet jacks, compactors, dumpster service	Intermittent maximum events (Lmax); impulsive sounds (door slams); tonal alarms possible	Site planning/orientation; operational timing; enclosure of refuse; compliance with CMMC cumulative exceedance structure
Parking / Internal Circulation	Vehicle start/stop, ramps, gates, alarms, car doors	Intermittent, distributed events; localized near access points	Site design to buffer/shield; locate access away from sensitive edges; compliance with ordinance as applicable
Outdoor Common Areas / Amenities	Courtyards, pools/spas, recreation areas, podium decks, barbeque/picnic amenities	Human voices/activity; higher sensitivity during evening/night reflected in CNEL/Ldn penalties	Noise Element compatibility planning; site placement/quiet hours; note ordinance exemptions for certain balcony/roof/courtyard areas in specified contexts
Commercial Tenant Activity (Mixed-Use)	Retail, restaurants, patios, customer activity, music	Intermittent activity; may extend into evening; service deliveries	Tenant restrictions/conditions; site design; ordinance standards; Noise Element compatibility framework
Routine Property Maintenance	Landscaping blowers/mowers, pressure washing, repairs	Intermittent daytime noise	Operational management; compliance with City ordinance; best practices for quieter equipment where feasible

Source: Adapted from City of Costa Mesa Housing Element IS/MND (City of Costa Mesa 2024); General Plan Noise Element; CMMC Sections 13-280 through 13-282.

Operational Noise Impact Evaluation

Building Mechanical Equipment

Mechanical equipment is a common and reasonably foreseeable on-site operational noise source for residential and mixed-use development. Such equipment can include rooftop or ground-mounted HVAC units, garage ventilation fans, kitchen exhaust systems, domestic water pumps, tankless water heaters, pool and spa equipment, and emergency generators. These sources can generate broadband noise from airflow and motors and may also generate tonal noise associated with fan or compressor operation. The potential for off-site noise effects depends on equipment sound power level, duty cycle, mounting details, location relative to receptor property lines, and whether intervening shielding blocks line-of-sight.

To provide a quantitative frame of reference for this program-level assessment, a typical rooftop packaged HVAC unit serving a multi-family residential building produces a sound power level of approximately 75 to 85 dBA

(depending on unit size and configuration) (EPA 1971). At a distance of 50 feet with no intervening barriers, this would produce a sound pressure level of approximately 43 to 53 dBA, generally below the City's daytime exterior noise standard of 55 dBA at the residential property line. However, at closer distances (25 feet or less, which may occur in zero-lot-line conditions), unshielded equipment could approach or exceed the standard without mitigation. Multiple units operating simultaneously could also produce cumulative levels exceeding the standard.

At the Program EIR stage, specific equipment parameters are unknown and would be speculative to quantify for any particular parcel. However, Costa Mesa's Noise Control Ordinance provides enforceable standards and a measurement protocol by which fixed noise sources can be assessed at affected properties, including exterior and interior standards and cumulative exceedance rules (CMMC Sections 13-280 through 13-282). In practice, compliance is commonly achieved by integrating noise control into project design through equipment selection (quieter units), strategic placement away from sensitive edges, shielding with parapets or walls, vibration isolation, and acoustical enclosures or barriers. The City's prior Housing Element IS/MND similarly recognized that equipment details are unknown at the program level and noted that compliance is typically achieved through enclosures around HVAC units and other design measures (City of Costa Mesa 2024).

Additionally, as described in Chapter 3 of this Draft PEIR, MUOD projects may be subject to technical studies to ensure compatibility with surrounding uses and compliance with City standards. For example, a noise study prepared by a qualified acoustical consultant may be required to demonstrate compliance with the City's Noise Ordinance, including applicable interior and exterior CNEL standards. Commercial uses would be designed and operated, including limitations on hours of operation where appropriate, to minimize noise effects on nearby residences.

With application of the City's enforceable noise standards, MUOD-require noise studies, and project-level design controls (placement, shielding, enclosures) required during future development review, operational noise from mechanical equipment would not be expected to cause a substantial permanent increase in ambient noise at adjacent receptors beyond adopted standards. Impacts would be reduced with incorporation of mitigation measure MM-4.13-2. However, this measure does not ensure that all impacts from future development projects would be mitigated to a level of less than significant. Future non-discretionary projects that would be implemented under the Project would be subject to the federal, state and local regulations mentioned above; however, these non-discretionary projects would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. As such, even with implementation of existing regulations and MM-4.13-2 as applied to future discretionary projects, potential impacts related to the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established would be significant and unavoidable.

Building Height Effects on Stationary Source Noise Propagation.

The amended MUOD would authorize increased building heights on certain Measure K parcels. Taller buildings introduce additional vertical facade area that can, in principle, reflect stationary source noise (e.g., rooftop HVAC, loading areas, commercial activity) toward nearby receptors. The magnitude of these effects is bounded: a single flat facade produces a theoretical maximum reflection increase of approximately 3 dBA at a directly opposing line-of-sight receiver (Caltrans 2013), and partial urban-canyon buildup in Costa Mesa's typical arterial and mid-block cross-sections would be substantially less than the theoretical single-facade maximum. Taller buildings can also provide shielding benefits for receptors located behind them. Because the City's Noise Ordinance (CMMC Sections 13-280 through 13-282) establishes enforceable exterior and interior noise standards that apply at the affected

property line regardless of propagation path, the standards themselves are agnostic to building height. These effects do not alter the less-than-significant conclusion of this threshold.

Loading, Deliveries, and Refuse Collection (Service Areas)

Mixed-use and higher-density residential development typically generates periodic deliveries and refuse collection. These operations can produce intermittent maximum noise events (e.g., truck activity, backup alarms, hydraulic lift operation, compactor cycling) and impulsive sounds (e.g., roll-up doors, dumpster lids, tailgate operations). Reference noise levels for typical service activities include: medium delivery truck idling at 58–65 dBA at 50 feet; refuse truck compactor cycling at 70–75 dBA Lmax at 50 feet (EPA 1971; FTA 2018); and roll-up door operations at 60–70 dBA Lmax at 50 feet. These events are characteristically intermittent—occurring over periods of minutes rather than continuously—which means the Leq and CNEL contributions are substantially lower than their peak levels would suggest.

The CEQA significance threshold question for these sources is whether the frequency and intensity of these events, when evaluated relative to the noise ordinance standards and the existing ambient environment, would create a substantial permanent increase in ambient noise levels or result in exceedances at sensitive receptors. The City's ordinance includes cumulative exceedance rules (CMMC Section 13-282) that specifically address the duration of exceedances within an hour, which provides a useful enforcement framework for assessing intermittent operational events.

While the precise service configuration is unknown at the rezoning stage, these impacts are typically controllable through site planning and operational measures: locating loading and refuse areas away from shared walls with existing residences; orienting service activity toward internal site areas or away from sensitive property lines; enclosing dumpsters and compactors within masonry walls; using rubber bumpers and quiet hardware on roll-up doors; restricting routine delivery and refuse service hours to daytime periods (typically 7:00 a.m. to 10:00 p.m.); and prohibiting extended truck idling.

Additionally, as described in Chapter 3 of this Draft PEIR, MUOD projects may be subject to technical studies to ensure compatibility with surrounding uses and compliance with City standards. For example, a noise study prepared by a qualified acoustical consultant may be required to demonstrate compliance with the City's Noise Ordinance, including applicable interior and exterior CNEL standards. Commercial uses would be designed and operated, including limitations on hours of operation where appropriate, to minimize noise effects on nearby residences.

With application of standard site planning and operational controls at the project stage, MUOD-required noise studies, and compliance with the City's noise ordinance standards and enforcement structure, loading, delivery, and refuse operational noise would be reduced with programmatic mitigation measure MM-4.13-2. However, MM-4.13-2 does not ensure that all impacts from future development projects would be mitigated to a level of less than significant. Future non-discretionary projects that would be implemented under the Project would be subject to the federal, state and local regulations mentioned above; however, these non-discretionary projects would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. As such, even with implementation of existing regulations and MM-4.13-2 as applied to future discretionary projects, potential impacts related to the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established would be significant and unavoidable.

Parking Areas and Internal Site Circulation

Future residential and mixed-use development will generate on-site vehicle activity, including engine start and stop, gate operations, ramp movement in structured garages, and door closures. Reference noise levels for typical parking area activities include: passenger vehicle pass-by at 55–60 dBA at 50 feet; tire squeal on garage ramps at 60–70 dBA Lmax at 50 feet; metal gate operation at 55–65 dBA Lmax at 50 feet; and car alarm events at 80–85 dBA Lmax at 50 feet (brief, infrequent) (EPA 1971; FHWA 2006). These sources are generally intermittent and localized, and in many mixed-use projects, the majority of parking activity occurs within structured garages or behind building massing that provides inherent shielding to adjacent properties.

From a programmatic perspective, these noise sources are not typically expected to create substantial permanent increases in ambient noise levels beyond adopted standards because they are distributed over time and can be effectively managed through project-level site design (e.g., locating driveway entrances and garage openings away from residential property lines, enclosing parking within structures, adding landscape buffers or solid walls along sensitive edges). Compliance with the City's ordinance standards provides an enforceable backstop if specific configurations create measurable exceedances at adjacent properties.

Additionally, as described in Chapter 3 of this Draft PEIR, MUOD projects may be subject to technical studies to ensure compatibility with surrounding uses and compliance with City standards. For example, a noise study prepared by a qualified acoustical engineer may be required to demonstrate compliance with the City's Noise Ordinance, including applicable interior and exterior CNEL standards. Commercial uses would be designed and operated, including limitations on hours of operation where appropriate, to minimize noise effects on nearby residences.

With project-level site design controls, MUOD-required noise studies, and compliance with the City's enforceable noise standards, operational noise from on-site parking and circulation would be reduced with programmatic mitigation measure MM-4.13-2. However, this measure does not ensure that all impacts from future development projects would be mitigated to a level of less than significant. Future non-discretionary projects that would be implemented under the Project would be subject to the federal, state and local regulations mentioned above; however, these non-discretionary projects would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. As such, even with implementation of existing regulations and MM-4.13-2 as applied to future discretionary projects, potential impacts related to the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established would be significant and unavoidable.

Outdoor Common Areas and Amenities

Higher-density residential and mixed-use development frequently includes shared outdoor amenities—courtyards, swimming pools and spas, recreation courts, podium decks, rooftop terraces, barbeque and picnic areas—which can generate noise from human activity (voices, gatherings, splashing, recreational play). The Noise Element emphasizes that evening and nighttime noise sensitivity is elevated and is reflected in CNEL/Ldn metrics, which apply penalties of 5 dBA during the evening (7:00 p.m. to 10:00 p.m.) and 10 dBA during nighttime hours (10:00 p.m. to 7:00 a.m.). Accordingly, outdoor amenities can be a compatibility issue when placed directly adjacent to existing residential uses without buffering or operational rules.

Costa Mesa's ordinance defines the "exterior residential noise environment" and sets time-of-day exterior noise standards for residential property, while also providing exemptions for certain balcony, roof deck, and courtyard

areas in specified mixed-use overlay and North Costa Mesa high-rise contexts (CMMC Sections 13-280[d] and 13-280[e]). These exemptions indicate that the City has recognized that certain elevated exterior spaces in mixed-use contexts may not be regulated as exterior residential noise environments for ordinance compliance purposes. This reinforces the importance of site planning and Noise Element compatibility strategies, rather than relying solely on ordinance thresholds, when configuring outdoor amenities near sensitive edges.

At the program level, the appropriate approach is to require that future projects incorporate design measures and operational rules—such as placing active amenities away from sensitive property lines, using building massing as shielding, establishing quiet hours for outdoor common areas, and designing pool and recreation facilities with appropriate setbacks from adjacent residential uses—to ensure that outdoor activity does not result in chronic noise conflicts.

Additionally, as described in Chapter 3 of this Draft PEIR, MUOD projects may be subject to technical studies to ensure compatibility with surrounding uses and compliance with City standards. For example, a noise study prepared by a qualified acoustical engineer may be required to demonstrate compliance with the City's Noise Ordinance, including applicable interior and exterior CNEL standards. Commercial uses would be designed and operated, including limitations on hours of operation where appropriate, to minimize noise effects on nearby residences.

With project-level site planning consistent with the Noise Element's compatibility framework, MUOD-required noise studies, and adoption of operational controls where warranted, operational noise from outdoor common areas would be reduced with programmatic mitigation measure MM-4.13-2. However, this measure does not ensure that all impacts from future development projects would be mitigated to a level of less than significant. Future non-discretionary projects that would be implemented under the Project would be subject to the federal, state and local regulations mentioned above; however, these non-discretionary projects would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. As such, even with implementation of existing regulations and MM-4.13-2 as applied to future discretionary projects, potential impacts related to the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established would be significant and unavoidable.

Commercial Tenant Activity

Where mixed-use development occurs, ground-floor commercial uses may generate noise from customers, operations, and (in some cases) outdoor patio activity or amplified music. Because the rezoning program does not define tenant type, hours, or patio configurations, program-level analysis focuses on the foreseeable potential for noise and the City's mechanisms to ensure compatibility. The Noise Element identifies mixed-use development as generally "normally acceptable" at CNEL/Ldn levels of 50–65 dBA and "conditionally acceptable" at 65–70 dBA (Table N-3), implying that detailed analysis and design features may be needed in higher-exposure environments.

Typical noise sources from commercial tenants in mixed-use settings include: customer conversation and foot traffic (55–65 dBA at 50 feet for a busy outdoor patio); amplified music through open doors or outdoor speakers (60–75 dBA Lmax at 50 feet, highly variable); kitchen exhaust fans (55–70 dBA at 50 feet depending on system) (EPA 1971; FTA 2018); and outdoor dining area activity during evening hours. The duration and intensity of these sources vary widely by tenant type and are most consequential when they extend into evening and nighttime hours, when the CNEL/Ldn penalties apply and when residential noise sensitivity is highest.

The City's noise ordinance provides enforceable exterior and interior standards and cumulative exceedance criteria for residential property that can address tenant-related noise where it creates measurable exceedances at affected residential properties. Additionally, the City's planning application review process (CMMC Title 13, Chapter III) provides a mechanism to impose conditions of approval related to hours of operation, outdoor patio use, and amplified sound for commercial uses in proximity to residential receptors. Similarly, as described in Chapter 3 of this Draft PEIR, MUOD projects may be subject to technical studies to ensure compatibility with surrounding uses and compliance with City standards. For example, a noise study prepared by a qualified acoustical engineer may be required to demonstrate compliance with the City's Noise Ordinance, including applicable interior and exterior CNEL standards. Commercial uses would be designed and operated, including limitations on hours of operation where appropriate, to minimize noise effects on nearby residences.

With application of Noise Element compatibility strategies, project-level site design, MUOD-required noise studies, and compliance with enforceable ordinance standards, mixed-use tenant operational noise would be reduced with programmatic mitigation measure MM-4.13-8. However, this measure does not ensure that all impacts from future development projects would be mitigated to a level of less than significant. Future non-discretionary projects that would be implemented under the Project would be subject to the federal, state and local regulations mentioned above; however, these non-discretionary projects would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. As such, even with implementation of existing regulations and MM-4.13-2 as applied to future discretionary projects, potential impacts related to the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established would be significant and unavoidable.

Routine Property Maintenance

Routine maintenance activities such as landscaping (leaf blowers at 65–75 dBA at 50 feet, lawn mowers at 60–70 dBA at 50 feet), pressure washing (70–80 dBA at 50 feet) (EPA 1971; FHWA 2006), and periodic repairs generate intermittent noise that generally occurs during daytime hours and is typical of urbanized residential and commercial environments. The Noise Element identifies landscape maintenance equipment among typical stationary noise sources contributing to the community noise environment. These activities are regulated through the City's noise ordinance framework and can be further managed through project operational policies (e.g., restricting maintenance to daytime hours; selecting quieter equipment where feasible).

Routine maintenance noise would be intermittent, generally limited to daytime hours, and regulated under the City's noise ordinance. Impacts would not be expected to cause substantial permanent increases in ambient noise beyond adopted standards. Impacts would be less than significant.

Consistency with the General Plan Noise Element

The proposed rezoning and Housing Element implementation program is designed to facilitate housing and mixed-use development along corridors and in areas where commercial and industrial activity is already present, while providing tools for ensuring compatibility with the existing community noise environment. Consistency with the Noise Element is demonstrated through three principal mechanisms:

First, the Noise Element's compatibility matrix (Table N-3) provides the City's primary tool for integrated land use and noise compatibility planning. The Project's implementation framework anticipates that where future residential or mixed-use development occurs in areas that are "conditionally acceptable" or higher-exposure categories, project-level acoustical analysis and design features would be incorporated to achieve acceptable interior and

outdoor living environments. This is consistent with the Noise Element's direction that development in higher-exposure environments should be guided by detailed analysis and appropriate design measures.

Second, the Noise Element identifies that Costa Mesa has a comprehensive Noise Ordinance that sets standards for indoor and outdoor residential areas and provides means to enforce reductions in offensive noises. The Project would be implemented through future discretionary or ministerial approvals where compliance with ordinance standards can be demonstrated through equipment control, site planning, and building design—actions consistent with the Noise Element's implementation strategy.

Third, the Noise Element emphasizes compliance with State noise insulation standards and describes the need for acoustical studies and interior noise objectives (e.g., 45 dBA CNEL) for new noise-sensitive structures where exterior exposure is elevated. The Project's programmatic mitigation measures require acoustical analysis and building design measures where appropriate, maintaining consistency with the Noise Element's stated purpose.

With implementation of programmatic mitigation measure MM-4.13-2, on-site operational noise impacts associated with future development enabled by the Project would not result in substantial permanent increases in ambient noise levels at nearby receptors beyond adopted standards. However, this measure does not ensure that all impacts from future development projects would be mitigated to a level of less than significant. Future non-discretionary projects that would be implemented under the Project would be subject to the federal, state and local regulations mentioned above; however, these non-discretionary projects would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. As such, even with implementation of existing regulations and MM-4.13-2 as applied to future discretionary projects, potential impacts related to the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established would be significant and unavoidable.

Threshold 4.13-2 Would the project result in generation of excessive ground-borne vibration or ground-borne noise levels?

Significant and Unavoidable Impact. As discussed in further detail below, even with implementation of existing regulations, applicable Costa Mesa General Plan goals and policies, and MM-4.13-3, Project impacts related to proximity of construction vibration to sensitive uses would be significant and unavoidable. In addition, this measure does not ensure that all impacts from future development projects would be mitigated to a level of less than significant. Future non-discretionary projects that would be implemented under the Project would be subject to the federal, state and local regulations mentioned above; however, these non-discretionary projects would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. As such, even with implementation of existing regulations and MM-4.13-3 as applied to future discretionary projects, potential impacts related to the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established would be significant and unavoidable. However, potential vibration impacts due to Project operation would be less than significant.

Construction Vibration

Ground borne vibration from construction equipment and activities can generate varying degrees of ground vibration. Vibration from construction activities rarely reaches levels that can damage structures but can achieve the perceptible ranges in occupied buildings close to the construction site. Table 4.13-14 lists vibration levels for various types of construction equipment.

Table 4.13-14. Vibration Source Levels for Construction Equipment

Construction Equipment Type		Peak Particle Velocity (PPV) at 25 ft (in/sec)	Approximate L_v† at 25 ft
Pile Driver (impact)	upper range	1.518	112
	typical	0.644	104
Pile Driver (sonic)	upper range	0.734	105
	typical	0.170	93
Clam shovel drop (slurry wall)		0.202	94
Hydromill (slurry wall)	in soil	0.008	66
	in rock	0.017	75
Vibratory Roller		0.210	94
Hoe Ram		0.089	87
Large bulldozer		0.089	87
Caisson drilling		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79
Small bulldozer		0.003	58

Source: FTA 2018.
Notes:
† Root-mean-square velocity in decibels (VdB) re 1 micro-inch/second, and presumes crest factor of 4.

Generally, heavy construction equipment used for most projects (small bulldozers, loaded trucks, caisson drilling etc.) would have peak particle velocity (PPV) vibration levels of approximately 0.089 inches per second or less at a distance of 25 feet (FTA 2018). Vibratory rollers, used during the paving phases of some projects, would have vibration levels of approximately 0.210 inches per second. Should impact pile driving be necessary during the building foundations phase, typical PPV levels at 25 feet of 0.644 inches per second would be anticipated, with upper range levels of approximately 1.518 inches per second; thus, it is seen that vibration levels could vary widely depending upon the equipment types used.

Because the City does not have quantified groundborne vibration velocity criteria as described in Section 4.13.2, these values were used to iteratively predict impact screening distances for site-specific construction-attributed vibration (associated with developments implemented under the Project) with expressions found in FTA and Caltrans guidance per the equation as follows (FTA 2018):

$$PPV_{rcvr} = PPV_{ref} * (25/D)^{1.5}$$

$$L_v = 20*LOG(PPV/[CF*V_{ref}]) = 20*LOG(PPV/[4*0.000001])$$

In the above expression, PPV_{rcvr} is the predicted vibration velocity at the receiver position, PPV_{ref} is the reference value at 25 feet from the vibration source and D is the actual horizontal distance to the receiver. The potential for annoyance to occupants within those buildings is evaluated with root-mean-square vibration velocity decibels (VdB), which are calculated from PPV and application of a crest factor (CF), where L_v is the vibration velocity in decibels (VdB; re 1 micro-inch/second), and presumes crest factor of 4 (FTA 2018).

The resulting minimum distance required for impact pile-driving and two types of typically expected on-site conventional heavy construction equipment to not exceed the Federal Transit Administration (FTA) groundborne vibration threshold (i.e., 0.2 inches per second peak particle velocity [PPV] for residential structures) is provided in Table 4.13-15. As shown, substantial distances (ranging from approximately 15 feet to over 97 feet) may be necessary to avoid exceeding the FTA threshold of significance for groundborne vibration. Thus, potential impacts from construction vibration are considered significant where these minimum distances may not be feasible for one or more site-specific construction projects implemented under the Project.

Table 4.13-15. Distance Required for Groundborne Vibration Compliance

Estimated Minimum Allowable Distance (feet) between Indicated Project Construction Equipment Type and an Adjoining Occupied Property to Comply with Perception Threshold[1]		
Dozer[2]	Roller[3]	Impact Pile Driver[4]
15 feet	26 feet	97 feet

Notes:
1 0.2 inches per second peak particle velocity (PPV) at residential structures, assuming a conversion crest factor of 4 per FTA guidance.
2 reference PPV of 0.089 inches per second
3 reference PPV of 0.21 inches per second
4 reference PPV of 1.518 inches per second

Additionally, for residential building occupants at the screening distances required for compliance as shown in Table 4.13-15, groundborne vibration levels would be 94 VdB and therefore considered annoying. Groundborne vibration levels would be within 80 VdB and not considered annoying for residential building occupants at distances of 42 feet for a dozer, 73 feet for a roller, or 155 feet for an impact pile driver. Thus, greater distances than shown in Table 4.13-15 would be necessary to avoid exceeding the FTA threshold of significance for vibration-induced human annoyance. Thus, potential impacts from construction vibration are considered significant where these minimum distances may not be feasible for one or more site-specific construction projects implemented under the Project.

MM-4.13-3 (Construction Vibration) would reduce vibration impacts associated with construction activities to the extent feasible. Future non-discretionary projects that would be implemented under the Project would be subject to the federal, state and local regulations mentioned above; however, these non-discretionary projects would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. As such, even with implementation of existing regulations, applicable Costa Mesa General Plan goals and policies, and MM-4.13-3 as applied to future discretionary projects, impacts related to proximity of construction activities to sensitive uses would be significant and unavoidable. In addition, this measure does not ensure that all impacts from future development projects would be mitigated to a level of less than significant. Future non-discretionary projects that would be implemented under the Project would be subject to the federal, state and local regulations mentioned above; however, these non-discretionary projects would not be subject to CEQA review and would not be required to implement the mitigation measures set forth in this Draft PEIR. As such, even with implementation of existing regulations and MM-4.13-3 as applied to future discretionary projects, potential impacts related to the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established would be significant and unavoidable.

Operational Vibration

Once operational, the future projects would not be expected to feature major onsite producers of groundborne vibration. Anticipated onsite mechanical systems like pumps, compressors, and fans are designed and manufactured to feature rotating or reciprocating components (e.g., impellers, rotors, and pistons) that are well-balanced with isolated vibration within or external to the equipment casings. On this basis, potential vibration impacts due to Project operation would be less than significant. No mitigation is required.

Threshold 4.13-3 **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, would the project expose people residing or working in the project area to excessive noise levels?**

Less Than Significant Impact. John Wayne Airport (JWA) is located immediately east of the city's northeastern boundary and is a significant contributor to the community noise environment in portions of the Planning Area. The Airport Environs Land Use Plan (AELUP) for JWA, administered by the Airport Land Use Commission (ALUC) for Orange County, establishes noise compatibility zones based on the 60 and 65 dBA CNEL noise contours.

As discussed in Section 4.13.1, the AELUP noise contours are based on the 1985 JWA Master Plan assumptions (as refined through the 2014 Settlement Agreement Amendment EIR). These contours are conservative relative to contemporary operations because advances in aircraft engine technology and the fleet turnover from older, louder Stage 2 aircraft to quieter Stage 3 and Stage 4 aircraft have reduced noise emissions per operation. The 65 dBA CNEL contour extends into the northeastern portion of the city, generally along the flight path corridor east of the I-405/SR-73 interchange.

General Plan Noise Element Policy N-1.A defines the maximum acceptable exterior noise level for residential areas at 65 CNEL. The Noise Element's compatibility matrix (Table N-3) identifies multi-family residential and mixed-use land uses as "normally acceptable" at CNEL levels of 50–65 dBA and "conditionally acceptable" at 65–70 dBA. For residential uses in the "conditionally acceptable" range, the Noise Element indicates that detailed noise analysis and sound insulation features should be incorporated to achieve acceptable interior noise environments.

As part of the amended MUOD, the Project would authorize increases in maximum permitted building heights on a subset of Measure K parcels in the northeastern portion of the Planning Area. There are 17 Measure K parcels wholly or partially within the AELUP 65 dBA CNEL noise impact boundary for JWA. These parcels are concentrated along the Bristol Street corridor, beneath principal departure and arrival flight tracks for JWA, and are subject to a maximum permitted building height of 60 feet (approximately five to six stories) under the amended MUOD. The remaining Measure K parcels with proposed height increases in the northeastern Planning Area are located within the 60 dBA CNEL contour or outside the AELUP airport noise impact boundary.

Measure K sites within the JWA 65 dBA CNEL contour would be subject to the AELUP's noise compatibility requirements and the City's Noise Element compatibility framework. Future residential development on these sites would be required to demonstrate compliance with the State interior noise standard of 45 dBA CNEL (Title 24, California Building Code) and with the City's exterior noise compatibility criteria through acoustical analysis, building design measures (e.g., enhanced facade construction, STC-rated windows, mechanical ventilation to allow windows-closed conditions), and site planning. As described in Chapter 3, Project Description, of this Draft PEIR, Project implementation via the amended MUOD would require a noise study for future development projects abutting a freeway or within the Airport Influence Area, as defined by the AELUP for John Wayne Airport. The noise study would

certify compliance with the City's Noise Ordinance and be consistent with requirements in the AELUP for John Wayne Airport.

Project implementation via the amended MUOD would require noise and safety requirements, including height and land use restrictions, to be consistent with the AELUP for John Wayne Airport. As a result, future development projects would be required to modify the density through a reduction of units and occupancy terms and/or reduce the intensity of land uses in order to be consistent with the AELUP for John Wayne Airport. In addition, Project implementation via the amended MUOD would require future development projects to modify building heights in in order to be consistent with the AELUP for John Wayne Airport. See further discussion in Section 4.9, Hazards and Hazardous Materials, and Section 4.11, Land Use and Planning, for further discussion.

The Project would not result in the exposure of people residing or working in the Planning Area to excessive aircraft noise levels beyond what is addressed by the existing AELUP compatibility framework, Noise Element policies, and State and City Building Code interior noise standards (45 dBA CNEL), including the noise study required under the amended MUOD. Compliance with these existing regulatory requirements at the time of future project-level review would ensure that aircraft noise exposure remains within acceptable limits for new residential development. Thus, future project-level developments would be required to be in compliance with the AELUP and associated regulations. Given the above, the Project's impacts would be less than significant.

4.13.5 Cumulative Impact Analysis

Where a lead agency concludes that the cumulative effects of a project, taken together with the impacts of other closely related past, present, and reasonably foreseeable future projects are significant, the lead agency then must determine whether the Project's incremental contribution to such significant cumulative impact is "cumulatively considerable" (and thus significant in and of itself). The cumulative noise impact analysis considers the combined effect of the Project together with other past, present, and reasonably foreseeable future projects on the noise environment within and surrounding the Planning Area. The cumulative context is defined by the buildout year scenario, which incorporates regional growth and planned transportation improvements in addition to the Project's implementation.

Threshold 4.13-1. The Project and related development projects within or adjoining its area would all be subject to applicable noise standards, depending upon the local jurisdiction, either the City of Costa Mesa, for which applicable standards have been summarized in Section 4.13.2, or local municipalities. Because construction and non-transportation operational noise impacts with respect to relevant standards are predicted to be potentially significant and unavoidable even with mitigation, the Project could contribute to cumulative exceedances of noise standards.

Temporary/Periodic Increases in Ambient Noise Levels. The Project would result in temporary noise increases during construction of future developments arising from its implementation, as discussed under Threshold 4.13-1 in Section 4.13.4. The construction period of future developments under the Project has the potential to overlap with the construction of other projects in the city and proximate municipalities. Due to the decrease in noise levels with distance and the presence of physical barriers (i.e., intervening buildings and topography), noise due to construction of other projects would not meaningfully combine with future development under the Project to produce a cumulative noise effect during construction. By way of illustration, if there are two concurrent construction projects of comparable sound emission intensity, and the activity nearest to the studied noise-sensitive receptor is compliant with the City's applicable noise threshold, the other activity could be no closer than three times the distance of the receptor to the nearest activity and not make a cumulatively measurable contribution to

the total and still City-compliant noise exposure level. If two concurrent projects were close to a receptor, the cumulative noise would be one of the following:

- the louder (in dBA) of the two concurrent activities; or,
- a logarithmic sum of the two activity noise levels that, per acoustic principles, cannot be more than 3 dBA greater than the louder of the two individual noise-producing activities.

In sum, cumulative construction noise is likely to be dominated by the closest or loudest activity to the receptor, and the combination will be no more than a barely perceptible difference (i.e., up to a 3 dBA change).

Hence, for the above reasons, cumulative impacts due to cumulative construction noise could be considered significant under certain conditions of multiple project proximity to a common noise-sensitive receiving land use. Mitigation of such cumulative construction noise impact would require each individual project to comply with the City's construction noise standard and involve measures as appearing in MM-4.13-1 through MM-4.13-3. Nevertheless, because the Project would result in significant and unavoidable impacts even with implementation of MM-4.13-1 through MM-4.13-3, the Project would contribute to potentially significant cumulative impacts related to construction noise.

Permanent Increase in Ambient Noise Levels/Stationary Sources. Long-term operational noise would result from operation of future development facilitated by the Project, such as permanent on-site noise sources (e.g., HVAC equipment), as addressed under Threshold 4.13-1. A cumulative impact could result if noise produced resulting from implementation of the Project were to combine with noise produced from the operation of other related projects in the vicinity to create a cumulatively significant permanent increase in ambient noise levels. However, the operation of future projects implemented under the Project, along with the operation of other related projects, would be subject to applicable requirements from the City's noise ordinance or similar regulations from neighboring municipalities, which would also limit the exterior noise levels at residences. However, despite compliance with these noise regulations that are based on fixed standards (or are adjusted upwards to match the pre-existing outdoor ambient sound level if measured to be higher), there is a potential risk of creating a durable increase in outdoor ambient sound due to the combination of concurrent stationary noise sources in proximity to a common noise-sensitive receptor.

As previously discussed in the preceding paragraphs with respect to temporary increases in the outdoor ambient sound level due to concurrent construction noise, the combination of two potential nearby operating facilities would generate one of the following outcomes in the absence of a dominant traffic-related acoustical contribution:

- the louder (in dBA) of the two concurrent operating facilities; or,
- a logarithmic sum of the two aggregate stationary source noise levels that, per acoustic principles, cannot be more than 3 dBA greater than the louder of the two individual noise-emitting facilities.

In sum, cumulative stationary operational noise is likely to be dominated by the closest or loudest facility to the receptor, and the combination will be no more than a barely perceptible difference (i.e., up to a 3 dBA change). Mitigation of such cumulative construction noise impact would require each individual project to comply with the City's construction noise standard and involve measures as appearing in MM-4.13-1 through MM-4.13-3. Nevertheless, because the Project would result in significant and unavoidable impacts even with implementation of MM-4.13-1 through MM-4.13-3, the Project would contribute to potentially significant cumulative impacts related to operational noise.

Permanent Increase in Ambient Noise Levels/Off-Site Traffic Noise. The 2050 Future Plus Project scenario inherently represents a cumulative condition because it includes regional background growth in addition to project-generated traffic. As shown in Table 4.13-11, two roadway segments (South Coast Drive and Hyland Avenue) exceed the doubling threshold under the cumulative 2050 scenario, and additional segments approach doubling. The project's contribution to cumulative traffic noise increases on these segments is cumulatively considerable. The cumulative traffic noise impact is significant and unavoidable for the same reasons identified for the project-level traffic noise impact: feasible mitigation measures are not available to fully offset the noise increases on the public roadway network.

Threshold 4.13-2. Construction-related vibration from future development under the Project was addressed under Threshold 4.13-2. Other foreseeable projects within the vicinity of the Project area could occur close enough to create excessive generation of construction-related groundborne vibration at a sensitive receptor common to both the Project and these other foreseeable projects. In addition, because the Project would result in significant and unavoidable impacts even with implementation of MM-4.13-3, the Project would result in cumulatively considerable impacts associated with excessive groundborne vibration.

Threshold 4.13-3. Future development under the Airport Environs Land Use Plan (AELUP) for JWA, administered by the Airport Land Use Commission (ALUC) for Orange County would be reviewed for consistency with adopted AELUPs and there would be no significant noise exposure impacts related to airport or airstrip noise levels. Therefore, the Project would not result in cumulatively considerable impacts related to public or private airport noise exposure.

4.13.6 Mitigation Measures

MM-4.13-1: Construction Noise Management Plan and Best Management Practices. Prior to the issuance of construction permits for future development projects subject to the MUOD within the Planning Area, the City shall ensure that the applicant requires, through the construction contractor's contract specifications, the preparation and implementation of a Construction Noise Management Plan, which shall include, at a minimum, the following:

a) Identification of noise-sensitive receptor locations within 200 feet of the construction site;
b) A construction equipment inventory with manufacturer's noise ratings or equivalent reference data;
c) Predicted construction noise levels at identified receptors using FHWA RCNM or equivalent methodology;
d) Specification of noise reduction measures to be implemented, which may include temporary noise barriers (minimum 12-foot height, STC 25 or greater), equipment muffling, staging area locations, and haul route designations;
e) A complaint response protocol with 24-hour contact information posted at the site perimeter;
f) A requirement that all construction equipment operated on-site be equipped with properly operating and maintained mufflers, intake silencers, and engine enclosures consistent with manufacturer's specifications;
g) A requirement that equipment not in active use be shut down to reduce idling noise;
h) A requirement that stationary equipment (generators, compressors, pumps) be located as far as feasible from noise-sensitive receptor locations and be shielded with temporary barriers or enclosures where the equipment is within 100 feet of a residential property line;

i) Compliance with the permitted construction hours specified in CMMC Section 13-279 (7:00 a.m. to 7:00 p.m. Monday through Friday; 9:00 a.m. to 6:00 p.m. Saturday; no construction on Sundays or federal holidays);

j) Written notice to occupants of all residential properties within 300 feet of the construction site at least 10 days prior to the start of construction, identifying the expected schedule, duration, and contact information for noise concerns; and

k) Where high-noise operations (e.g., grading, demolition, concrete sawing) are anticipated within 100 feet of occupied residential structures, coordination with affected residents regarding scheduling to minimize disruption.

MM-4.13-2: Operational Noise Design, Performance, and Management. Prior to the issuance of construction permits for future development projects subject to the MUOD within the Planning Area, the applicant shall demonstrate through project design, acoustical analysis, and operational planning that operational noise sources associated with the project will comply with the City noise standards and will minimize noise exposure to nearby sensitive receptors. The following requirements shall apply, as applicable:

a) For projects that include stationary mechanical equipment (including but not limited to HVAC units, exhaust fans, generators, refrigeration equipment, pumps, and related appurtenances), the applicant shall demonstrate that the equipment will comply with the City's adopted residential exterior and interior noise standards, as applicable, at the nearest affected sensitive receptor locations, including equipment specifications (manufacturer/model or acoustical performance data), equipment location plans, and identification of noise control measures (e.g., barriers, parapets, enclosures, silencers, and vibration isolators), and where field verification is feasible, the City may require post-installation noise measurements consistent with the City's measurement protocol to confirm compliance;

b) For mixed-use or multi-family development projects that include loading areas, refuse collection points, compactors, or service bays, the applicant shall incorporate site design and operational plan that minimizes noise exposure to adjacent sensitive receptors, which may include locating loading and refuse areas away from sensitive property lines, orienting service activity toward internal site areas, providing solid enclosures around dumpsters and compactors, using rubber bumpers and quiet roll-up door hardware, prohibiting extended idling, and limiting routine deliveries and refuse service to daytime periods where feasible;

c) For residential, mixed-use, or multi-family development projects that include outdoor common areas with active recreational amenities (e.g., pool/spa, barbeque/picnic areas, recreation courts), the applicant shall site and design such amenities to minimize operational noise exposure to adjacent existing sensitive receptors, which may include using building massing or solid walls as shielding, locating active amenities away from sensitive edges, and establishing operational quiet hours for outdoor common areas; and

d) For mixed-use projects that include commercial tenants, outdoor seating, or other activity likely to generate evening or nighttime noise, the applicant or property manager shall implement a complaint response protocol that identifies a responsible contact, provides a means for residents to report persistent operational noise concerns, and documents corrective action (e.g., adjusting operating practices, modifying site management rules, adding localized noise controls).

MM-4.13-3: Construction Vibration. Prior to the issuance of construction permits for future projects subject to the MUOD within the Planning Area that utilize vibration-intensive construction equipment (e.g., pile drivers, jackhammers, vibratory rollers) within 500 feet of sensitive receptors, the applicant shall submit a vibration impact evaluation to the City for review and approval prior to issuance of a grading or building permit. The evaluation shall include a list of proposed construction equipment, associated vibration source levels, and a predictive analysis of potential project vibration impacts using Federal Transit Administration (FTA) guidance. If construction-related vibration is determined to exceed the FTA threshold of 0.2 inches per second peak particle velocity (PPV) or 80 velocity decibels (VdB) at vibration-sensitive uses, project-specific (e.g., suggested techniques per FTA or Caltrans guidance) measures shall be required to ensure compliance with vibration standards. All project-specific measures approved by the City shall be incorporated into appropriate construction-related plans (e.g., demolition plans, grading plans, and building plans) and implemented during project construction.

Examples of equipment vibration source-to-receptor distances within which impact evaluation should occur, based on FTA reference vibration information, and with respect to potential for building occupant annoyance, include:

- Jackhammer – 23 feet
- Dozer, hoe-ram, drill rig, front-end loader, tractor, or backhoe – 42 feet
- Roller (for site ground compaction or paving) – 73 feet
- Impact pile-driving – 155 feet

This mitigation measure shall remain in effect unless superseded by a citywide groundborne vibration ordinance that establishes construction vibration standards and ensures project compliance with FTA thresholds for development projects within the Planning Area. If construction-related vibration is anticipated to exceed the FTA thresholds, the contractor shall issue written notice to all receptors located within the identified screening distances no later than three weeks before beginning any activities that involve the vibratory equipment referenced above. The notification shall specify the expected start date and the duration of daytime vibration-producing work. It should also advise recipients of the potential for vibration-related impacts, particularly for those that possess vibration-sensitive equipment. A contact phone number should be provided to property owners or occupants to report if they have vibration-sensitive devices.

4.13.7 Level of Significance After Mitigation

Threshold 4.13-1. Construction Noise. Even with implementation of MM-4.13-1 and MM-4.13-2, it cannot be guaranteed that the 80 dBA Leq(8h) construction noise threshold can be achieved at all receptor locations adjacent to all construction sites across the Planning Area, particularly at zero-lot-line infill sites during grading and demolition phases. Therefore, impacts related to temporary construction noise would be **significant and unavoidable**.

Traffic Noise. Even with compliance of existing regulations, feasible mitigation measures are not available to reduce the permanent noise increases associated with project-generated traffic volume doublings on South Coast Drive, Hyland Avenue, Placentia Avenue, and Sunflower Avenue. MM-4.13-2 would reduce interior noise exposure at new

noise-sensitive uses but would not reduce outdoor noise levels at existing receptors along the affected corridors. Therefore, impacts related to permanent traffic noise increases would be **significant and unavoidable**.

On-Site Operational Noise. With implementation of MM-4.13-2, on-site operational noise from future development would comply with the City's enforceable noise standards and would not result in a substantial permanent increase in ambient noise levels at nearby receptors beyond adopted standards. Therefore, impacts related to on-site operational noise would be **significant and unavoidable**.

Threshold 4.13-2. Even with implementation of MM-4.13-3, the minimum distances presented in Table 4.13-15 may not be feasible for one or more site-specific construction projects implemented under the Project; thus, Project impacts related to proximity of construction vibration to sensitive uses would be significant and unavoidable.

Threshold 4.13-3. The Project would not result in the exposure of people residing or working in the Planning Area to excessive aircraft noise levels. Future residential development on Measure K sites within the JWA 65 dBA CNEL contour would be subject to the AELUP noise compatibility requirements, General Plan Noise Element Policy N-1.A, State Building Code interior noise standards (45 dBA CNEL), and the CMMC Section 13-62(g) acoustical analysis requirement. Compliance with these existing regulatory requirements would ensure that aircraft noise exposure at new noise-sensitive uses remains within acceptable limits. No mitigation measures are required. Therefore, impacts related to airport noise exposure would be **less than significant.**

4.13.8 References

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4.14 Population and Housing

This section of the Draft PEIR analyzes the potential impacts from the implementation of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation (Project) on population and housing, including impacts related to population growth and displacement of housing or people. A discussion of the existing conditions in the city and surrounding areas are also included in this section to present an environmental baseline for the Project. The analysis is based on information and data from the City of Costa Mesa General Plan 2015-2035 (General Plan), Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (referred to as Connect SoCal 2024 [Connect SoCal]), United States Census Bureau, California Department of Finance, and the following:

Appendix B Buildout Methodology, prepared by Dudek

Other sources consulted are listed in Section 4.14.8, References.

4.14.1 Existing Conditions

The following discussion details the existing environmental conditions related to population and housing, focusing on the Planning Area's existing population, housing, and employment numbers, the existing jobs-housing balance, the City's General Plan buildout projections, regional projections based on SCAG's Connect SoCal, and projected jobs-housing balance. The geographic scope for existing conditions is the Planning Area (i.e., Measure K sites, including Housing Element and non-Housing Element properties), as illustrated in Figure 2-2.

4.14.1.1 Regional Projections

Every four years, SCAG completes a comprehensive update of the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), including updates to the regional growth forecast. At the time of the issuance of the Notice of Preparation (NOP), the applicable regional growth forecasts were included in SCAG's 2024–2050 RTP/SCS, known as Connect SoCal (SCAG 2024a). A combination of forecasts for population, households, and employment within the SCAG region, Orange County, and Costa Mesa, as included SCAG's Demographics and Growth Forecast Technical Report (SCAG 2024b), are presented below in Table 4.14-1.

Table 4.14-1. SCAG Regional Population, Households, and Employment Forecasts

Geography	Years			Total Change	Percent Change	Total Change	Percent Change
	2025	2035	2050	2025-2050		2035-2050	
SCAG Region							
Population	19,068,000	19,946,000	20,909,000	1,841,000	9.7	963,000	4.83
Households	6,632,000	7,311,000	7,814,000	1,182,000	17.8	503,000	6.88
Employment	9,235,000	9,885,000	10,276,000	1,041,000	11.3	391,000	3.96
Orange County							
Population	3,208,000	3,299,000	3,439,000	231,000	7.2	140,000	4.24
Households	1,123,000	1,196,000	1,253,000	130,000	11.6	57,000	4.77
Employment	1,857,000	1,942,000	2,019,000	162,000	8.7	77,000	3.96
Costa Mesa							
Population[1]	N/A	128,000	139,264	N/A	N/A	11,264	8.80
Households	N/A	50,000	54,400	N/A	N/A	4,400	8.80
Employment	N/A	103,600	104,900	N/A	N/A	1,300	1.25

Source: SCAG 2024b (Table 12 and Table 13).
Notes: N/A = Not Applicable.
1 SCAG did not provide population projections for local jurisdictions within the SCAG region. As such, an estimate of the future population in the city is based on Connect SoCal's household forecast and the city's existing persons per household ratio of 2.56 (U.S. Census 2026). Therefore, population projections for the city are estimated to be 128,000[1] in 2035 and 139,264[2] in 2050.

According to Connect SoCal, population growth has slowed. However, while growth rates are at a historic low; an increase to the total population through 2050 is expected. In the SCAG region, a 0.4 percent annual growth rate corresponds to about 73,640 new residents annually, nearly 2 million new residents between 2025 and 2050. For Orange County, a total population increase of 7.2 percent is anticipated between 2025 and 2050. In addition, SCAG's projections estimate an 8.8 percent increase in households within the city, notably larger than the SCAG region's household growth (6.88 percent) and Orange County's household growth (4.77 percent) during the same time period (2035-2050) (SCAG 2024b).

Additionally, according to SCAG, determining consistency with Connect SoCal for CEQA purposes, lead agencies (such as the City of Costa Mesa), have the sole discretion in determining a local project's consistency; consistency should be evaluated utilizing the goals and policies of Connect SoCal and its associated PEIR. Connect SoCal does not supersede or otherwise affect local jurisdiction authority or decisions on future development, including entitlements and development agreements. There is no obligation by a jurisdiction to change its land use policies, General Plan, or regulations to be consistent with projections included in Connect SoCal (SCAG 2024c).

4.14.1.2 Planned Growth Projections

The City of Costa Mesa General Plan Final EIR analyzed buildout projections for anticipated population, housing, and employment growth for the year 2035 (City of Costa Mesa 2016b). As shown in Table 4.14-2, the City anticipated a buildout of approximately 51,894 dwelling units, 131,690 residents, and 104,425 jobs by 2035. This represents a projected change from a 2.05 jobs-housing ratio in 2015 to 2.01 jobs-housing ratio in 2035.

1 50,000 households in 2035 x 2.56 persons per household = 128,000 residents in 2035.
2 54,400 households in 2050 x 2.56 persons per household = 139,264 residents in 2050.

Table 4.14-2. General Plan 2035 Buildout Projections

Description	Existing (2013)	Buildout (2035)
Residential Development (DU)		
Single-Family	14,210	14,791
Multi-Family	28,413	37,103
Total	**42,623**	**51,894**
Non-Residential Development (TSF)		
Office	7,224	11,004
Commercial	11,403	13,267
Industrial	13,087	13,087
Total	**31,714**	**37,358**
Population		
Total	**109,756**	**131,690**
Employment		
Total	**87,300**	**104,425**
Jobs-Housing Ratio		
Total	**2.05**	**2.01**

Source: City of Costa Mesa 2016b
Note: DU = dwelling units; TSF = thousand square feet. The residential buildout for the 2015-2035 General Plan does not include the 2021-2029 RHNA allocation.

For the purpose of comparison, as shown above in Table 4.14-1, SCAG projects 50,000 households, 128,000 residents, and 103,600 employees in the city by 2035. These projections represent an underestimation of 1,894 households,[3] an underestimation of 3,690 residents,[4] and an underestimation of 825 employees[5] when compared to the General Plan's buildout projections in 2035.

4.14.1.3 6th Cycle RHNA Goals

As detailed further below in Section 4.14.2, Regulatory Setting, the SCAG region is currently within the 6th Regional Housing Needs Allocation (RHNA) Cycle, which spans from October 2021 to October 2029. RHNA is mandated by State Housing Law as part of a periodic process of updating local housing elements in city and county general plans. RHNA is produced by SCAG and contains a forecast of housing needs within each jurisdiction within the SCAG region for a period of eight years. The RHNA provides an allocation of the existing and future housing needs by jurisdiction that represents the jurisdiction's fair share allocation of the projected regional population growth. The future housing needs allocations are broken down by income level so that each jurisdiction is responsible for the development of affordable housing units to meet future housing needs. The 6th RHNA Cycle is in effect at the time of preparing this Draft PEIR.

The allocation is based on a methodology developed by SCAG to distribute existing and projected housing need, including anticipated vacancies and projected household growth, for each jurisdiction. The regional existing need for additional housing units was determined to be 836,857 units, and the regional projected need is 504,970 units

[3] 50,000 – 51,894 = underestimated 1,894 households.
[4] 128,000 – 131,690 = underestimated 3,690 residents.
[5] 103,600 –104,425 = underestimated 825 employees.

(SCAG 2020, 2021). SCAG's 6th Cycle RHNA allocation to local jurisdictions based on the Regional Council-approved Final RHNA Methodology described above includes the allocations shown in Table 4.14-3.

Table 4.14-3. SCAG's 6th Cycle Final RHNA Allocation

Total	Very Low Income	Low Income	Moderate Income	Above Moderate Income
SCAG Region				
1,341,827	351,796	206,807	223,957	559,267
Orange County				
183,861	46,416	29,242	32,546	75,657
City of Costa Mesa				
11,760	2,919	1,794	2,088	4,959

Source: SCAG 2021.

Note that the state-mandated RHNA allocations provided above in Table 4.14-3 require cities to provide opportunities for residential housing units to be developed, but do not require the actual construction of allocated units by 2029. Planning for each jurisdiction includes ensuring that there are enough sites with the appropriate land use/zoning to accommodate development.

4.14.1.4 Planning Area Population, Housing, and Employment

Under existing conditions, the Planning Area is located within an urbanized environment within the city of Costa Mesa. As shown in Table 4.14-4, Existing Conditions for City and Planning Area, the Planning Area includes approximately 508 dwelling units and an estimated population of 1,300 residents. Moreover, the total employment in the Planning Area is estimated at 23,383 jobs based existing parcel data for Planning Area parcels (Appendix B).

Table 4.14-4. Existing Conditions for City and Planning Area

Description	Existing Conditions
City of Costa Mesa Existing Conditions	
Total Dwelling Units (DU)[1]	42,292
Total Population[1]	109,131
Total Employment[2]	63,500
Planning Area Existing Conditions	
Planning Area Dwelling Units[3]	508
Planning Area Population[4]	1,300
Planning Area Employment[5]	23,383

Sources: Appendix B; EDD 2025; U.S. Census 2026.
Notes: DU = dwelling units.

1. Population and housing for the City reflects estimates recorded by the U.S. Census Bureau's 2020-2024 American Community Survey (U.S. Census 2026).
2. Existing employment data for the City provided by the California Employment Development Department Labor Market Information Division. Estimates reflect the total employment in November 2025, which reflects the baseline employment conditions within the city at the time of NOP publication for this Draft PEIR (EDD 2025).
3. The total number of existing dwelling units in the Planning Area is an estimate based on existing conditions (Appendix B).
4. 508 housing units x 2.56 persons per household (U.S. Census 2026) = 1,300.48 residents (rounded to 1,300 residents).
5. Employment was estimated for the Planning Area based on existing parcel data for Planning Area parcels (Appendix B).

4.14.1.5 Existing Jobs-Housing Balance

A jobs-housing balance is a ratio that indicates the number of available jobs in the Planning Area compared to the number of available housing units. The ratio is one potential indicator of a community's ability to reduce commuter traffic and overall vehicle miles traveled (VMT) by maintaining a balance between employment and housing in close proximity (e.g., within the Planning Area limits).

A general measure of the balance of a community's employment opportunities with the needs of its residents is through a "jobs–housing balance" test. A balanced community would have a match between employment and housing opportunities so that most of the residents could also work in the community. SCAG defines a balanced community as an area extending about 14 miles around an employment center with a ratio of 1.0 to 1.29 jobs per household and the U.S. Environmental Protection Agency states that a jobs-to-housing ratio of 0.75 to 1.5 is considered beneficial for reducing VMT (SCAG 2001; U.S. EPA 2014). Under existing conditions, it is estimated that the city (as detailed above in Table 4.14-1) contains 42,292 dwelling units and 74,957 jobs. As such, the city currently has a 1.77 job-to-housing ratio,[6] which is considered a jobs-rich community.

4.14.2 Regulatory Requirements

4.14.2.1 Federal

There are no federal programs, policies, or regulations related to population or housing that are applicable to the Project.

4.14.2.2 State

Section 65580 of the Government Code (Housing Element Law)

Pursuant to Section 65580 of the Government Code, a Housing Element of a General Plan must contain local commitments to the following:

- Provide sites with appropriate zoning and development standards and with services and facilities to accommodate the jurisdiction's RHNA for each income level. The RHNA is the only population and/or housing requirement that applies to the General Plan Update.
- Assist in the development of adequate housing to meet the needs of lower and moderate-income households.
- Address, and where appropriate and legally possible, remove governmental constraints to the maintenance, improvement, and development of housing, including housing for all income levels and housing for persons with disabilities.
- Conserve and improve the condition of the existing affordable housing stock.
- Promote housing opportunities for all persons regardless of race, religion, sex, marital status, ancestry, national origin, color, familial status or disability.
- Preserve assisted housing developments for lower income households.

[6] 74,957 jobs / 42,292 dwelling units = 1.77 job-to-housing ratio

California Department of Housing and Community Development

State law requires that jurisdictions provide their fair share of regional housing needs. The California Department of Housing and Community Development (HCD) is mandated to determine the statewide housing need. HCD, in cooperation with local governments and councils of governments, are charged with making a determination of the existing and projected housing need as a share of the statewide housing need of their city or region. The housing construction need is determined for four broad household income categories: very low (households making less than 50 percent of median family income), low (50 percent to 80 percent of median family income), moderate (80 percent to 120 percent of median family income), and above moderate (more than 120 percent of median family income). The intent of the future needs allocation by income groups is to relieve the undue concentration of very low and low-income households in a single jurisdiction and to help allocate resources in a fair and equitable manner.

The "fair share" allocation process begins with the California Department of Finance's projection of statewide housing demand for an 8-year period, which is then apportioned by HCD among each of the state's official regions, which are represented by councils of government. A local jurisdiction's fair share of regional housing need is the number of additional dwelling units that will need to be constructed during any given 8-year planning period. Once a local government has received its final RHNA, it must revise its Housing Element to show how it plans to accommodate its portion of the region's housing need.

4.14.2.3 Regional

Southern California Association of Governments

SCAG is the Metropolitan Planning Organization for six counties: Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial Counties. As the designated Metropolitan Planning Organization, SCAG is mandated to research and develop plans for transportation, growth management, hazardous waste management, and air quality. SCAG is responsible for planning efforts that result in the Regional Transportation Plan (RTP) and the Federal Transportation Improvement Program; SCAG also develops the Sustainable Communities Strategy (SCS) to reduce greenhouse gas emissions as required by the Sustainable Communities and Climate Protection Act (Senate Bill 375).

SCAG is responsible for developing demographic projections; developing land use, housing, employment, transportation programs and strategies for South Coast Air Quality Management District; ensuring that the RTP and the Federal Transportation Improvement Program conform to the State Implementation Plans for transportation-related criteria pollutants, per the Clean Air Act; preparing the Regional Housing Needs Assessment, including planning for future population, housing, and employment growth throughout the SCAG region; and preparing the Southern California Hazardous Waste Management Plan. SCAG is the responsible agency for developing and adopting regional housing, population, and employment growth forecasts within the SCAG region. SCAG's demographic data is developed to enable the proper planning of infrastructure and facilities to adequately meet the needs of the anticipated growth.

Orange County Council of Governments

The Orange County Council of Governments (OCCOG) is a joint powers authority comprised of the County of Orange and its incorporated cities. OCCOG provides regional coordination, technical services, and data resources to support local planning, infrastructure development, and environmental analysis throughout Orange County. OCCOG is not a Metropolitan Planning Organization and does not have regional land use authority; however, it supports local jurisdictions by facilitating interagency collaboration and providing consistent countywide data.

OCCOG coordinates with regional agencies, including SCAG and the Orange County Transportation Authority (OCTA), to assist its member jurisdictions in implementing regional forecasts, transportation plans, and state and federal planning requirements. OCCOG's technical support helps local agencies apply regional population, housing, employment, and transportation projections in local planning documents and environmental compliance efforts.

Regional Transportation Plan/ Sustainable Communities Strategy

The RTP is a long-range transportation plan that is developed and updated by SCAG every four years to guide transportation investments throughout the region. The SCS is a required element of the RTP that integrates land use and transportation strategies to achieve California Air Resources Board emissions reduction targets pursuant to Senate Bill 375. On April 4, 2024, the SCAG Regional Council adopted the 2024-2050 RTP/SCS (Connect SoCal). Connect SoCal includes goals to increase mobility and enhance sustainability for the region's residents and visitors and encompasses three principles to improve the region's future: mobility, economy, and sustainability. In addition, Connect SoCal provides a regional investment framework to address the region's transportation related challenges, while enhancing the existing transportation system and integrating land use into transportation planning (SCAG 2024a).

To address the mobility challenge of the region's continuing roadway congestion, Connect SoCal proposes transportation investments in transit; passenger and high-speed rail; active transportation; transportation demand management; transportation systems management; highways; arterials; goods movement; aviation and airport ground access; and operations and maintenance projects. Connect SoCal recommends local jurisdictions accommodate future growth within existing urbanized areas, particularly near existing transit, to reduce VMT, congestion, and greenhouse gas emissions. The Connect SoCal approach to sustainably manage growth and transportation demand would reduce the distance and barriers between new housing, jobs, and services and would reduce vehicle travel and greenhouse gas emissions.

Regional Housing Needs Allocation

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 within the SCAG region for 8-year periods. The RHNA provides an allocation of the existing and future housing needs by jurisdiction that represents the jurisdiction's fair share allocation of the projected regional population growth. The future housing needs allocations are broken down by income level so that each jurisdiction is responsible for the development of affordable housing units to meet future housing needs.

SCAG was required to develop the final RHNA methodology to distribute existing and projected housing needs for the 6th Cycle RHNA to the Orange County Council of Governments and other member councils of governments, for the October 2021 through October 2029 planning period. SCAG has developed several guiding principles as the basis for developing the distribution mechanism for the RHNA methodology. These principles are based on the input and guidance provided by the RHNA Subcommittee during their discussions on RHNA methodology between February 2019 and June 2019.

1. The housing crisis is a result of housing building not keeping up with growth over the last several decades. The RHNA allocation for all jurisdictions is expected to be higher than the 5th RHNA cycle.
2. Each jurisdiction must receive a fair share of their regional housing need. This includes a fair share of planning for enough housing for all income levels, and consideration of factors that indicate areas that have high and low concentration of access to opportunity.

3. It is important to emphasize the linkage to other regional planning principles to develop more efficient land use patterns, reduce greenhouse gas emissions, and improve overall quality of life.

4.14.2.4 Local

Costa Mesa Affordable Housing Ordinance

This affordable housing policy requires market-rate residential developments to include affordable housing. It is one tool in the City's toolbox to address the city's shortage of affordable housing. Under the Affordable Housing Ordinance, any proposed residential or mixed-use project with 50 or more dwelling units is subject to the requirements of the Ordinance. This Ordinance also includes exceptions that would exempt projects under specific circumstances, including but not limited to ownership residential projects of any size, conversions of existing multi-family residential developments to residential common interest developments (condominiums) for ownership housing pursuant to CMMC Section 13-42, and residential building additions, repairs or remodels. Under the Affordable Housing Ordinance, an applicant of a rental project must fulfill their obligations of on-site production of affordable units at the low- and very low-income levels and must include the required number of units calculated based on the project's base density.

Costa Mesa 2015-2035 General Plan

The Costa Mesa General Plan guides policy for land use across the city. The following provides a summary of the most applicable population and housing-related goals and policies across General Plan Elements that pertain to the Project and is not a comprehensive list (City of Costa Mesa 2016a). The Project would support and/or would not conflict with the implementation of the following goals and policies:

Land Use Element

Goal LU-1 **A Balanced Community with a Mix of Land Uses to Meet Resident and Business Needs**.

Policy LU-1.1 Provide for the development of a mix and balance of housing opportunities, commercial goods and services, and employment opportunities in consideration of the needs of the business and residential segments of the community.

Policy LU-1.3 Strongly encourage the development of residential uses and owner-occupied housing (single-family detached residences, condominiums, townhouses) where feasible to improve the balance between rental and ownership housing opportunities.

Policy LU-1.4 Promote housing and employment opportunities within planned development areas to the extent feasible.

Housing Element

The Housing Element is one of the seven required General Plan elements mandated by state law. State law (California Government Code Section 65583) requires that each jurisdiction's Housing Element consist of "identification and analysis of existing and projected housing needs and a statement of goals, policies, quantified objectives, and scheduled program actions for the preservation, improvement and development of housing." The Housing Element must analyze and plan for housing for all segments of the community. The 6th Cycle Housing Element Update 2021-2029 (Housing Element) was adopted by the City Council in November 2022, amended in

March 2023 and was determined to meet statutory requirements by HCD on May 9, 2023 (HCD 2023a, 2023b). As shown above in Table 4.14-3, the City is required to accommodate 11,760 units.

The following represent goals and policies from the Housing Element that pertain to the Project (City of Costa Mesa 2023):

Housing Goal #1 Preserve and enhance the City's existing housing supply.

Policy HOU-1.2 Minimize the displacement risk for existing residents when considering approval of future redevelopment and public projects.

Housing Goal #2 Facilitate the creation and availability of housing for residents at all income levels and for those with special housing needs.

Policy HOU-2.1 Facilitate the development of housing that meets the needs of all segments of the population including affordable housing and households with specialized needs.

Policy HOU-2.2 Promote the use of State density bonus provisions to encourage the development of affordable housing for lower and moderate-income households, as well as senior housing through the dissemination of informational materials and discussions with project applicants.

Policy HOU-2.3 Monitor the implementation of the City's ordinances, codes, policies, and procedures to ensure they comply with State requirements for "reasonable accommodation" for disabled persons and all fair housing laws.

Policy HOU-2.4 Encourage housing programs and future actions that address the need for affordable housing options as well as the housing needs of Costa Mesa's senior resident population and the large households population.

Housing Goal #3 Identify adequate, suitable sites for residential use and development to meet the City's Regional Housing Needs Assessment (RHNA) at all income levels and promote a range of housing types to meet the needs of all segments of the Costa Mesa community.

Policy HOU-3.1 Encourage the conversion of existing marginal, underutilized, or vacant motels, commercial, and/or industrial land to residential, where feasible and consistent with environmental conditions that are suitable for new residential development.

Policy HOU-3.2 Encourage the development of well-planned and designed residential or mixed-use projects which, through vertical or horizontal integration, provide for the development of compatible residential, commercial, industrial, institutional, or public uses within a single project, neighborhood, or geographic area within the City.

Policy HOU-3.3 Actively engage and partner with large employers, the Chamber of Commerce, and major commercial and industrial developers to identify and implement programs to balance employment growth with the ability to provide housing opportunities affordable to the incomes of the newly created job opportunities.

Policy HOU-3.4 Consider the potential impact of new housing opportunities and their impacts on existing residential neighborhoods when reviewing development applications affecting residential properties.

Policy HOU-3.5 Encourage residential and mixed-use development along transportation routes and major commercial/mixed use corridors.

Existing Community-Based and Specific Plans

The 19 West Urban Plan, SoBECA Urban Plan, Mesa West Bluffs Urban Plan, Mesa West Residential Ownership Urban Plan/Mixed-Use Overlay, Harbor Mixed-Use Overlay, Residential Incentive Overlay, North Costa Mesa Specific Plan, One Metro West Specific Plan, and the Newport Boulevard Specific Plan are existing urban and specific plans within the city that govern land use and planning for specific areas. However, these plans do not include any applicable goals or policies pertaining to population and housing.

4.14.3 Thresholds of Significance

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

Threshold 4.14-1 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).

Threshold 4.14-2 Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

4.14.4 Impact Analyses

4.14.4.1 Methodology

As described in Chapter 3, Project Description, the Project does not include or propose any site-specific development that could directly result in construction or operational impacts to the environment. However, implementation of the Project would facilitate additional future development in the city. Therefore, this Draft PEIR does not assess the site-specific construction and operation details of each future development within the Planning Area. Rather, it assesses the impacts associated with changes to existing land uses and the associated overall effects of buildout of the Project through 2056, where reasonably foreseeable physical changes to the environment could occur. Analysis at a parcel or site-specific level was not conducted because, unless otherwise noted within this assessment, the actual locations of project development (and its chronologic sequence or concurrence) that may be implemented in the future are speculative.

Future development and redevelopment in the Planning Area is expected to occur as a result of implementation of the amended MUOD on Measure K sites to accommodate new housing. The Project, as a whole, is considered and analyzed programmatically in this Draft PEIR; and the proposed Project components were determined to result in quantifiable growth in population and employment. A list of the parcels affected by the Project, which includes existing and proposed land use designations/zoning, is included as Attachment A, Planning Area Parcel Data, within

Appendix B, Buildout Methodology, of this Draft PEIR. Methodologies used to calculate the anticipated housing, non-residential building area, population, and employment growth resulting from implementation of the Project are discussed in detail in Appendix B, Buildout Methodology, of this Draft PEIR.

In summary, and as described above, the Project would rezone all Measure K sites, including Housing Element and non-Housing Element sites, by applying the amended MUOD, which would include specific provisions regarding allowed uses, maximum residential densities, and other provisions. Application and utilization of the amended MUOD assumes that residential-only or mixed-use (residential and commercial) would be developed on Measure K sites. As described below, Draft PEIR analyzes the potential buildout of 21,522 units and 10,630,361 square feet of non-residential/commercial uses by 2056. The Planning Area buildout conditions, which include quantitative measures of anticipated Project buildout as compared to existing conditions, are provided below in Table 4.14-5, Population, Housing, and Employment Buildout for the Planning Area, below.

Table 4.14-5. Population, Housing, and Employment Buildout for the Planning Area

Description	Planning Area	
Population and Housing	**Dwelling Units**	**Population**
Existing Population and Housing Conditions		
Total Existing Planning Area	508[a]	1,300[b]
Project-Facilitated Population and Housing Growth		
Project Growth	22,030[c]	52,872[d]
Population and Housing Buildout (Project - Existing)		
Total	**21,522**	**51,572**
Employment	**Non-Residential Square Footage (SF)**	**Employees[1]**
Existing Employment Conditions		
Total Existing Planning Area	17,554,415	23,383
Existing (Assumed to Remain)	10,878,773	14,491
Redeveloped		
Existing (Likely to Redevelop)[2]	6,675,642	8,892
Post-Project Redeveloped Planning Area[3]	17,306,003	23,346
Planning Area Total		
Post-Project Total Planning Area[4]	28,184,776	37,837
Project-Generated Growth *(Post-Project - Total Existing)*		
Net New Project[5]	**10,630,361**	**14,454**

Sources: Appendix B
Notes: Estimates are rounded to the nearest whole number.

[a] The total number of existing dwelling units in the Planning Area was estimated at the time of NOP publication (November 2025) is based on parcel data exported from the Southern California Association of Governments (SCAG) Housing, Environment, and Land Use Parcel Tool (HELPR) Tool 3.0 (SCAG 2025) and desktop research (see Appendix B for more details).

[b] Baseline population for the Planning Area reflects population estimate (2.56 persons per household) for the city as recorded by the U.S. Census Bureau's 2020-2024 American Community Survey (Census 2026).

[c] The Project-facilitated dwelling unit growth reflects the "realistic" capacity (i.e., likelihood of redevelopment) of parcels at buildout (2056). See Appendix B for more details.

[d] The Project-facilitated population growth is based on a 2.4 persons per household (i.e., dwelling unit) generation factor, which represents the average household size of the Transportation Analysis Zones (TAZs) for the Planning Area (Appendix J).

[1] Employment data for the Planning Area was estimated using SCAG land use codes and parcel data exported SCAG's HELPR Tool 3.0 under existing conditions (2025) (SCAG 2025).

[2] This represents the difference between the total existing conditions and the portion of the Planning Area assumed to remain. Therefore, the data presents the existing conditions of parcels likely to redevelop prior to Project implementation (see Appendix B for discussion on site utilization and age of structures on site).

[3] This represents the total "realistic" buildout for the Planning Area in 2056. See Appendix B for more details.

[4] This represents the sum of the portion of existing conditions assumed to remain within the Planning Area and the total "realistic" buildout.

[5] This represents the difference between the post-Project non-residential square footage and employment and the total existing conditions within the Planning Area.

4.14.4.2 2035 vs. 2056 Project-Related Buildout

Buildout of the Project (anticipated to occur through 2056) would result in population growth consisting of approximately 51,572 residents, 21,522 dwelling units, and 14,454 employees. As discussed above in Section 4.14.1, Existing Conditions, "planned" growth estimates used in this analysis are derived from the City's General

Plan. However, General Plan projections are only provided through 2035. As the Project buildout year is 2056, population, housing, and employment growth projections for the Project do not align with projections set forth by the City in the General Plan. In order to compare Project-related growth to planned growth anticipated under the General Plan, buildout of the Project has been amortized over 30 years (i.e., 2026 to 2056). With an assumed annual growth rate of approximately 734 dwelling units,[7] 1,762 residents,[8] and 778 jobs per year,[9] the Project would result in 6,609 dwelling units,[10] 15,862 residents,[11] and 7,004 jobs[12] between 2026 and 2035. In order to determine whether the Project would result in substantial unplanned population growth, the Project-related buildout through 2035 is compared to planned buildout of the Planning Area anticipated to occur under the General Plan through 2035. Additionally, a comparison of the Project-related growth to SCAG's Connect SoCal's 2050 buildout conditions is demonstrated below. Similar to the above methodology, buildout of the Project has been amortized over 30 years resulting in 17,116 new units and 40,998 new residents between 2026 and 2050. In order to determine whether the Project would result in substantial unplanned population growth, the Project-related buildout through 2050 is compared to planned buildout for the city under Connect SoCal's 2050 buildout projections.

4.14.4.3 Key Concepts, Terminology, and Approach

Planned Growth. For the purposes of this analysis, "planned growth" is the existing realistic buildout potential on parcels that would be subject to Project rezoning (see Appendix B), minus the current number of dwelling units, residents, or jobs on these parcels. Under existing land use designation/zoning, Planning Area parcels could accommodate up to 3,329 dwelling units, 8,522 residents,[13] 47,814,654 non-residential square feet (Appendix B). Accounting for the existing conditions provided above in Table 4.14-5 (i.e., 508 dwelling units, 1,300 residents, 17,554,415 non-residential square feet, and 23,383 jobs) the remaining allowable growth (or "planned growth") on theses parcels equates to 2,821 additional dwelling units,[14] 7,222 additional residents,[15] and 30,260,239 non-residential square feet[16] beyond the existing conditions.

Substantial Unplanned Population Growth. As defined herein, "unplanned population growth" is an estimated population increase that is not included in population forecasts for a specified area or region, as set forth in local or regional planning documents. An increase in housing units would induce population growth in the region, and while the Project does not propose any direct development, it would implement zone changes to allow for residential and mixed-use development to occur within the Planning Area. The determination of whether unplanned population growth is "substantial" is relative but can generally be determined by comparing the unplanned population growth to the planned population growth forecasts in terms of a ratio (e.g., a certain percentage of the forecasted population growth). A larger ratio would signify a more substantial potential impact. An analysis of whether the Project would induce substantial unplanned population growth is demonstrated by analyzing potential secondary effects of proposed land use changes (e.g., increased capacity for growth) and comparing those effects to planned growth projections anticipated by the City.

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7 22,030 Project-related dwelling units / 30 years = approximately 734 dwelling units per year
8 52,872 Project-related residents / 30 years = approximately 1,762 residents per year
9 23,346 Project-related jobs / 30 years = approximately 778 jobs per year
10 734 dwelling units per year × 10 years = approximately 6,609 dwelling units
11 1,762 Project-related residents per year × 10 years = approximately 15,862 residents
12 778 Project-related jobs per year × 10 years = approximately 7,004 jobs
13 Population estimates are based on projected dwelling units (3,329) and assume 2.56 persons per household (U.S. Census 2026) for the Planning Area. 3,329 x 2.56 = 8,522.24 or 8,522 (rounded up to the nearest whole number)
14 3,329 – 508 = 2,821 dwelling units.
15 8,522 – 1,300 = 7,222 residents.
16 47,814,654 – 17,554,415 = 30,260,239 non-residential square feet.

Displacement. An impact related to the "displacement of housing or people" under CEQA is limited to the potential for displacement to result in adverse physical changes to the environment (e.g., necessitating the construction of housing elsewhere). This approach is consistent with Section 15382 of the State CEQA Guidelines, which states that "[a]n economic or social change by itself shall not be considered a significant impact on the environment." As such, this section includes an analysis of (1) the potential for the Project to result in displacement of people or housing, and (2) the potential for such displacement to result in physical changes to the environment, such as the construction of replacement housing. An analysis of whether the Project would displace people or housing is demonstrated by analyzing potential secondary effects of proposed land use changes.

4.14.4.4 Environmental Analyses

Threshold 4.14-1 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)?

Significant and Unavoidable Impact. As described in Chapter 3, Project Description, the Project does not include or propose any site-specific development that could directly result in construction or operational impacts to the environment. However, implementation of the Project would facilitate additional future development in the Planning Area. Section 4.14.4.1, Methodology, above, lists the Project's anticipated population, housing, and employment buildout (see Table 4.15-5). Project-facilitated growth anticipated due to implementation of the Project would result in approximately 21,522 new dwelling units, 51,572 new residents, and 14,454 new jobs in the Planning Area. Implementation of the proposed Project would occur over time with a horizon year of 2056 (or 30 years from adoption).

As discussed above in Section 4.14.4.1, Methodology, buildout estimates used in this analysis are derived from both SCAG and City data sources; specifically, HELPR Tool 3.0 Tool and the General Plan/Zoning, respectively. However, the General Plan projections are only provided through 2035. As the Project buildout year is 2056, population, housing, and employment growth projections for the Project do not align with projections set forth by the City in the General Plan. In order to compare Project-related growth to planned growth anticipated under the General Plan, buildout of the Project has been amortized over 30 years (i.e., 2026 to 2056). With an assumed annual growth rate of approximately 734 dwelling units, 1,762 residents, and 778 jobs per year, the Project would result in 6,609 dwelling units, 15,862 residents, and 7,004 jobs between 2026 and 2035.

The tables below compare the Project-related population and housing growth and buildout to the General Plan's 2035 planned growth and buildout for the Planning Area (Table 4.14-6).

Table 4.14-6. General Plan 2035: Planned and Unplanned Growth in the Planning Area

Category	PLANNING AREA				
		General Plan (2035)			
	Existing Conditions[1]	Planned Buildout[2]	Planned Growth[3]	2035 Project-Related Buildout[4]	2035 Unplanned Growth[5]
Housing (DU)	508	3,329	2,821	6,609	3,788
Population	1,300	8,522	7,222	15,862	8,640

Sources: Appendix B; City of Costa Mesa 2016b
Notes: DU = dwelling unit
1 For further details related to existing Planning Area conditions, please refer to Table 4.14-4, above.
2 For further details related to planned buildout per the General Plan, please refer to Appendix B.
3 "Planned Buildout" – "Existing Conditions" = "Planned Growth"
4 In order to compare Project-related buildout to planned growth anticipated under the General Plan for 2035, buildout of the Project was amortized over 30 years (i.e., 2026 to 2056). With an assumed annual growth rate of approximately 734 dwelling units and 1,762 residents, the Project would result in approximately 6,609 dwelling units and 15,862 residents between 2026 and 2035.
5 "2035 Project-Related Buildout" – "Planned Growth" = "2035 Unplanned Growth"

The following analysis compares the Project-related growth to SCAG's Connect SoCal projections for the city. As shown, the city, in combination with the Project's housing buildout and the General Plan's housing buildout of non-Planning Area parcels would exceed Connect SoCal's projections in 2050 by 6,424 units. Additionally, population buildout would also exceed SCAG's projections by 6,630 residents in 2050.

Table 4.14-7. Connect SoCal Buildout and Growth Comparisons for the City in 2050

Category	General Plan Land Use Buildout (2035)[1]	Project Buildout (2050)[2]	General Plan Buildout + Project Buildout	Connect SoCal Projected Buildout (2050)[3]	Difference Between Buildout Projections	Exceeds Growth Projections?
Housing (DU)	43,240	17,624	60,864	54,400	**+6,424**	**Yes**
Population	103,596	42,298	145,894	139,264	**+6,630**	**Yes**

Source: Appendix B
Notes: DU = dwelling unit.
1 This represents the General Plan buildout of all non-Planning Area parcels in the city. See Table 2-3 within Chapter 2, Environmental Setting, of this Draft PEIR.
2 In order to compare Project-related buildout to planned growth anticipated under Connect SoCal's 2050 projections, buildout of the Project was amortized over 30 years (i.e., 2026 to 2056). With an assumed annual growth rate of approximately 734 dwelling units and 1,762 residents, the Project would result in approximately 17,624 dwelling units and 42,298 residents between 2026 and 2050. Moreover, the growth would include the reduction of existing conditions within the Planning Area (508 units and 1,300 residents). As such, the Project-related growth in 2050 is 17,116 units[17] and 40,998 residents[18].
3 See Connect SoCal projections for the City of Costa Mesa under Table 4.14-1. Of note, SCAG did not provide population projections for local jurisdictions within the SCAG region. As such, an estimate of the future population in the city is based on Connect SoCal's household forecast and the city's existing persons per household ratio of 2.56 (U.S. Census 2026). Therefore, population projections for the city are estimated to be 139,264 in 2050.

17 17,624 – 508 = 17,116 units.
18 42,298 – 1,300 = 40,998 residents.

Population and Housing

As shown in Table 4.14-6, implementation of the Project would result in unplanned population and housing growth due to the secondary effects of proposed rezoning, which would allow for more residential and mixed-use development to occur in the Planning Area. Buildout under the Project would result in approximately 6,609 dwelling units through 2035. Under existing conditions, planned growth on these parcels could accommodate an estimated 2,821 dwelling units. As shown in Tables 4.14-6 above, the Project would exceed planned growth projections on Planning Area parcels, resulting in approximately 3,788 unplanned Project-related dwelling units through 2035. As shown in Table 4.14-6, the Project's unplanned growth of 3,788 dwelling units would exceed the General Plan's planned dwelling unit growth for the Planning Area of 3,329 units through 2035.

The proposed rezoning is designed to facilitate more additional residential development as required to help meet the City's RHNA goals for the current housing cycle. Nevertheless, the Project's anticipated population and housing buildout would represent substantial unplanned population growth for the Planning Area. Based on a person per household ratio of 2.4 (Appendix J), the Project would result in 15,862 residents by 2035 (representing unplanned population growth of approximately 8,640 residents). The Project's unplanned growth of 8,640 residents would exceed the General Plan's planned population growth for the Planning Area of 7,222 residents through 2035. Similarly, as shown in Table 4.14-7, the city, in combination with the Project's housing buildout and the General Plan's housing buildout of non-Planning Area parcels would exceed Connect SoCal's projections in 2050 by 6,424 units. Additionally, population buildout would also exceed SCAG's projections by 6,630 residents in 2050.

Chapter 3, Project Description, of this Draft PEIR states that one of the Project's objective is to implement the rezoning of Measure K sites, including the rezoning of Housing Element sites, as required by State law. As discussed above in Section 4.14.2, Regulatory Requirements, Housing Element Law mandates the planning for housing need within each jurisdiction. As such, RHNA provides an allocation of the existing and future housing needs by jurisdiction, which represents the jurisdiction's fair share allocation of the projected regional population growth. Based on SCAG's RHNA methodology and HCD's regional determination, a total of 1,341,827 units are required to be planned for between 2021 and 2029 in the SCAG region (SCAG 2020). Moreover, while RHNA is statutorily exempt from CEQA (per CEQA Guidelines section 15283, Public Resources Code section 21803 and Government Code section 65584), implementation of the RHNA through the Housing Element, as demonstrated throughout this Draft PEIR, is not exempt from CEQA.

As discussed above, the Project would result in unplanned population growth. Unplanned growth is growth that is not anticipated under local or regional planning documents, such as the General Plan and Connect SoCal. Implications of this unplanned growth affect other local and regional plans that rely on SCAG and city projections, such as the region's Air Quality Management Plan (AQMP) and the County's Urban Water Management Plan (UWMP) (see Sections 4.3, Air Quality, and 4.19, Utilities and Service Systems, of this Draft PEIR for more discussion).

Implementation of the Project would occur gradually overtime through 2056; therefore, the impacts associated with the unplanned growth would be short-term. Regional planning associations such as SCAG are required by law to update the RTP/SCS every 4 years (e.g., Connect SoCal would be updated by 2028). As Project-related growth and development would occur over the course of three decades, this would give planners and agencies time to address the potential impacts associated with the Project buildout. This would also mean that SCAG's projections would be corrected with more accurate and up-to-date information on future conditions in 2028, such as the City's required facilitation of state-mandated housing. The AQMP and UWMP are examples of other planning documents that are revised periodically and are anticipated to be updated within the Project's 2056 buildout horizon. As such, impacts related to the Project's unplanned population growth would be moderated as updated projections are systematically

incorporated into regional planning documents applicable to the Planning Area (e.g., Connect SoCal, AQMP, UWMP, etc.). To ensure compliance, the Project would implement MM-4.14-1 in which the City would coordinate with the South Coast Air Quality Management District (SCAQMD) and SCAG to update the AQMP and Connect SoCal with the new growth projections as a result of the Project.

Although the Project would be implemented gradually over time, the Project would result in substantial unplanned population growth. Specifically, the Project would induce substantial unplanned population and housing growth within the Planning Area as a result of proposed rezoning to facilitate residential and mixed-use development, which exceed General Plan growth projections for Planning Area parcels through 2035 when considered in the context of other planned growth. Further, even though the unplanned growth would be a short-term exceedance that would be remedied at the time that the regional plans (e.g., RTP/SCS, UWMP, AQMP) would undergo mandatory updates/revisions, the unplanned growth would still be considered substantial in the short-term. Even with the implementation of MM-4.14-1, the Project would have a significant and unavoidable impact related to inducing substantial unplanned population growth in the Planning Area.

Employment

As shown in Table 4.14-5 above, employment conditions are derived from a methodology of Planning Area parcels that are likely to redevelop (see Appendix B for more details). Under existing conditions, the Planning Area contains 17,554,415 square feet of existing non-residential uses. This is estimated to generate approximately 23,383 jobs under existing conditions. Of the 17.5 million square feet, 10,878,773 square feet is assumed to remain under the Project's methodology (thus, approximately 14,491 jobs would remain under the Project). Implementation of the Project would be gradual over a 30-year buildout ending in 2056. As a result, 6,675,642 square feet (or 8,892 jobs) are proposed to be redeveloped within the Planning Area. The Project's realistic buildout (as further described in Chapter 3, Project Description) is estimated to be 17,306,003 square feet of non-residential uses (or 23,346 jobs). Thus, at buildout, the Planning Area would include a total of 28,184,776 square feet of non-residential uses (or 37,837 jobs), or a net new buildout of 10,630,361 square feet of non-residential uses (or 14,454 jobs).

Under existing land use conditions, the maximum allowable buildout of Planning Area parcels would generate approximately 47,814,654 square feet of non-residential uses based on the existing maximum allowed floor area ratio (FAR) (Appendix B). The amended MUOD would defer to the maximum intensities (i.e., FAR) allowed per land use designation as established in Table LU-6, Land Use Density and Intensity Summary, of the General Plan. While maximum intensities range between 0.40 and 1.77 FAR for land use designations applicable to Measure K sites, the assumption was made that a maximum of 1.00 FAR is realistically feasible in typical mixed-use development typologies (i.e., commercial and residential mixed-use). Therefore, the applicable maximum intensity ranging between 0.40 and 1.00 FAR was applied to each site and totaled across all sites. See Appendix B for more discussion.

As discussed above, in order to compare Project-related buildout to planned buildout anticipated under the General Plan in 2035, buildout of the Project has been amortized over 30 years (i.e., 2026 to 2056). With an assumed annual growth rate of approximately 778 jobs per year, the Project would result in 7,004 jobs between 2026 and 2035. As a result, Project-related employment growth in combination with the existing employment numbers in the city (74,957 jobs, as shown in Table 4.14-4) would equate to approximately 81,961 jobs in 2035.[19] The General Plan estimated an employment buildout of 104,425 jobs by 2035. Therefore, the Project-related employment growth would not exceed General Plan projections. As the Project would not exceed planned employment growth

[19] 74,957 + 7,004 = 81,961 jobs.

projections, no unplanned growth would occur. Therefore, the Project would not induce substantial unplanned population growth related to employment, and no mitigation is required.

Threshold 4.14-2 Would the project *substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere*?

Less Than Significant Impact. The Project does not include or propose any site-specific development that could directly result in construction or operational impacts to the environment. However, through proposed rezoning, implementation of the Project would facilitate new residential and mixed-uses within the Planning Area.

Population and Housing

As previously mentioned, the Project would facilitate future development of residential and mixed-use development through proposed MUOD rezoning, thereby resulting in potential environmental impacts. Buildout of the Project would require the demolition and construction, or renovation, of existing residential properties that are occupied (see Appendix B for more discussion). The temporary displacement of some residents due to redevelopment of residential properties would occur within the Planning Area. However, the Project would facilitate development of approximately 22,030 dwelling units that are expected to substantially increase the capacity for housing stock in the Planning Area. The Project is not anticipated to permanently displace a substantial number of people. Future development would occur gradually over time through 2056, and any displacement would be temporary. Notably, the Project does not anticipate any net loss of housing because of Project implementation; rather the housing facilitated by the Project would represent a net increase in housing and would provide opportunities for development of a range of housing types (e.g., mixed-use residential and multi-family) at various levels of affordability (e.g., to low-, moderate- and above-moderate income units). In addition, State law (Government Code Section 66300.5 et. seq.) includes additional protections for existing occupied rental units and tenants related to replacement housing, relocation assistance, and right of first refusal for income qualifying households. As such, any temporary impacts associated with displacement associated with redevelopment of existing properties would be offset by the anticipated increase in housing production. Therefore, impacts related to the substantial displacement of existing housing and people would be less than significant and no mitigation is required.

Employment

As discussed above, the Project would result in the creation of new jobs through MUOD rezoning, which would facilitate the construction of mixed-use development within the Planning Area. It is estimated that the Project would result in 10,630,361 square feet of non-residential uses and 14,454 jobs by 2056. In addition, the Project assumes a loss of existing jobs/non-residential uses as a result of MUOD rezoning. The additional 14,454 jobs generated by the Project assumes a loss of 8,892 jobs associated with existing commercial and industrial uses on these Planning Area parcels. Specifically, as described in Chapter 3, Project Description, the loss of existing jobs would be associated with the proposed permitted uses in the MUOD. Under the proposed Project, future development projects would not allow new industrial uses on Planning Area parcels. As such, the Project would result in the loss of approximately 5,914 industrial jobs assumed under SCAG land use codes and employment generation factors (see Appendix B for more details). Moreover, the remaining employment loss would be associated with commercial uses. As the intent of the MUOD is to facilitate residential growth in the context of mixed-use development (e.g., a mix of residential and employment-generating uses), it is assumed that mixed-use redevelopment would include employment opportunities in a comparable manner to the existing conditions on the Planning Area parcels. Buildout in 2056 would generate new commercial uses resulting in a net increase of 14,454 jobs. Therefore, the Project would generate new employment and would not displace a substantial number of existing jobs, the Project would

not result in the construction of replacement businesses elsewhere, and impacts related to displacement would be less than significant.

4.14.5 Cumulative Impact Analyses

Where a lead agency concludes that the cumulative effects of past, present, and reasonably foreseeable future projects are significant, the lead agency then must determine whether the Project has any contribution to the cumulative impact, and if so, whether the Project's incremental effect is "cumulatively considerable." The cumulative study area used to assess potential cumulative impacts related to population and housing includes the city of Costa Mesa and considers the future buildout of applicable local plans (e.g., General Plan). The cumulative impact analysis contained in this Draft PEIR considers projections used in the City's General Plan land use buildout as well as one current project (Fairview Developmental Center Specific Plan, for which a Notice of Preparation was released in October 2025).[20]

Threshold 4.14-1. The Project would facilitate population growth as a result of rezoning to allow for residential and mixed-use development to occur, including accommodation of 21,522 dwelling units. As discussed in Chapter 3 of this Draft PEIR, the Project is a result of Housing Element implementation, which would facilitate additional housing development and population growth within the city. Furthermore, the City is undergoing environmental review for a separate Housing Element site, Fairview Developmental Center. As the Project has a horizon year of 2056, the Project would coincide not only with implementation of the current 6th Cycle RHNA, but also future RHNA cycles. The combined effect of this anticipated housing growth, which is likely to result in substantial unplanned population growth, represents a significant cumulative impact.

As discussed in Section 4.14.4, Impact Analysis under Threshold 4.14-1, the Project would result in substantial unplanned housing and population growth. As discussed, impacts related to the Project's unplanned population growth would be moderated as updated projections are systematically incorporated into regional planning documents applicable to the Planning Area (e.g., Connect SoCal, AQMP, UWMP, etc.). To ensure compliance, the Project would implement MM-4.14-1 in which the City would coordinate with the South Coast Air Quality Management District (SCAQMD) and SCAG to update the AQMP and Connect SoCal with the new growth projections as a result of the Project. Even with the implementation of MM-4.14-1, the Project would have a significant and unavoidable impact related to inducing substantial unplanned population growth in the Planning Area. Therefore, the Project's contribution to impacts related to substantial unplanned population growth would be cumulatively considerable.

Threshold 4.14-2. Buildout of the City's General Plan, the Fairview Developmental Center Specific Plan, and the Project would require the demolition and construction, or renovation, of existing residential properties that are occupied. The temporary displacement of some residents due to redevelopment of residential properties would occur throughout the city, as is to be expected in urban areas that would be subject to infill development. However, as discussed above, the City (via the proposed Project and the Fairview Developmental Center Specific Plan) is required to implement their housing element and accommodate housing in accordance with their respective RHNA allocations, which will include the provision of various housing types, including low- and very low- income housing, consistent with the anticipated demands for these housing types as allocated by the state. As such, any temporary impacts associated with displacement would be offset by the anticipated increases in housing production. Therefore, permanent displacement of housing and people is not anticipated to occur, as existing policies and regulations would require and/or incentivize many future development projects to provide market rate and

[20] The buildout of the city was determined throughout the development of the Climate Action and Adaptation Plan, which is anticipated to be considered for adoption in October 2026.

affordable units (consistent with the applicable RHNA requirements). As such, the existing cumulative impact would be less than significant.

As discussed above in Section 4.14.2.4 under Threshold 4.14-2, the Project would implement MUOD rezoning to accommodate development of approximately 22,030 dwelling units that are expected to substantially increase the capacity for housing stock in the Planning Area. In addition to market-rate housing, this accommodation would include approximately 11,760 RHNA units, a portion of which would be affordable to low and very low income levels. Any displacement that occurs would be temporary and would be offset by the Project's accommodation of new housing. As such, the Project's incremental contribution to impacts related to the substantial displacement of existing housing and people would not be cumulatively considerable.

4.14.6 Mitigation Measures

MM-4.14-1 SCAG Coordination and Inclusion in Regional Planning. Within one year from approval of the Project, the City shall submit the Final PEIR to the Southern California Association of Governments (SCAG) for inclusion in regional planning documents, including the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (also referred to as Connect SoCal) and the Regional Housing Needs Assessment (RHNA), as applicable. This action is intended to ensure that the population, housing and employment growth facilitated by the Project is recognized and incorporated into regional forecasts. Doing so would allow SCAG and local jurisdictions to better align transportation, housing, and infrastructure planning with the long-term impacts of the Project.

4.14.7 Level of Significance Conclusion

Threshold 4.14-1. Implementation of MM-4.14-1 would ensure that the appropriate growth projections of the Planning Area would be incorporated by SCAG. However, there is an anticipated interim period where the SCAG growth projections and would not reflect the appropriate growth in the Planning Area; however, this will eventually be resolved with updates of both plans. Nonetheless, the Project would still conflict with the regional growth projections. Based on the above considerations, impacts would be **significant and unavoidable**.

Threshold 4.14-2. Impacts related to the displacement of housing and people would be **less than significant** and would not be cumulatively considerable.

4.14.8 References

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4.15 Public Services

This section of the Draft PEIR analyzes the potential impacts from the implementation of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation (Project) on public services, including fire protection and emergency services, police protection, schools, and library services on a programmatic level. A discussion of the existing public services in the City of Costa Mesa (City) and in the Planning Area is also included in this section to present the environmental baseline for the Project. The analysis is based, in part, on information provided from following sources: Costa Mesa 2015-2035 General Plan (General Plan), Costa Mesa Fire & Rescue Department, Costa Mesa Police Department, Newport-Mesa Unified School District, and Orange County (County) Public Libraries. Please also refer to the following appendix:

Appendix I Public Services Correspondence

Other sources consulted are listed in Section 4.15.8, References.[1]

4.15.1 Existing Conditions

4.15.1.1 Fire Protection Services

The Costa Mesa Fire & Rescue Department (CMFRD) serves the City of Costa Mesa to provide fire and emergency medical services. CMFRD operates six fire stations and three divisions: the Fire Administration Division, the Fire/Rescue/Emergency Medical Services Division, and the Fire Prevention/Community Risk Reduction Division. CMFRD employs 90 full-time staff, including 84 sworn positions and six non-sworn positions (CMFRD 2025a). CMFRD is responsible for community risk reduction, fire prevention and education, enforcement of fire protection laws, fire suppression, rescue, emergency medical services, hazardous materials response, and weed abatement. In addition, for the purposes of emergency medical service response, CMFRD aims to satisfy and achieve a response time goal of seven minutes for 90 percent of emergency calls (City of Costa Mesa 2025a). In addition, CMFRD is an active participant with the Metro Net Cities and the Orange County Fire Authority, which is an automatic mutual aid system and training collaborative in partnership with cities surrounding Costa Mesa where the closest emergency response unit is dispatched to the emergency regardless of city boundary (CMFRD 2025b).

CMFRD receives its revenue from established fire system development impact fees and the City's General Fund. The City allocates funding from the General Fund for various City-provided public services, including CMFRD. The location of CMFRD fire stations are shown in Figure 4.15-1, Fire Stations. The stations listed in Table 4.15-1, Fire Stations Serving the City, are single-company stations and represent all CMFRD stations within the city (Appendix I).

[1] For a discussion of the regulatory setting and existing environmental conditions related to park services, please refer to Section 4.16, Recreation, of this Draft PEIR. Potential impacts to park services are analyzed in Section 4.16, Recreation, of this Draft PEIR.

Table 4.15-1. Fire Stations Serving the City

Figure ID	Station	Address
1	Station 1	1570 Adams Avenue, Costa Mesa, CA 92626
2	Station 2	800 Baker Street, Costa Mesa, CA 92626
3	Station 3	1865 Park Avenue, Costa Mesa, CA 92627
4	Station 4	2300 Placentia Avenue, Costa Mesa, CA 92626
5	Station 5	2450 Vanguard Way, Costa Mesa, CA 92626
6	Station 6	3350 Sakioka Drive, Costa Mesa, CA 92626

Source: CMFRD 2025c

4.15.1.2 Police Protection Services

The Costa Mesa Police Department (CMPD) is responsible for crime prevention, field patrol, crime investigation, and traffic enforcement within the city (City of Costa Mesa 2016). CMPD operates three divisions, including the Administration Division, the Field Operations Division, and the Support Services Division (CMPD 2025a). The Field Operations Division currently employs 142 sworn police personnel, consisting of one captain, four lieutenants, 16 sergeants, and 77 officers, as well as 29 civilian employees (Appendix I; CMPD 2025a). The Support Services Division currently employs 102 sworn and professional staff employees (Appendix I; CMPD 2025b). CMPD also contracts with the Huntington Beach Police Department for airborne law enforcement patrols and related services (City of Costa Mesa 2016).

CMPD currently maintains a ratio of 1.26 police officer per 1,000 residents and maintains 0.72 professional staff support personnel per officer. CMPD indicated that, although there are no nationally recognized resident-to-officer ratios, according to Federal Bureau of Investigation reporting for 2020, the total ratio of officers to population nationally and in California should be 2.2 per 1,000 residents, which CMPD does not currently meet. CMPD operates with a customer service goal response time of 5 minutes or less for emergency response incidents and 30 minutes or less for non-emergency calls. In 2025, CMPD met their 5-minute response time goal for emergency calls for 97 percent of emergency calls and met their non-emergency response time goal of 30 minutes or less for approximately 88 percent of calls (Appendix I). 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.

The City is served by three CMPD stations within the city, including the Department's headquarters and two substations, one of which consists of three officers and exclusively serves South Coast Plaza (City of Costa Mesa 2016; CMPD 2025c). The locations of the CMPD stations can be found in Figure 4.15-2, Police Stations. Table 4.15-2, Police Stations Serving the City, represents a list of CMPD stations within the city.

Table 4.15-2. Police Stations Serving the City

Station	Address
Headquarters Station	99 Fair Drive, Costa Mesa, CA 92626
Substation	567 West 18th Street, Costa Mesa, CA 92626
South Coast Plaza Station	3333 Bristol Street, Costa Mesa, CA 92626

Source: City of Costa Mesa 2016

The operational funding for the CMPD comes from various types of tax revenue, and funding from the City's General Fund is also allocated to the CMPD upon approval by the City (City of Costa Mesa 2025a). Based on recent

correspondence with the CMPD (provided in Appendix I), although CMPD has adequate staffing and no current plans for construction of new or expansion of existing facilities serving the City, CMPD does want to increase staffing to expand public safety and community services, including the expansion of the patrol force and staffing for a new real time information center. However, new development in the city would increase residents, employees, and population within the CMPD service area. Assigning additional personnel beyond the current capacity of CMPD stations to meet acceptable service ratios would intensify the need for facility space and supporting equipment, as the CMPD Headquarters (HQ) is currently above capacity for staff, desired programs, and parking, and inhibits the efficient delivery of services. The City is currently discussing future plans to demolish and build a new Westside Substation to move some personnel and services to the south end of the city to help ease stress on the HQ building (Appendix I).

4.15.1.3 School Services

The Newport–Mesa Unified School District (NMUSD) provides public educational services for various areas in the region, including the City, the City of Newport Beach, and the neighborhood of Corona del Mar (NMUSD 2025a). NMUSD has a current enrollment of approximately 18,000 students across 31 schools: 22 elementary schools, two middle schools, three middle/high schools, and four high schools (NMUSD 2025a, 2025b). In addition to the NMUSD public schools that serve the City, there are also private schools in the city, as shown in Figure 4.15-3, Schools. NMUSD schools serve the City within three specifically designated zones that feed into three high schools: the "Costa Mesa Zone," the "Estancia Zone," and the "Newport Harbor Zone." Schools serving the Costa Mesa Zone include: College Park Elementary School (grades PS [preschool], TK [transitional kindergarten], K–6 [kindergarten through grade 6]), Killybrooke Elementary School (grades TK, K–6), Paularino Elementary School (grades PS, TK, K–6), Sonora Elementary School (grades PS, TK, K–6), Davis Magnet School (grades PS, K–6), Costa Mesa Middle/High School (grades 7–12), and Monte Vista Independent School (grades 7-12).[2] Schools serving the Estancia Zone within the city include: Adams Elementary School (grades TK, K–6), California Elementary School (grades TK, K–6), Pomona Elementary School (grades PS, TK, K–1), Rea Elementary School (grades 2–6),[3] Victoria Elementary School (grades TK, K–6), Wilson Elementary School (grades PS, TK, K–6), TeWinkle Middle School (grades 7-8), Estancia High School (grades 9–12), and Early College High School (grades 9-12).[4] Four schools primarily serve the Newport Harbor Zone and partially serve the City as well, including: Kaiser Elementary School (grades 2–6), Whittier Elementary School (grades PS, TK, K–6), Woodland Elementary School (grades PS, TK, K–1), and Back Bay High School (grades 9-12)[5] (NMUSD 2025b).

Figure 4.15-3, Schools, maps the respective locations of the NMUSD schools that serve the City, in addition to private schools and other educational facilities in the city. Table 4.15-3 provides the names, addresses, total enrollment capacities, and current enrollment of the schools for the 2025-2026 school year.

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2 Note that Davis Magnet School and Monte Vista Independent School have districtwide attendance boundaries and do not exclusively serve the Costa Mesa Zone (NMUSD 2025b).

3 Note that Rea Elementary School also serves the Newport Harbor Zone and does not exclusively serve the Estancia Zone (NMUSD 2025b).

4 Note that Early College High School has districtwide attendance boundaries and does not exclusively serve the Estancia Zone (NMUSD 2025b).

5 Note that Back Bay High School has districtwide attendance boundaries and does not exclusively serve the Newport Harbor Zone and the City (NMUSD 2025b).

Table 4.15-3. Schools Serving the City

Figure ID	School Name	Address	Enrollment Capacity	2025-2026 Enrollment
Costa Mesa Zone				
1	College Park Elementary School	2380 Notre Dame Road, Costa Mesa, CA 92626	912	489
2	Killybrooke Elementary School	3155 Killybrooke Lane, Costa Mesa, CA 92626	823	442
3	Paularino Elementary School	1060 Paularino Avenue, Costa Mesa, CA 92626	804	397
4	Sonora Elementary School	966 Sonora Road, Costa Mesa, CA 92626	922	345
5	Davis Magnet School	1050 Arlington Drive, Costa Mesa, CA 92626	1,258	546
6	Costa Mesa Middle/High School	2650 Fairview Road, Costa Mesa, CA 92626	—	1,596
7	Monte Vista Independent Study School	1001 Presidio Square, Costa Mesa, CA 92626	—	64
Estancia Zone				
8	Adams Elementary School	2850 Clubhouse Road, Costa Mesa, CA 92626	737	341
9	California Elementary School	3232 California Avenue, Costa Mesa, CA 92626	619	384
10	Pomona Elementary School	2051 Pomona Avenue, Costa Mesa, CA 92627	766	182
11	Rea Elementary School	661 Hamilton Avenue, Costa Mesa, CA 92627	868	405
12	Victoria Elementary School	1025 Victoria Street, Costa Mesa, CA 92627	701	281
13	Wilson Elementary School	801 Wilson Street, Costa Mesa, CA 92627	915	309
14	TeWinkle Middle School	3224 California Avenue, Costa Mesa, CA 92626	2,616	449
15	Estancia High School	2323 Placentia Avenue, Costa Mesa, CA 92627	1,276	947
16	Early College High School	2990 Mesa Verde Drive, Costa Mesa, CA 92626	—	148
Newport Harbor Zone				
17	Kaiser Elementary School	2130 Santa Ana Avenue, Costa Mesa, CA 92627	1,110	701
18	Whittier Elementary School	1800 Whittier Avenue, Costa Mesa, CA 92627	1,251	436
19	Woodland Elementary School	2025 Garden Lane, Costa Mesa, CA 92626	730	387

Table 4.15-3. Schools Serving the City

Figure ID	School Name	Address	Enrollment Capacity	2025-2026 Enrollment
20	Back Bay High School	390 Monte Vista Avenue, Costa Mesa, CA 92627	214	91
		Total	16,522[a]	8,940

Source: Appendix I; City of Costa Mesa 2016, 2025b.
Note:
- Not Available

[a] Note that this total is not inclusive of the total enrollment capacities of Costa Mesa Middle/High School, Monte Vista Independent Study School, or Early College High School, as the total capacities of these schools were not provided in Appendix I. Therefore, this is assumed to be an under-estimation of school capacity within Costa Mesa.

4.15.1.5 Libraries

Orange County Public Libraries (OCPL) operates 32 library branches, a bookmobile, and a satellite location at the Orangewood Children and Family Center, serving over 1.6 million residents in the County, including the City (OCPL 2024). As shown in Table 4.15-4, County Libraries Serving the City, the City is served by the Costa Mesa/Donald Dungan and the Costa Mesa/Mesa Verde library branches. The location of library facilities serving the City is illustrated in Figure 4.15-4, Libraries. The OCPL branches serving the City are listed below in Table 4.15-4, County Libraries Serving the City.

Table 4.15-4. County Libraries Serving the City

Library	Address	Staff and Resources
Costa Mesa/Donald Dungan	1855 Park Avenue, Costa Mesa, CA 92627	Staff: 13 staff members Collection: 67,312 items Resources: Book Club; Computer and Tech Tutoring; Hotspots; Laptop Kiosk; Library of Things; Private Study Rooms; Public Computers; Wi-Fi; Wireless Printing; World Language Collections
Costa Mesa/Mesa Verde	2969 Mesa Verde Drive, Costa Mesa, CA 92626	Staff: 10 staff members Collection: 42,571 items Resources: Book Club for Adults; Friends of the Library Bookstore; Hotspots; Laptop and Charger Kiosk; Library of Things; Public Computers; Wi-Fi; Wireless Printing; World Language Collections

Source: Appendix I; OCPL 2024, 2025a, 2025b

The Orange County General Plan service level guidelines require a minimum of 0.2 gross square foot of library facility space per capita (County of Orange 2026). According to OCPL, under existing conditions, the libraries serving the City currently meet the minimum requirements for the service population as no new facilities are currently required (Appendix I).

4.15.2 Regulatory Requirements[6]

4.15.2.1 Federal

National Fire Protection Association

The National Fire Protection Association recommends that fire departments respond to fire calls within six minutes of receiving the request for assistance 90 percent of the time. These time recommendations are based on the demands created by a structural fire. It is crucial to attempt to arrive and intervene at a fire scene prior to the fire spreading beyond the room of origin. Total structural destruction typically starts within eight to 10 minutes after ignition. Response time is generally defined as one minute to receive and dispatch the call, one minute to prepare to respond at the fire station or field and four minutes (or less) travel time.

Occupational Safety and Health Administration

The federal Occupational Safety and Health Administration (OSHA) enforces provisions of the federal occupational safety and health act, which requires safety and health regulations for construction under Part No. 1926 of Title 29 Code of Federal Regulations. The fire related requirements of OSHA are specifically contained in Subpart F, Fire Protection and Prevention. Examples of general requirements related to fire protection and prevention include maintaining fire suppression equipment specific to construction on-site, providing a temporary or permanent water supply of sufficient volume, duration, and pressure, properly operate on-site firefighting equipment, and keeping storage sites free from accumulation of unnecessary combustible materials.

4.15.2.2 State

California Health and Safety Code (Section 13000 et seq.)

State fire regulations are set forth in Section 13000 et seq. of the California Health and Safety Code, which include regulations concerning building standards (as 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. The State Fire Marshal enforces these regulations and building standards in all state-owned buildings, state-occupied buildings, and state institutions throughout California.

California Code of Regulations Title 24, Part 2 and Part 9

Part 2 of Title 24 of the California Code of Regulations refers to the California Building Code, which contains general building design and construction requirements relating to fire and life safety, structural safety, and access compliance. California Building Code provisions provide minimum standards to safeguard life or limb, health, property, and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all buildings and structures and certain equipment.

Part 9 of Title 24 refers to the California Fire Code, which contains regulations consistent with nationally recognized and accepted practices for safeguarding life and property from the hazards of the following: fire and explosion; dangerous conditions arising from the storage, handling, and use of hazardous materials and devices; and hazardous conditions in the use or occupancy of buildings or premises. The California Fire Code also contains

6 For a discussion of regulatory requirements related to park services, please refer to Section 4.16, Recreation, of this Draft PEIR.

provisions to assist emergency response personnel. The California Fire Code also establishes requirements intended to provide safety and assistance to firefighters and emergency responders during emergency operations. The provisions of the California Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout the State of California. The California Fire Code includes regulations regarding fire-resistance-rate construction, fire protection systems such as alarm and sprinkler systems, fire service features such as fire apparatus access roads, means of egress fire safety during construction and demolition, and wildland-urban interface areas. There are fire-safety-related building standards are referenced in other parts of Title 24. The 2022 California Fire Code is a fully integrated code based on the 2021 International Fire Code.

California Government Code

Section 65995. California Government Code Section 65995 (the Leroy F. Green School Facilities Act of 1998) set provisions for school districts to levy fees to help fund expanded facilities to house new pupils that may be generated by development projects. Sections 65996(a) and (b) of the California Government Code state that such fees collected by school districts provide full and complete school facilities mitigation under the California Environmental Quality Act (CEQA). These fees may be adjusted by the district over time as conditions change.

Section 66000. According to California Government Code Section 66000, a qualified agency, such as a local school district, may impose fees on developers to compensate for the impact that a project will have on existing facilities or services. The State of California legislature passed Senate Bill (SB) 50 in 1998, which inserted new language into the California Government Code (Sections 65995.5-65995.7), which authorized school districts to impose fees on developers of new residential construction in excess of mitigation fees authorized by California Government Code Section 66000. School districts must meet a list of specific criteria, including the completion and annual update of a School Facility Needs Analysis, in order to be legally able to impose the additional fees.

4.15.2.3 Local

Orange County General Plan

The General Plan guides policy for land use within Orange County, which is relevant for the purposes of library services, which are provided by Orange County. The following provides a summary of the applicable goals and policies that pertain to the Project. The Project would support and/or would not conflict with the implementation of the following goals and policies.

Public Services & Facilities Element

The Public Services & Facilities Element of the Orange County General Plan provides the following goals and policies potentially relevant to the subject of library services for the proposed Project. The Project would support and/or would not conflict with the implementation of the following goals and policies (County of Orange 2026):

Goal 1 Assure that an adequate level of library service is provided within the service area of the Orange County Public Library.

Policy 1. **Facility Siting.** Branch libraries shall be sited in central locations of the community to be served. Site selection criteria shall consider:

a) A service standard of 0.2 square foot of library space per capita;

b) Easy access, preferably on main thoroughfare;

c) Adequate lot size to accommodate, at minimum, an average branch library size of 10,000 square feet, and provisions for parking;

d) Located near a community center or neighborhood shopping area;

e) Located within a three mile radius of the community served.

Costa Mesa 2015-2035 General Plan

The General Plan guides policy for public services within the city of Costa Mesa. The following provides a summary of the applicable goals and policies that pertain to the Project. The Project would support and/or would not conflict with the implementation of the following goals and policies.

Land Use Element

The Land Use Element of the City's General Plan provides the following goals and policies potentially relevant to the subject of public services for the proposed Project. The Project would support and/or would not conflict with the implementation of the following goals and policies (City of Costa Mesa 2025b):

Goal LU-5 **Adequate Community Services, Transportation System, and Infrastructure to Meet Growth**.

Policy LU-5.4 Require appropriate site and environmental analysis for future fire and police station site locations or for the relocation or closure of existing fire and police facilities.

Policy LU-5.5 Ensure that new development pays its fair share of impact fees such as park fees and traffic impact fees. This can also include impact fees related to community services (police protection services and fire emergency response services) or library facilities, once adopted and applicable.

Safety Element

The Safety Element of the General Plan provides the following goals and policies relevant to the Project (City of Costa Mesa 2016):

Goal S-2: **High Level of Police and Fire Services and Emergency Preparedness.** Provide a high level of security in the community to prevent and reduce crime, and to minimize risks of fire to people, property, and the environment.

Policy S-2.1: Promote crime prevention strategies and provide a high level of response to incidents.

Policy S-2.2: Emphasize and prioritize crime prevention strategies, such as pedestrian-scale lighting in targeted areas.

Policy S-2.3: Timely response to incidents and monitoring areas with high crime rates should be part of a comprehensive strategy to reduce crime in the community.

Policy S-2.4: Provide a high level of police and fire service in the community. Secure adequate facilities, **equipment, and personnel for police and fire.**

Policy S-2.6: Require that water supply systems for development are adequate to combat structural fires in terms of location and minimum required fire-flow pressures.

Policy S-2.7: Require development to contribute its fair share toward funding the provision of appropriate fire and emergency medical services as determined necessary to adequately serve the project.

Policy S-2.12: Continue to maintain adequate police and fire staffing, facilities, equipment, and maintenance sufficient to protect the community.

Existing Community and Specific Plans

The 19 West Urban Plan, SoBECA Urban Plan, Mesa West Bluffs Urban Plan, Mesa West Residential Ownership Urban Plan/Mixed-Use Overlay, Harbor Mixed-Use Overlay, Residential Incentive Overlay, North Costa Mesa Specific Plan, One Metro West Specific Plan, and the Newport Boulevard Specific Plan are the existing urban and specific plans within the Planning Area. However, these plans do not include any applicable goals or policies pertaining to public services.

City of Costa Mesa Code

Title 7 – Fire Protection and Prevention

Chapter 2, Section 7-14, Adoption of the California Fire Code. The 2022 California Fire Code includes regulations regarding fire-resistance-rated construction, fire protection systems such as alarm and sprinkler systems, fire service features such as fire apparatus access roads, means of egress fire safety during construction and demolition, and wildland-urban interface areas.

Chapter 2, Section 7-15, Amendments to the 2022 California Fire Code. This purpose of this section is to adopt various amendments to the 2022 California Fire Code.

Title 13 – Planning, Zoning and Development

Chapter 7, Article 2, Section 13-270, Establishment of Development Impact Fee. According to the City's Code, the fire protection system development impact fee is based on the Costa Mesa Fire Protection System Fee Study. The mitigation fee shall provide funds for the City's future construction of facilities and equipment purchases or to reimburse the City for those identified facilities and equipment funded by the City with monies advanced by the City from other sources. Furthermore, the section states that a refund may be made when a building permit expires and no extensions have been granted for a development for which the funds have been collected. In addition, a developer may apply to the City Council for an adjustment of the fee if they feel the fee is disproportionate or not reasonably related to the impact of the project on the fire protection system.

Fire System Development Fees. As discussed in the City's Fiscal Year 2021-22 Development Impact Fee Report, the fire system fee provides funding for additional fire protection facilities, equipment, and paramedic support for which the need is generated by development on specific parcels in North Costa Mesa. This fee is currently only levied against five properties in the North Costa Mesa Specific Plan area: Home Ranch, South Coast Plaza Town Center, South Coast Metro Center, and Sakioka Farms' Lots 1 and 2. Fee Schedule: The fee is $0.285 per square foot of new commercial, industrial, or residential development (City of Costa Mesa 2022).

School District Developer Fees

As shown in Table 4.15-5, School District and Developer Fees, the Newport-Mesa Unified School District serves the City and Planning Area. School fees are collected by the district for all new residential and commercial development. The current school fees applicable to future development under the Project are provided below in Table 4.15-5.

Table 4.15-5. School District Developer Fees

School District	Fee Type	Developer Fees (Per Square Foot)	
		Residential	Commercial
Newport-Mesa Unified School District	Statutory Fees (Level I)	$5.17	$0.84

Source: NMUSD 2025c

4.15.3 Thresholds of Significance

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

Threshold 4.15-1: Create capacity or service level problems, or result in substantial adverse physical impacts associated with the provision of 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: [7]

i. Fire protection
ii. Police protection
iii. Schools
iv. Other public facilities

4.15.4 Impact Analyses

4.15.4.1 Methodology

As described in Chapter 3, Project Description, the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation Project is a policy document that does not include or propose any site-specific development that could directly result in construction or operational impacts to the environment. However, implementation of the Project would facilitate additional future development in the city. Therefore, this Draft PEIR does not assess the site-specific construction and operation details of each future development within the Planning Area. Rather, it assesses the impacts associated with changes to existing land uses and the associated overall effects of buildout of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation Project through 2056, where reasonably foreseeable physical changes to the environment could occur. Analysis at a parcel or site-specific level was not conducted because, unless otherwise noted within this

[7] Please refer to Threshold 4.16-1 in Section 4.16.4, Impact Analysis, of Section 4.16, Recreation, of this Draft PEIR for a comprehensive analysis of potential impacts relating to park services.

assessment, the actual locations of Project development (and its chronologic sequence or concurrence) that may be implemented in the future are speculative.

The City's General Plan and information obtained from the CMFRD, CMPD, NMUSD, and OCPL were used to evaluate public services located in the city and the Planning Area. The potential for the Project to result in impacts related to public services is dependent on the Project's effect on maintaining acceptable service ratios, response times or other performance objectives for fire protection services, police protection services, school services, and library services. Given that the Project, as a policy document, would not result in direct physical changes to the environment, the following analysis is based on Planning Area's existing conditions compared to the Project's buildout conditions under proposed land uses through 2056. Additionally, the following analysis is based on the Project's potential for future development in relation to where within the Planning Area's proposed land use changes would occur as a result of the Project.

4.15.4.2 Environmental Analyses

Threshold 4.15-1. 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:

i. Fire Protection Services?

Less-Than-Significant Impact. As detailed in Section 4.15.1, Existing Conditions, the Planning Area is served by existing CMFRD services and stations within the city. The location of fire stations can be found in Figure 4.15-1. Moreover, Table 4.15-2 shows stations that serve the City and Planning Area. CMFRD's standard for adequate response time is five minutes for 80 percent of emergency calls (City of Costa Mesa 2016).

No specific development is proposed as part of the Project that would have direct impacts on fire protection services. However, implementation of the Project would facilitate future development projects that would increase demand on fire protection services as a result of construction and operation. As stated by CMFRD, the existing fire facilities in the city would not be sufficient to accommodate full buildout of the proposed Project and the Project would therefore require new facilities and/or physically altered facilities in order to maintain acceptable service ratios, response times, and operational performance objectives (Appendix I).

Existing City policies and regulations are intended to minimize impacts to performance objectives of fire protection services (i.e., standard response times). For example, CMFRD receives revenue from established fire system development impact fees in the city at a rate of $0.285 per square foot of new commercial, industrial, or residential development (City of Costa Mesa 2022). As new development occurs, payments would occur to fund the construction of new facilities and equipment purchases. Operational funding for the CMFRD is also supported by the City's General Fund. The City allocates funding for various City-provided public services, including CMFRD. As the City's population and demand for CMFRD's services increase, the City would allocate resources from the City's General Fund during the annual budgeting process to address staffing and equipment needs to serve the City.

Additionally, existing building and fire codes, as outlined in Section 4.15.2, Regulatory Requirements, require fire hydrants, sprinkler systems, and adequate access for emergency vehicles, which would reduce potential impacts of the future development on fire protection and emergency services. These Project design elements would be reviewed and approved by the City Public Works Department and CMFRD prior to the issuance of building permits

for each future development within the Planning Area. As such, future development projects would comply with all applicable provisions of the City's Fire and Building Codes. These existing City permitting procedures for development would reduce potential impacts to fire protection services. Moreover, implementation of the Project would be gradually implemented through 2056, and CMFRD would add staff and equipment to the existing stations on an as-needed basis over time in order to accommodate increased demand.

All future development under the Project would undergo project-level review for compliance with applicable Zoning Code provisions and other regulatory requirements. In the event that new or expanded facilities are required, the amended MUOD requires development of a minimum of 50 percent residential on Housing Element sites, which would likely eliminate the option of developing a fire station on these properties. On non-Housing Element sites, the amended MUOD would provide property owners with the option to redevelop their site with residential or mixed-use development under the provisions of the MUOD or to redevelop the site as currently permitted by the underlying base zone. As such, the amended MUOD could allow for future development of public service uses, such as new CMFRD stations, on non-Housing Element sites within the Planning Area. The Project would facilitate approximately 10,630,361 net square feet of non-residential/commercial use by 2056, which could allow for the construction or expansion of CMFRD facilities. Therefore, the potential construction or expansion of CMFRD facilities would not result in any new adverse physical effects beyond what has already been assessed in this PEIR, and impacts would be less than significant. No mitigation is required.

ii. Police Protection Services?

Less-Than-Significant Impact. Police protection services for the City are provided by CMPD, as outlined in Section 4.15.1, above. The locations of police stations serving the Planning Area (i.e., the Headquarters, Substation, and South Coast Plaza Stations) are listed in Table 4.15-2, Police Stations Serving the City, and are illustrated in Figure 4.15-2, Police Stations. The CMPD currently maintains a ratio of 1.26 police officer per 1,000 residents and maintains 0.72 professional staff support personnel per officer (Appendix I). As previously discussed, the CMPD operates with a customer service goal response time of 5 minutes or less for emergency response incidents and 30 minutes or less for non-emergency calls (Appendix I). However, response time is variable, particularly because the nearest responding patrol car may be located anywhere within the station's patrol area and may not necessarily respond directly from the station itself.

In 2025, CMPD met their 5-minute response time goal for emergency calls for approximately 97 percent of emergency calls and met their non-emergency response time goal of 30 minutes or less for approximately 88 percent of calls (Appendix I). Therefore, according to CMPD's performance measures and customer service goals, police protection services are currently meeting standard response times within the city.

Based on recent correspondence with the CMPD (provided in Appendix I), CMPD has no current plans for construction of new or expansion of existing facilities serving the City. Although, the City is currently discussing future plans to demolish and build a new Westside Substation to move some personnel and services to the south end of city to help ease stress on the HQ building (Appendix I). New development in the city would increase the number of residents, employees, and the total population within the CMPD service area. Assigning additional personnel to the HQ building to meet acceptable service ratios would intensify the current need for additional facility space and supporting equipment at that station. The Project would result in an increase in population and employment throughout the Planning Area. Therefore, the Project could create capacity or service level problems and result in the need for new or physically altered facilities in order to maintain acceptable service ratios, response times or other performance objectives for police protection services.

The Project would be gradually implemented through 2056, and the CMPD would add staff and equipment to the existing stations on an as-needed basis over time to accommodate increased demand. If additional law enforcement personnel are required to meet acceptable service ratios, modifications to law enforcement service contracts and equipment assets may be required. As discussed in Appendix I, based upon the Project's projected growth, CMPD suggests that a police substation be established north of I-405 to allow for additional personnel, parking for additional police vehicles, and faster response times, and anticipates that an increase of about 91 officers and 66 professional staff over the next two decades would be required to maintain service ratios, or roughly 4–5 officers and 3–4 professional staff per year. Operational funding for CMPD is derived from service contracts and various types of tax revenue (property taxes, sales taxes, user taxes, vehicle license fees, deed transfer fees, etc.) that are deposited in the City's General Fund. The City approves and allocates the revenue for various City-provided public services, including CMPD's services (City of Costa Mesa 2025a). As future development occurs, tax revenues from property and sales taxes would be generated and deposited in the City's General Fund. A portion of these revenues would be allocated to the CMPD during the City's annual budgeting process, as is the case in current conditions, to address staffing and equipment needs to serve the City, including the Planning Area. These funds would need to be allocated to the CMPD and approved by the City (Appendix I). Funding for CMPD is annually evaluated and may vary from year to year. City revenues that would be allocated to the CMPD through the annual budgeting process would help maintain acceptable service ratios, response times or other performance objectives for police protection services.

As stated above, new or expanded CMPD facilities may be required in order to maintain acceptable service ratios, response times or other performance objectives for police protection services. In the event that new or expanded facilities are required, the amended MUOD requires development of a minimum of 50 percent residential on Housing Element sites, which would likely eliminate the option of developing a CMPD station on these properties. On non-Housing Element sites, the amended MUOD would provide property owners with the option to redevelop their site with residential or mixed-use development under the provisions of the MUOD. As such, the Project could allow for future development of public service uses, such as new CMPD stations, on non-Housing Element sites within the Planning Area utilizing the provisions of the amended MUOD. As previously discussed, the PEIR does not address specific development projects; however, the potential adverse physical impacts associated with buildout under the Project's proposed land use changes (including approximately 10,630,361 square feet of new commercial building area and approximately 51,572 additional residents and 14,454 additional employees in the Planning Area) are evaluated throughout this PEIR. Therefore, the potential construction or expansion of CMPD facilities would not result in any new adverse physical effects beyond what has already been assessed in this PEIR, and impacts would be less than significant. No mitigation is required.

iii. Schools?

Less-Than-Significant Impact. NMUSD offers education to all school-age residents within the city and Planning Area. As shown above in Table 4.15-3, Public Schools Serving the City, 20 NMUSD schools serve the City and Planning Area. Figure 4.15-3, Schools, illustrates the schools serving the City.

No direct development is proposed as part of the Project. However, land use changes proposed by the Project would facilitate future residential development in the city, which would generate demand for school services provided by the NMUSD. The proposed land use changes would facilitate development of approximately 21,522 additional dwelling units within the Planning Area. According to the Office of Public School Construction's standard rate for unified school districts, the student generation rate is 0.7 students per dwelling unit (OPSC 2019). Based on this

student generation rate, approximately 15,066 additional students[8] are anticipated at buildout of the Project. As such, the Project would increase demand on schools to provide school services. To maintain acceptable service ratios or other performance objectives, NMUSD indicated that the construction of new or expansion of existing school facilities would be required (Appendix I).

However, implementation of the Project would be gradually implemented through 2056. Moreover, existing funding mechanisms would lessen potential impacts related to an increase in the student population. As detailed in Section 4.15.1, the schools serving the City are, in part, funded through the payment of development fees pursuant to SB 50 (Government Code Section 65995). These fees would be required to be paid by future development prior to issuance of building permits and would be used to offset the impact of an additional student population. According to SB 50, payment of these fees constitutes adequate mitigation related to impacts to school facilities. Secondary impacts related to vehicle trips, including vehicle trips potentially from school parents and busing activities, are accounted for in the transportation, air quality, greenhouse gas, and noise analyses of this Draft PEIR (see Section 4.3, Air Quality; Section 4.8, Greenhouse Gas Emissions; Section 4.13, Noise; and Section 4.17, Transportation of this Draft PEIR).

Furthermore, a school district and a project applicant/developer have the option of entering into various alternative mitigation agreements to ensure the timely construction of school facilities to house students from new residential development. The primary financing mechanism authorized in these mitigation agreements is the formation of a community facilities district, pursuant to the Mello-Roos Community District Act of 1982. In lieu of an alternative mitigation agreement, state-mandated school facilities fees, which help maintain adequate school facilities and levels of service may also reduce potential impacts. Ultimately, the provision of schools is the responsibility of the school district. SB 50 provides that the statutory fees found in the Government and Education Codes are the exclusive means of considering and mitigating for school impacts. As previously mentioned, imposition of the statutory fees constitutes full and complete mitigation (Government Code Section 65995[b]). Therefore, impacts would be less than significant, and no mitigation is required.

iv. Other public facilities (libraries)?

Less-Than-Significant Impact. Library services in the city are provided by the OCPL system, as discussed in Section 4.15.1, above. The library locations are illustrated in Figure 4.15-4 and detailed in Table 4.15-4. The Orange County General Plan stipulates a minimum of 0.2 square feet of library facility space per capita (County of Orange 2026). No direct development is proposed as part of the Project. However, land use changes proposed by the Project would facilitate future development that could potentially result in a significant impact on existing library services. Although the proposed Project would not require the construction of new library facilities, implementation of the Project would increase demand on existing library services and facilities, resulting in the need for ongoing operational and maintenance activities (e.g., infrastructure upgrades) and additional materials/personnel in order to maintain acceptable service ratios and other performance objectives (Appendix I).

OCPL service standards are determined by a systemwide Library Advisory Board Resource Deployment Formula that is adjusted as needed. As stated in Appendix I, under existing conditions, the libraries serving the City currently meet the minimum requirements for the service population, as no new facilities are currently required. However, the Project would have potentially significant impacts on OCPL's service capabilities, specifically, the Mesa Verde Library (Appendix I). Implementation of the Project would be gradually implemented through 2056, and while OCPL would experience a large influx of new users, funding for OCPL services is provided through County property taxes

[8] 21,522 additional dwelling units x 0.7 students per dwelling unit = 15,065.4 additional students (or approximately 15,066 additional students)

dedicated to the library (County of Orange 2025). These funds would be used to upgrade and expand existing facilities, as needed. As such, future residential development facilitated as a result of the Project's proposed land use changes would be required to provide payment of fees to reduce impacts to library facilities and services. These fees could be used to address the need for ongoing operational and maintenance activities and/or additional materials/personnel at the existing libraries serving the City. In addition, as indicated by OCPL, the construction of new library branches would not be required as a result of Project implementation (Appendix I). Furthermore, the potential need for future library facilities is too speculative at this time and impacts from future development under the Project relating to library services would be analyzed on a project-by-project basis. Therefore, impacts related to library services would be less than significant, and no mitigation is required.

4.15.5 Cumulative Impact Analyses

Where a lead agency concludes that the cumulative effects of a project, taken together with the impacts of other closely related past, present, and reasonably foreseeable future projects are significant, the lead agency then must determine whether the project's incremental contribution to such significant cumulative impact is "cumulatively considerable" (and thus significant in and of itself). The cumulative study area used to assess potential cumulative public services impacts includes the city of Costa Mesa and considers the future buildout of applicable local and regional plans. The full list of related plans applicable to the Project's cumulative analyses is provided in Section 2.5, Cumulative Impact Analysis, in Chapter 2, Environmental Setting of this Draft PEIR.

As discussed in Section 4.14, Population and Housing, of this Draft PEIR, the buildout of the proposed Project by 2056 would exceed the growth projections for the City in the City's General Plan. The cumulative impact of this population increase in the city would increase demand on public services, such that the provision of new or physically altered governmental facilities could cause significant environmental impacts.

Threshold 4.15-1(i) (Fire Protection). Cumulative development in the city would increase the demand for fire protection and emergency medical services to accommodate new population growth and development. This increased demand from the implementation of related plans has the potential to affect existing service levels and response times for the CMFRD, resulting in a cumulatively significant impact.

While the Planning Area primarily relies on the CMFRD for fire protection services, it also borders various jurisdictions served by local fire departments. These local departments may be required to respond to incidents within the city and the Planning Area. As such, the Project could increase demand on fire departments in these adjacent jurisdictions. This could potentially lead to a future need for new or expanded facilities in these jurisdictions; however, the potential need for future facilities would be speculative at this time. Furthermore, while the construction and operation of new or expanded facilities in adjacent areas may have localized impacts, individual facilities would not contribute to any additive cumulative or regional impacts.

The necessity for constructing new or expanded fire protection facilities to serve cumulative demands would be assessed by the CMFRD, the City's Planning Commission, or similar entities in adjacent jurisdictions. This would occur during the annual budgetary process and would comply with relevant state and local environmental laws, including evaluations pursuant to CEQA. Operational funding for CMFRD and other fire departments serving related projects in adjacent areas comes from a variety of sources, including contracts, developer fees, property taxes, sales taxes, user taxes, vehicle license fees, and deed transfer fees. These funds are allocated annually in a manner designed to provide for adequate staffing levels and facilities to serve future development within the city and surrounding jurisdictions.

Although the Project could result in the need for new or expanded CMFRD facilities, these facilities could be accommodated within parcels subject to proposed land use changes, the potential impacts of which are analyzed throughout this PEIR. While the construction and operation of new or expanded CMFRD facilities may have localized impacts, individual facilities would not contribute to any additive cumulative or regional impacts. Therefore, the Project's incremental contribution to impacts on fire protection services would not be cumulatively considerable.

Threshold 4.15-1(ii) (Police Protection). Cumulative development in the city would incrementally increase the demand for law enforcement services to serve new population and development. This increase in demand for law enforcement services from implementation of related plans would have the potential to affect existing service levels and response times for the CMPD and other police departments from neighboring jurisdictions, resulting in a cumulatively significant impact.

Although the City primarily relies on the CMPD for law enforcement services, the Planning Area is adjacent to various jurisdictions served by local police departments. These local departments may be called to respond to incidents within the city. As such, the Project could increase demand on departments in adjacent jurisdictions. This could potentially lead to the future need for new or expanded facilities in adjacent jurisdictions; however, the potential need for future facilities is unknown and would be speculative at this time. Furthermore, while the construction and operation of new or expanded facilities in adjacent areas may have localized impacts, individual facilities would not contribute to any additive cumulative or regional impacts.

The need for construction of new or expanded law enforcement facilities to serve cumulative demands would be assessed by the CMPD, the City's Planning Commission, or similar entities in adjacent jurisdictions. This would take place during the annual budgetary process and would comply with relevant state and local environmental laws, including evaluations pursuant to CEQA. Operational funding for CMPD and other police departments serving related projects in adjacent jurisdictions comes from a variety of sources, including contracts, developer fees, property taxes, sales taxes, user taxes, vehicle license fees, and deed transfer fees. These funds are allocated annually in a manner to provide for appropriate staffing levels and facilities to serve future developments in their respective jurisdictions.

Although the Project could result in the need for new or expanded CMPD facilities, these facilities could be accommodated within the Planning Area on non-Housing Element sites where the amended MUOD would allow property owners to utilize parcels' underlying base commercial and industrial zones to develop the site, the potential impacts of which are analyzed throughout this PEIR. While the construction and operation of new or expanded CMPD facilities in the city may have localized impacts, individual facilities would not contribute to any additive cumulative or regional impacts. Therefore, the Project's incremental contribution to impacts on police services would not be cumulatively considerable.

Threshold 4.15-1(iii) (Schools). Cumulative residential development would incrementally increase the student population in the city and could affect student/facility ratios and require the construction or expansion of NMUSD school facilities to maintain adequate service ratios, which would have the potential to create a potentially significant impact on the environment. However, state law requires residential development projects to pay established school impact fees in accordance with SB 50 prior to the issuance of a building permit. The funding program established by SB 50 has been found by the legislature to constitute "full and complete mitigation of the impacts of any legislative or adjudicative act…on the provision of adequate school facilities" (Government Code Section 65995[h]). Therefore, the fees authorized for collection under SB 50 are conclusively deemed full and adequate mitigation of impacts on school district facilities. Therefore, the Project's incremental contribution to impacts on school services would not be cumulatively considerable.

Threshold 4.15-1(iv) (Libraries). OCPL serves Orange County with library services, including the City. Related residential development would increase the demand for library services and could result in the need to construct additional or expand existing library facilities, which could result in a significant adverse physical impact on the environment. The need for the construction of new or expanded library facilities to serve cumulative demands would be determined by the OCPL and the Orange County Board of Supervisors through the annual budgetary process and would be evaluated for environmental impacts in compliance with applicable state and local laws. As with the Project, future cumulative development would generate new tax revenues, and as discussed above, funding sources for OCPL consisting of property taxes, state assistance, and revenue from fines, mitigation fees, and other miscellaneous revenue would help reduce impacts. Although cumulative development could result in the need for new or expanded library facilities (potentially resulting in a cumulatively significant impact), required payment of library facilities fees for residential projects would reduce the Project's incremental contribution to impacts on library facilities. Thus, impacts would not be cumulatively considerable.

4.15.6 Mitigation Measures

All impacts related to Fire Protection, Police Protection, School Services, and Libraries would be less than significant and no mitigation is required.

4.15.7 Level of Significance Conclusion

Threshold 4.15-1(i) (Fire Protection). Impacts to fire services would be **less than significant** and would not be cumulatively considerable.

Threshold 4.15-1(ii) (Police Protection). Impacts to police protection services would be **less than significant** and would not be cumulatively considerable.

Threshold 4.15-1(iii) (Schools). Impacts to school services would be **less than significant** and would not be cumulatively considerable.

Threshold 4.15-1(iv) (Libraries). Impacts to library services would be **less than significant** and would not be cumulatively considerable.

4.15.8 References

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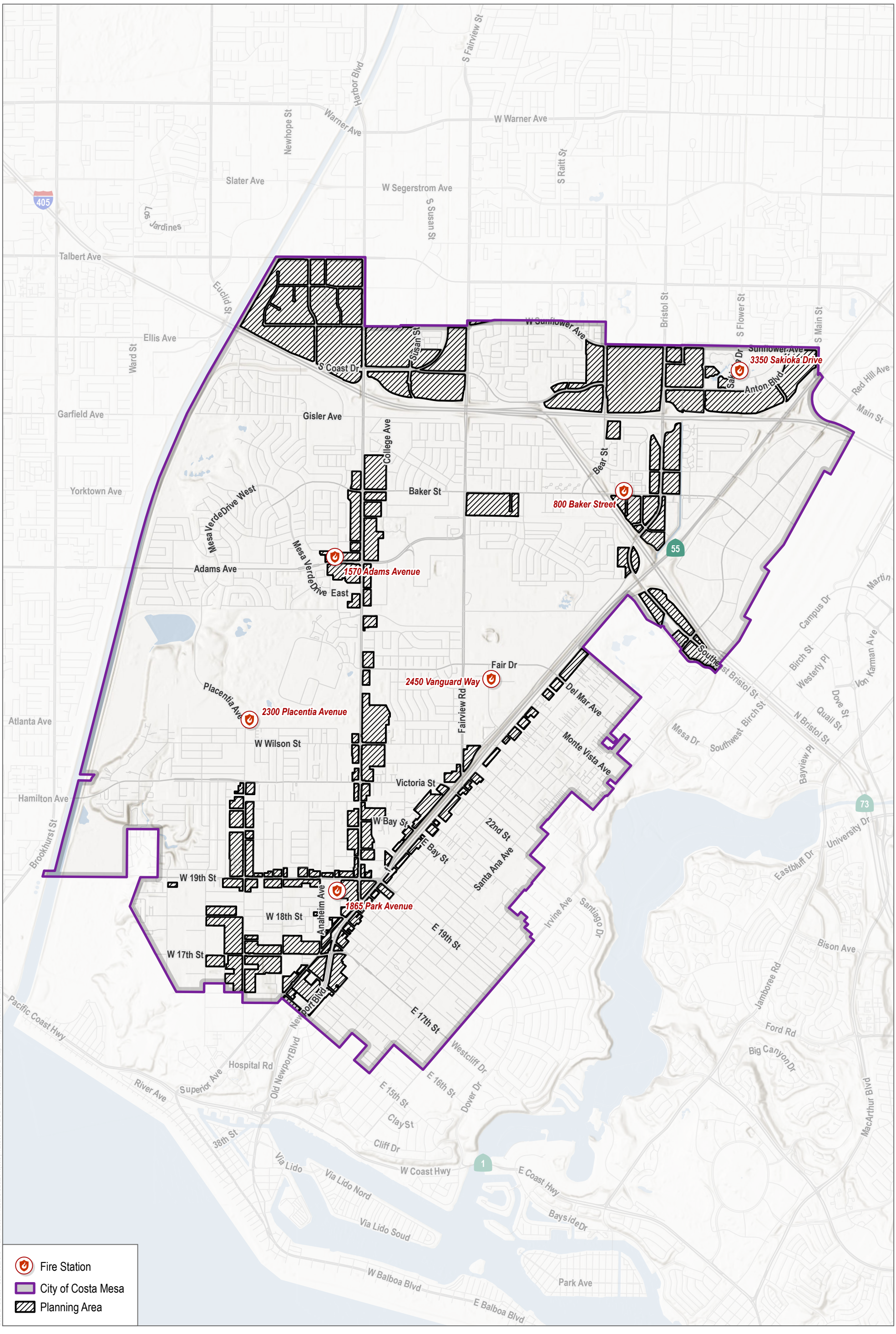

SOURCE: Esri, Open Street Map

FIGURE 4.15-1

Fire Stations

DUDEK

0 1,500 3,000 Feet

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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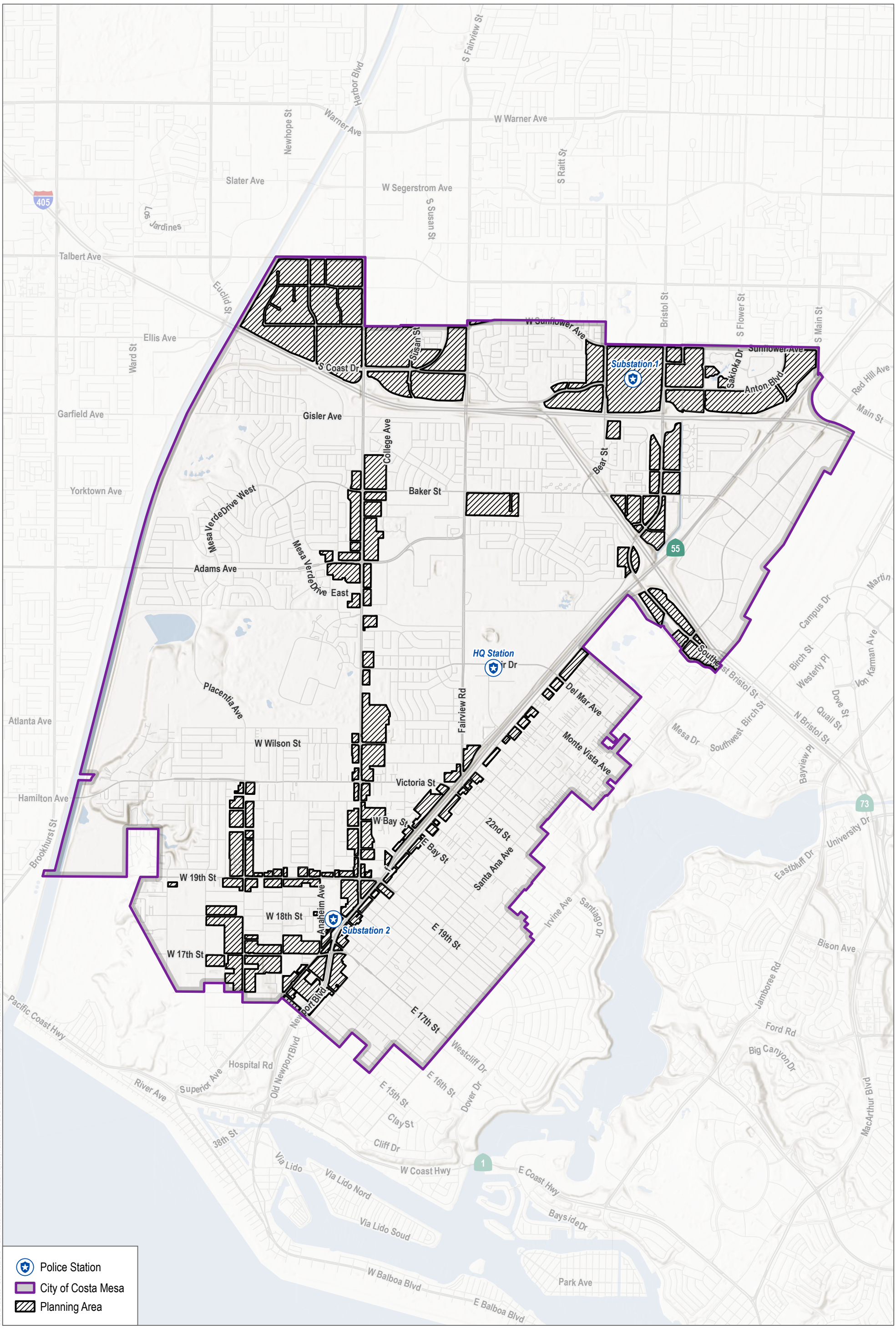

SOURCE: Esri, Open Street Map

DUDEK

0 1,500 3,000 Feet

FIGURE 4.15-2

Police Stations

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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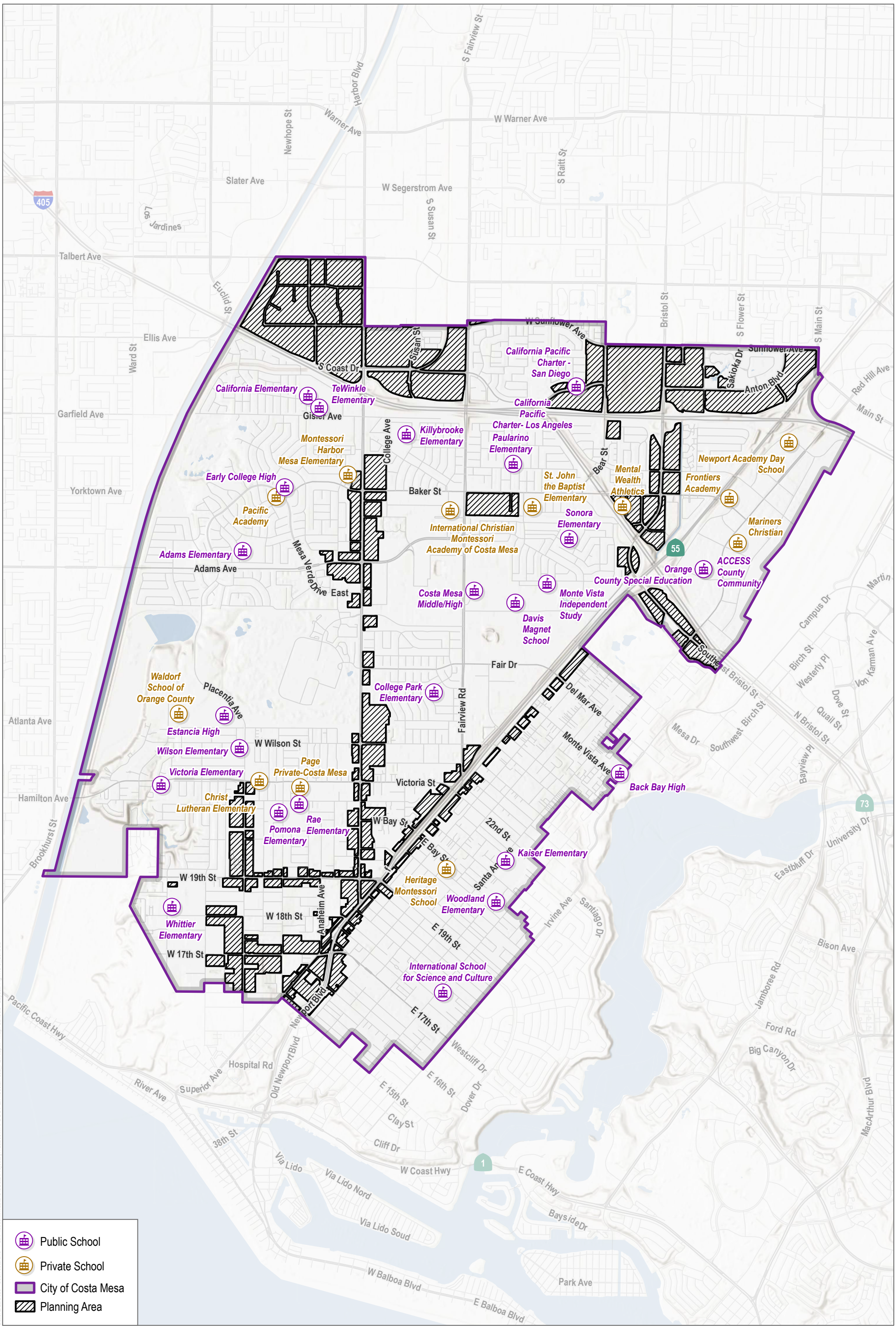

SOURCE: Esri, Open Street Map, California Department of Education

DUDEK

0 1,500 3,000 Feet

FIGURE 4.15-3

Schools

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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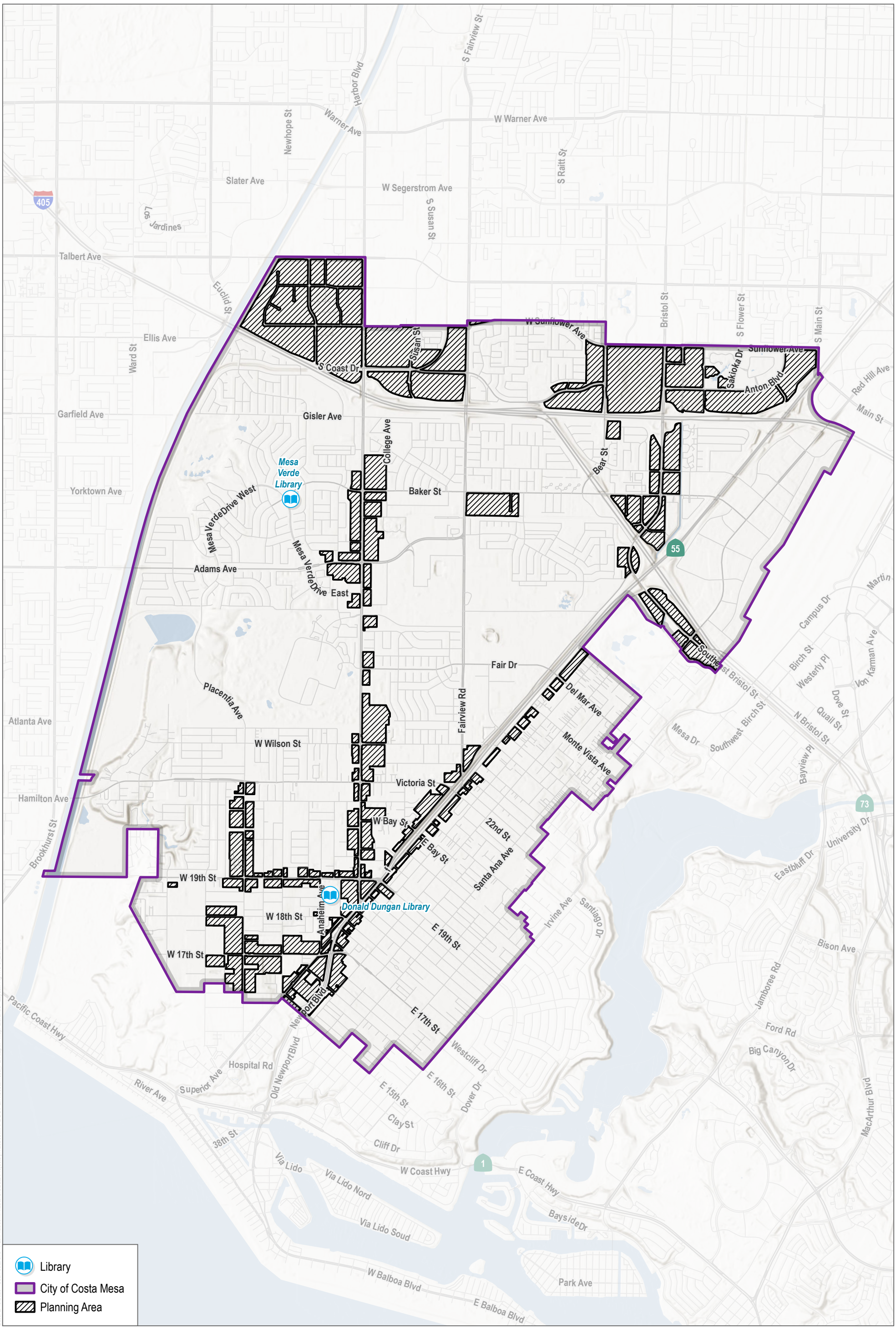

SOURCE: Esri, Open Street Map, Open Street Map 2019

DUDEK

0 1,500 3,000 Feet

FIGURE 4.15-4

Libraries

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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4.16 Recreation

This section of the Draft PEIR analyzes the potential impacts from the implementation of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation (Project) on recreational facilities, including neighborhood and regional parks, to determine whether substantial physical deterioration of a facility could occur or be accelerated. A description of the existing parks and recreational facilities for the City of Costa Mesa and Planning Area is also provided to present the environmental baseline conditions. The analysis is based, in part, on review of the Costa Mesa 2015-2035 General Plan (General Plan), online resources from the City's Parks and Community Services Department, and the following appendix:

Appendix I Public Services Correspondence

Other sources consulted are listed in Section 4.16.8, References.

4.16.1 Existing Conditions

The City's Parks and Community Services Department is responsible for programming and managing park land in the city, including 31 parks identified in Table 4.16-1, and is committed to enhancing the community through the delivery of innovative recreational programs, quality parks and facilities, and services that promote social, physical, and emotional well-being (City of Costa Mesa 2026). Table 4.16-1 shows the neighborhood parks and community parks serving the City of Costa Mesa, including location and acreage, which are also shown in Figure 4.16-1, Parks.

Table 4.16-1. Parks Serving the City

	Park Facility Name	Address	Size (in acres)
Neighborhood Parks			
1	Bark Park[1]	970 Arlington Drive	2.00
2	Brentwood Park	265 Brentwood Street	2.60
3	Del Mesa Park	2080 Manistee Drive	2.47
4	Estancia Park	1900 Adams Avenue	9.03
5	Gisler Park	1250 Gisler Street	4.59
6	Harper Park	425 E. 18th Street	1.06
7	Heller Park	257 E. 16th Street	2.61
8	Jordan Park	2141 Tustin Avenue	2.48
9	Ketchum-Libolt Park	2150 Maple Street	0.34
10	Lindbergh Park	220 E. 23rd Street	2.00
11	Marina View Park	1035 W. 19th Street	2.29
12	Mesa Verde Park	1795 Samar Drive	2.73
13	Moon Park	3377 California Street	1.67
14	Neth Park	77 Fair Drive	2.50
15	Paularino Park	1040 Paularino Avenue	2.23
16	Perez Park	308 University Drive	0.12
17	Pinkley Park	360 E. Ogle Street	2.57
18	Shalimar Park	782 Shalimar Drive	0.18

[1] Note that Bark Park is located within the boundary of TeWinkle Park at 970 Arlington Drive in the City (see Figure 4.16-1).

Table 4.16-1. Parks Serving the City

	Park Facility Name	Address	Size (in acres)
19	Shiffer Park	3143 Bear Street	7.09
20	Smallwood Park	1646 Corsica Place	3.39
21	Suburbia Park	3302 Alabama Circle	0.53
22	Tanager Park	1780 Hummingbird Drive	7.41
23	Vista Park	1200 Victoria Street	5.92
24	Wilson Park	360 W. Wilson Street	3.61
25	Wimbledon Park	3440 Wimbledon Way	3.29
		Total Neighborhood Park Acres	74.71
Community Parks			
26	Balaeric Park	1975 Balearic Drive	**10.06**
27	Canyon Park	970 Arbor Street	**35.96**
28	Fairview Park	2525 Placentia Avenue	**208.00**
29	Lions Park	570 W. 18th Street	**12.82**
30	TeWinkle Park	970 Arlington Drive	**43.67**
31	Wakeham Park	3400 Smalley Street	**10.33**
		Total Community Park Acreage	**320.84**
Regional Park / Nature Preserve			
32	Talbert Regional Park	1298 Victoria Street	**180.00**
		Total Regional Park Acreage	**180.00**
		Total Park Acreage	**575.55**

Source: Appendix I; City of Costa Mesa 2016, 2025a.

As shown in Table 4.16-1, Parks Serving the City, and Figure 4.16-1, Parks, the City's park system includes 74.71 acres of neighborhood parks, 320.84 acres of community parks, and 180 acres of regional nature preserve (Talbert Regional Park). In addition, the City also provides 871.94 acres of institutional park uses,[2] 150 acres of parks and open space associated with the Orange County Fair and Event Center, 6.19 acres of open space easements, and 379.7 acres of golf courses, for a total of 1,985.42 acres of parks and open space (City of Costa Mesa 2016, 2025a). Talbert Regional Park/Nature Preserve is owned and managed by the County of Orange and is located in the city, as shown on Figure 4.16-1 (Appendix I). As discussed in the City's General Plan, Talbert Regional Park/Nature Preserve encompasses 180 acres along the Santa Ana River, including 97 acres within the coastal zone, and includes six distinct introduced and native plant zones intended to accommodate more active human use and provide a visual screen. Talbert Regional Park is part of the Orange County Central/Coastal Subregional NCCP/HCP open space and natural habitat reserve system. Talbert Regional Park includes hiking and running trails and bird-watching areas (City of Costa Mesa 2016).

According to the City's General Plan, the City aims to provide 4.26 acres of parkland for every 1,000 residents; thus, assuming a current Census population of 109,131 people in the city (see Section 4.14, Population and Housing), this would equate to a current requirement to provide approximately 464.9[3] acres of parkland throughout the city

[2] This includes schools, colleges, public facilities, Civic Center, Santa Ana River right-of-way, Fairview Developmental Center, and other public and institutional uses (City of Costa Mesa 2016).

[3] 4.26 acres of parkland x (109,131 residents / 1,000) = 464.9 acres of parkland.

(Appendix I). Including Talbert Regional Park, the city contains approximately 576 acres of parkland (Appendix I).[4] The City currently achieves a parkland ratio of approximately 5.28 acres of parkland per 1,000 residents[5] (Appendix I). Therefore, the City currently exceeds parkland requirements by approximately 113.1 acres of parkland and exceeds the parkland per 1,000 residents ratio by approximately 1.04 acres per 1,000 residents. The Planning Area is located throughout the city; thus, a majority of the City's parks and recreational facilities would be within the vicinity of the Project.

Recreational facilities within the city are illustrated in Figure 4.16-2, Recreational Facilities. In addition, the City utilizes open space and recreational facilities associated with Newport Mesa Unified School District (NMUSD) schools. According to the draft Parks, Recreation, and Open Space Master Plan Update, NMUSD facilities include 27 utility fields, including 19 baseball/softball diamonds (City of Costa Mesa 2018). The City also utilizes several NMUSD elementary and middle school facilities for after-school programs, and all elementary, middle, and high school athletic fields for youth and adult sports programming (City of Costa Mesa 2016). In addition, the City operates and maintains the Costa Mesa Country Club, a municipal golf club located adjacent to Fairview Park that includes two 18-hole golf courses, a driving range, a banquet facility, a coffee shop, and a pro shop (Appendix I).

The City also operates the Costa Mesa Tennis Center within TeWinkle Park, three community centers (Balearic Community Center, Downtown Recreation Center, and the Norma Hertzog Community Center), and the Costa Mesa Senior Center (City of Costa Mesa 2016, 2025b). The Costa Mesa Senior Center provides seniors with social, recreational, and lifelong learning programs designed to encourage a healthy and active lifestyle (Appendix I).

Additionally, within the city, the County of Orange operates the 150-acre Orange County Fair and Event Center, including a 3.5-acre outdoor agricultural and livestock area that supports education programs for school-aged children, a 14.5-acre equestrian center, the outdoor Pacific Amphitheatre, and multipurpose gathering areas (City of Costa Mesa 2016).

4.16.2 Regulatory Requirements

4.16.2.1 Federal

There are no federal policies or regulations applicable to parks or recreation with respect to the Project.

4.16.2.2 State

California Government Code

Quimby Act

The Quimby Act (Government Code Section 66477), enacted in 1975, creates a framework that allows cities and counties to provide parks for growing communities. The Quimby Act authorizes jurisdictions to adopt ordinances that require parkland dedication or payment of in-lieu fees as a condition of approval of residential subdivisions. The Quimby Act also specifies acceptable uses and expenditures of the funds, such as allowing developers to set aside land, donate conservation easements, or pay direct fees for park improvements. In 2022, the City of Costa

[4] Without considering Talbert Regional Park, the City would not meet the General Plan's goal of 4.26 acres of parkland per 1,000 residents under existing conditions; however, for the purposes of this analysis, this PEIR includes Talbert Regional Park in the City's parkland calculations.

[5] 576 acres of parkland / (109,131 residents / 1,000) = 5.28 acres of parkland per 1,000 residents.

Mesa collected $1,278,941 in park development fees from the Quimby Act and ended the year of 2022 with $3,615,436 in the park development fee fund (City of Costa Mesa 2022).

Mello-Roos Community Facilities Act

The Mello-Roos Community Facilities Act (Government Code Section 53311), enacted in 1982, provides an alternative method of financing certain public capital facilities and services, especially in developing areas and areas undergoing rehabilitation. This state law empowers local agencies to establish Community Facilities Districts, special districts established by local governments in California, as a means of obtaining community funding.

4.16.2.3 Local

Costa Mesa 2015-2035 General Plan

Land Use Element

The Land Use Element of the City's General Plan provides the following goals and policies potentially relevant to the subject of parks and recreation for the proposed Project. The Project would support and/or would not conflict with the implementation of the following goals and policies (City of Costa Mesa 2025c):

Policy LU-5.5: Ensure that new development pays its fair share of impact fees such as park fees and traffic impact fees. This can also include impact fees related to community services (police protection services and fire emergency response services) or library facilities, once adopted and applicable.

Open Space and Recreation Element

The Open Space and Recreation Element of the General Plan guides policy for parks and community-serving facilities that enhance the quality of life for residents and are important components of complete and sustainable neighborhoods. The purpose of the Open Space and Recreation Element is to provide the policy framework for the maintenance and preservation of the City's open space and recreation system. The following summarizes the applicable goals and policies that pertain to the Project (City of Costa Mesa 2016):

Goal OSR-1: **Balanced and Accessible System of Parks and Open Spaces.** Provide a high-quality environment through the development of recreation resources and preservation of open space that meets community needs in Costa Mesa.

Policy OSR-1.1: Maintain a system of Neighborhood and Community Parks that provide a variety of active and passive recreational opportunities throughout the City.

Policy OSR-1.2: Provide parks and recreation facilities appropriate for the individual neighborhoods in which they are located and reflective of the needs and interests of the population they serve.

Policy OSR-1.5: Maximize public space by requiring plazas and public gathering spaces in private developments that can serve multiple uses, including recreation and social needs.

Policy OSR-1.8: Require that parks and recreation facilities reflect new trends and population changes, and are developed with facilities appropriate to all ages, including athletic fields, active play areas, passive open space, tot lots, and picnic areas.

Policy OSR-1.13: Design and reform parks to reflect the latest recreational features that respond to demographic changes and community needs.

Policy OSR-1.18: Provide a minimum of 4.26 acres of parkland per 1,000 residents.

Policy OSR-1.20: Enhance pedestrian, bicycle, and transit linkages to meet the needs of residents and to provide better access to parks, recreation, and public spaces.

Policy OSR-1.21: Provide opportunities for public access to all open space areas, except where sensitive resources may be threatened or damaged, public health and safety may be compromised, or access would interfere with the managed production of resources.

Goal OSR-3: **Conserved Open Space.** Costa Mesa is committed to open space conservation to ensure that the network of parklands, trails, hillsides, and undeveloped natural areas remain viable for supporting biological communities and providing sanctuary for future generations. This commitment includes expanding public access to open space, where appropriate, and acquiring additional lands where feasible.

Policy OSR-3.2: Encourage the preservation of coastal views from City and County parkland and public streets within Costa Mesa.

City of Costa Mesa Code

The City of Costa Mesa Municipal Code (CMMC) consists of the regulatory, penal, and administrative ordinances for the City. Components of the City's Municipal Code that are applicable to the subject of recreation are identified below.

Title 13, Chapter 11, Article 5 — Park and Recreation Dedications.

The purpose of this article is to establish procedures for requiring park and recreational facilities in conjunction with residential developments ("park impact fees"), with requirements for residential development that requires a subdivision in Sections 13-251 through 13-261 and requirements for multifamily residential developments (does not require a subdivision) in Sections 13-261.2 through 13-261.8. These park impact fees shall provide funds for the City's future construction of facilities and equipment purchases or to reimburse the City for those identified facilities and equipment funded by the City with monies advanced by the City from other sources.

Title 13, Chapter 12, Article 4 — Park and Recreation Impact Fees.

The purpose of this article is to establish the procedures for the payment of parks and recreation impact fees in conjunction with the establishment of new multifamily residential units and accessory dwelling units (ADUs) in Section 13-276. These park fees shall provide funds to provide park and recreational facilities to serve the future residents of such units. These fees are in addition to the fee/dedication requirements of Title 13, Chapter 11, Article 5, Park and Recreation Dedications.

Measure Z (Article 4 to Municipal Code Title 13, Chapter XII, Special Fee Assessments).

Approved by the voters in November 2016, Measure Z established an open space and public park impact fee. The fee is applicable to all new development located both north of the I-405 Freeway and west of Fairview Drive and is due upon issuance of a certificate of occupancy. The fee is established to offset the impact of development upon recreational opportunities and is used solely for the purpose of increasing active recreation, open space, and public park facilities within the city.

Existing Community-Based and Specific Plans

The 19 West Urban Plan, SoBECA Urban Plan, Mesa West Bluffs Urban Plan, Mesa West Residential Ownership Urban Plan/Mixed-Use Overlay, Harbor Mixed-Use Overlay, Residential Incentive Overlay, North Costa Mesa Specific Plan, One Metro West Specific Plan, and the Newport Boulevard Specific Plan are the existing urban and specific plans within the Planning Area. However, these plans do not include any applicable goals or policies pertaining to recreation.

4.16.3 Thresholds of Significance

The significance criteria used to evaluate Project impacts on recreation are based on Appendix G of the CEQA Guidelines. Note that Threshold 4.16-1 is originally from Section 4.15, Public Services, and has been addressed in this section in order to have a comprehensive discussion of park and recreation resources within one chapter. According to Appendix G of the CEQA Guidelines, a significant impact related to parks and recreation would occur if the Project would:

Threshold 4.16-1: Create capacity or service level problems, or result in substantial adverse physical impacts associated with the provision of 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 park services.[6]

Threshold 4.16-2: 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.

The following threshold question for this topic required in accordance with Appendix G of the CEQA Guidelines was scoped out of this Draft PEIR, having been adequately addressed in the Initial Study, wherein it was determined that the Project would have no impact or a less than significant impact on the environment:

- 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?

Thus, an analysis of this threshold is included in Appendix A-1, NOP and Initial Study, of this Draft PEIR.

[6] This threshold is originally from Section 4.15, Public Services (Parks).

4.16.4 Impact Analyses

4.16.4.1 Methodology

As described in Chapter 3, Project Description, the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation Project does not include or propose any site-specific development that could directly result in construction or operational impacts to the environment. However, implementation of the Project would facilitate additional future development in the city. Therefore, this Draft PEIR does not assess the site-specific construction and operation details of each future development within the Planning Area. Rather, it assesses the impacts associated with changes to existing land uses and the associated overall effects of buildout of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation Project through 2056, where reasonably foreseeable physical changes to the environment could occur. Analysis at a parcel or site-specific level was not conducted because, unless otherwise noted within this assessment, the actual locations of Project development (and its chronologic sequence or concurrence) that may be implemented in the future are speculative.

The City's General Plan and other online information obtained from the City were used to evaluate potential impacts to recreational facilities located in the city. The potential for the Project to impact recreation is dependent on where within the Planning Area land use redesignations would occur, and subsequent future development as a result of Project implementation.

This analysis estimates the number of residents that would be generated by implementation of the Project and assesses whether existing and planned public parks would have sufficient available capacity to accommodate additional users, whether park and recreational facilities would need to be expanded or constructed, and whether the Project would result in substantial physical deterioration of park/recreational facilities.

4.16.4.2 Environmental Analyses

Threshold 4.16-1. 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:

i. Parks?

Significant and Unavoidable Impact. As outlined above in Section 4.16.1 above, park services in the city are provided by the City's Parks and Community Services Department. Table 4.16-1 lists the parks serving the City of Costa Mesa. The location of existing parks in relation to the Planning Area can be found in Figure 4.16-1, Parks. No direct development is proposed as part of the Project. However, land use changes proposed by the Project would facilitate future development that would increase the City's service population and result in potentially significant impacts to park services.

As discussed in Chapter 3, Project Description, of this Draft PEIR, the Project implements the rezoning of all Measure K sites, including Housing Element sites and non-Housing Element sites, along with modifications to the City's zoning regulations across existing urban plans, overlays, and specific plans with the intent to clarify, consolidate, and streamline regulations where possible to implement the rezoning and meet State law. The Project would implement land use changes within the Planning Area to accommodate residential and mixed-use development

consisting of approximately 21,522 additional dwelling units, thereby generating 51,572 additional residents, and approximately 10,630,361 square feet of additional commercial use, thereby generating approximately 14,454 additional employees. Thus, implementation of the Project would increase the service-area population by a total of approximately 51,572 additional residents and 14,454 additional employees in the Planning Area.

For the purposes of this impact analysis, an assessment on parkland per resident (i.e., park land metric) is applicable in assessing impacts at the Project's programmatic level. As described above in Section 4.16.1, the City aims to provide 4.26 acres of parkland for every 1,000 residents, which would equate to a current requirement to provide approximately 464.9 acres of parkland throughout the city (Appendix I). In addition, the City currently exceeds the General Plan goal for parkland per 1,000 residents, as there are approximately 576 acres of parkland (including Talbert Regional Park) within the city limits. However, the Project would increase demand on parks to maintain acceptable service ratios. An increase in population of 51,572 additional residents would increase the City's population to 160,703 through 2056 and would require that the City provide 684.59 total acres of parkland in the city,[7] which would call for an increase of 108.59 acres of parkland[8] in the city. Without an increase in parkland throughout the city through 2056 to meet the anticipated demand, the City's parkland per 1,000 residents ratio would fall below the General Plan requirement of 4.26 to 3.58 acres of parkland per 1,000 residents.[9] As such, implementation of the Project would create a deficient level of parkland and parkland per 1,000 residents in the city.

The MUOD includes development standards that promote the provision of open space in future development projects within the Planning Area. The MUOD would require residential and mixed-use residential development on Housing Element sites to dedicate 30 percent of the lot for open space. Of which, a minimum of 100 square feet of usable private open space would be provided for each ground floor unit and a minimum of 50 square feet of usable private open space would be provided for each unit above the ground floor. For projects with commercial gross floor area greater than 100,000 square feet, the project would be required to provide the equivalent to a minimum of 5 percent of the commercial gross floor area for publicly accessible open space. On Housing Element sites, the MUOD allows the flexibility for all or a portion of the required common open space and usable private open space to be substituted by publicly accessible open space.

The Open Space and Recreation Element of the General Plan also includes a number of policies supporting the construction of new or expanded parks and recreational facilities, including General Plan Policies OSR-1.1, OSR-1.2, OSR-1.8, OSR-1.13, and OSR-1.18 (see Section 4.15.2, Regulatory Requirements, for a list of applicable General Plan policies). The Project implements Measure K and Housing Element direction by applying an amended MUOD with objective, corridor appropriate development standards, privacy and lighting performance measures, and shade/shadow analysis triggers, while retaining existing bluff top protections. The amended MOUD includes a requirement that, for properties where the MOUD does not currently apply, all future projects on those properties implemented under the amended MOUD standards must also be consistent with the provisions of the General Plan. The facilitation of future park spaces in accordance with General Plan policies and the MUOD's open space requirements would help to maintain acceptable parkland service ratios. In addition, the City is in the process of updating the Parks, Recreation, and Open Space Master Plan, which would address and support the future provision of additional parks citywide to serve residents and to achieve adequate levels of parkland in the city. As such, the updated Parks, Recreation, and Open Space Master Plan would support the provision of parkland to accommodate Project residents in the future.

7 4.26 acres of parkland x (160,703 residents / 1,000) = 684.59 acres of parkland.
8 684.59 required acres of parkland - 576 existing acres of parkland = 108.59 additional acres of parkland needed.
9 576 acres of parkland / (160,703 residents / 1,000) = 3.58 acres of parkland per 1,000 residents.

However, the extent to which the City can implement parks is related to the availability of funding for land acquisition, construction, operations, maintenance, and programming. In accordance with the Quimby Act (Government Code Section 66477) and Title 13 of the CMMC, the City requires dedication of 3 acres of parkland or payment of in-lieu fees as a condition of approval for new multi-family residential units and subdivisions per every 1,000 residents (Appendix I). The Quimby Act, which focuses on public open space, specifies acceptable uses and expenditures of such funds, such as allowing developers to set aside land, donate conservation easements, or pay direct fees for park improvements. This ensures that when new residential subdivisions are developed, there is an increase in park funding and/or dedication of additional parkland proportional to increases in population. However, Quimby fees are not required for non-subdivision projects. The City also requires the payment of parks and recreation impact fees for new multifamily residential units and ADUs in the city to reduce the potential impacts of proposed developments to parks and recreation services and facilities, pursuant to Costa Mesa Municipal Code Section 13-276. The fee requirements are based on the General Plan goal of 4.26 acres of parkland per 1,000 residents and on the population density of the proposed development.

In addition to availability of funding, the construction or expansion of park and recreation facilities is subject to the availability of vacant land or open space appropriate for the development of parks and recreation facilities. The Planning Area is located in a predominantly built-out, urbanized area of the city, where many of the parcels are not immediately near to vacant land or open space. As discussed above in Section 4.16.1, the City currently exceeds the General Plan goal for parkland per 1,000 residents by approximately 113.1 acres. Implementation of the Project would create deficient levels of parkland in the city, and the City would be required to provide an additional 108.59 acres of parkland in the city. The City has indicated that with implementation of the Project, the City does not have the available parkland required to meet the proposed Project's projected increase in parkland demand (Appendix I). Due to the uncertain availability of land area at the time of drafting this PEIR, it is too speculative to assume that proportional development of new or expanded park/recreation facilities would occur with implementation of the Project. Although implementation of the Project may result in private and communal/shared open space on-site of future developments, and future park facilities may be created as a result of Quimby Act fees/dedications and the City's parks and recreation impact fees, it is unknown whether future parks would be adequate to serve the demands generated by existing and future residents or whether future parks would be publicly accessible or accessible only to residents within future residential buildings. The Project would result in an increased population across the city that would limit the City's ability to maintain acceptable parkland service ratios.

The proposed Project does not include or require the development of 108.59 acres of new parkland to meet the General Plan policies of 4.26 acres per 1,000 residents. However, on Housing Element sites, new development with a commercial gross floor area greater than 100,000 square feet would be required to provide the equivalent of 5 percent of the commercial gross floor area for publicly accessible open space. Additionally, the required minimum 30 percent usable common open space and minimum usable private open space in the MUOD is allowed to be substituted by publicly accessible open space. At this time, it is unclear how much public parkland will be created through development in the MUOD. Although the MUOD encourages public open space, it is not required for projects with less than 100,000 square feet of gross commercial floor area. The Project's proposed land use changes are assumed to result in a significant impact to park services thereby requiring construction of new parks or expansion of parks facilities in the city. At this time, there are no feasible mitigation measures to reduce impacts to less than significant. Although the Project includes open space minimums, the Project does not have the mechanism to ensure that new parks are funded, constructed, or that existing parks are expanded through the 2056 buildout year for the Project. The City of Costa Mesa is in the process of preparing a Parks, Recreation, and Open Space Master Plan update to establish a strategy to ensure there are adequate parks and recreation facilities in the future. Without an updated and adopted Parks, Recreation, and Open Space Master Plan at the time of the

preparation of this PEIR and given the programmatic nature of this PEIR, the Project would have a significant and unavoidable impact related to park services.

Threshold 4.16-2. 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?

Significant and Unavoidable Impact. As described above under Threshold 4.16-1, the Project would implement land use changes within the Planning Area to accommodate residential and mixed-use development that would generate an increase in the parks and recreation service-area population by a total of approximately 66,026 additional residents and employees in the Planning Area. As described above under Threshold 4.16-1, implementation of the Project would require an increase of 108.59 acres of parkland in the city. Without being able to define the amount of new public parkland to be constructed in the MUOD due to the programmatic nature of this PEIR, and without an increase in parkland throughout the city through 2056 to meet the anticipated demand, the City's parkland per 1,000 residents ratio would fall below the General Plan requirement, and the Project would create a deficient level of parkland in the city per the General Plan and parkland per 1,000 residents in the city.

The proposed Project does not require the development of 108.59 acres of new parkland. Further, payment of Quimby fees are not required for non-subdivision projects; although, the City's parks and recreation impact fees would apply to proposed multifamily residential units and ADUs in the city. The fee requirements are based on the General Plan goal of 4.26 acres of parkland per 1,000 residents and on the population density of the proposed development. The Project's proposed land use changes would result in a significant impact to park services. As such, implementation of the Project and introduction of an increased parks and recreation service-area population of 51,572 additional residents and 14,454 additional employees through 2056 would increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of facilities would occur or be accelerated, thereby resulting in a potentially significant impact. At this time, there are no feasible mitigation measures to reduce impacts to less than significant. Although the collection of required Quimby fees, City parks and recreation impact fees, and/or parkland dedication, and the open space minimums established in the MUOD, would mitigate some of the burden on the existing recreation system, the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation Project does not have the mechanism to ensure that at least 108.59 acres of new parks and recreation facilities are funded and constructed through the 2056 buildout year for the Project. Therefore, the Project would have a significant and unavoidable impact regarding the occurrence or acceleration of substantial physical deterioration of existing neighborhood and regional parks or other recreational facilities. Note that the City of Costa Mesa is in the process of preparing a Parks, Recreation, and Open Space Master Plan update to establish a strategy to accommodate adequate parks and recreation facilities in the future.

4.16.5 Cumulative Impact Analyses

Where a lead agency concludes that the cumulative effects of past, present, and reasonably foreseeable future projects are significant, the lead agency then must determine whether the proposed Project has any contribution to the cumulative impact, and if so, whether the Project's incremental effect is "cumulatively considerable." The cumulative study area used to assess potential cumulative recreational impacts is the City of Costa Mesa and considers the future buildout of applicable local and regional plans. The full list of related plans applicable to the Project's cumulative analyses is provided in Section 2.5, Cumulative Impact Analysis, in Chapter 2, Environmental Setting, of this Draft PEIR.

Threshold 4.16-1. The City's Parks and Community Services Department serves the City with parks and recreational land uses. As further described above in Section 4.16.1, the City currently exceeds the General Plan goal for parkland per 1,000 residents that calls for 464.9 acres of parkland, as the City currently provides approximately 576 acres of parkland (including Talbert Regional Park). However, the Project would increase demand on parks and service ratios. Cumulative development outside of the City associated with the buildout of adopted and future plans (e.g., general plans and housing elements) would further reduce the park acreage ratio with no guarantee that additional park spaces would be built. As such, there is an existing cumulative impact. The Project's proposed residential development would incrementally increase the demand for parks and could result in the need to construct additional or expand existing parks, which could result in a potentially significant physical impact on the environment. However, the MUOD would establish open space minimums on Housing Element and non-Housing Element Measure K sites. On Housing Element sites, any portion or all of the required minimum 30 percent open space can be provided as publicly accessible open space. Future development projects that require discretionary action and involve subdivision-related actions would be required to demonstrate compliance with CEQA prior to project approval and would be required to pay applicable park impact fees under the Quimby Act (Government Code Section 66477) and under the City's Municipal Code (Section 13-276). Without the payment of park mitigation fees or the dedication of land for future parks, the Project would have a cumulatively considerable impact.

Threshold 4.16-2. The cumulative impact of population growth outside of the City and within other local jurisdictions would further increase the use of existing neighborhood and regional parks and recreational facilities, such that substantial physical deterioration of the facilities would occur, and this would be a potentially significant cumulative impact. As discussed in Section 4.14, Population and Housing, of this Draft PEIR, buildout of the Project by 2056 would exceed planned growth projections for parcels subject to proposed land use changes. Furthermore, as discussed above in Section 4.16.4 under Threshold 4.16-1, implementation of the Project would result in a significant and unavoidable impact related to the deterioration of existing parks serving the City. In the potential absence of new parks to alleviate the existing demands for park facilities currently in the city, the Project would exacerbate conditions related to park deterioration. Therefore, the Project would contribute to an existing cumulative impact related to the increased use of existing parks and associated facilities, such that substantial physical deterioration of the facility would occur or be accelerated, and Project impacts would be cumulatively considerable.

4.16.6 Mitigation Measures

No feasible mitigation measures are available to mitigate Project impacts related to park services or the indirect physical deterioration of existing neighborhood, community, and regional parks.

4.16.7 Level of Significance Conclusion

Threshold 4.16-1. The Project has the potential to create future capacity or service level problems, and result in substantial adverse physical impacts associated with the provision of 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 parks. No feasible mitigation measures are available to mitigate impacts. Therefore, impacts to park services would be **significant and unavoidable** and cumulatively considerable.

Threshold 4.16-2. The Project has the potential to 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. No feasible mitigation measures are available to mitigate impacts. Therefore, impacts to parks or other recreational facilities would be **significant and unavoidable** and cumulatively considerable.

4.16.8 References

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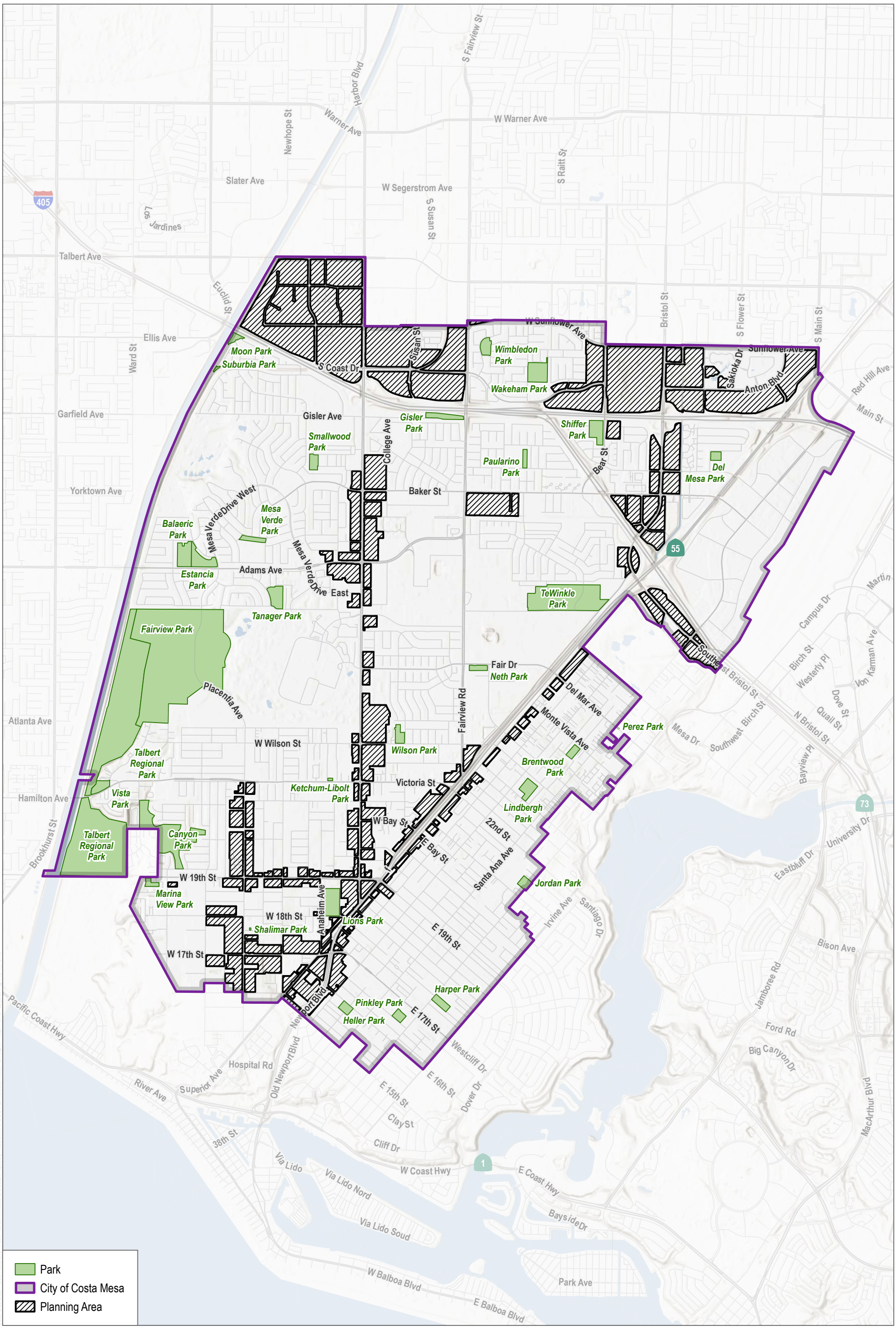

SOURCE: Esri, Open Street Map, Open Street Map 2019

FIGURE 4.16-1

Parks

DUDEK

0 1,500 3,000 Feet

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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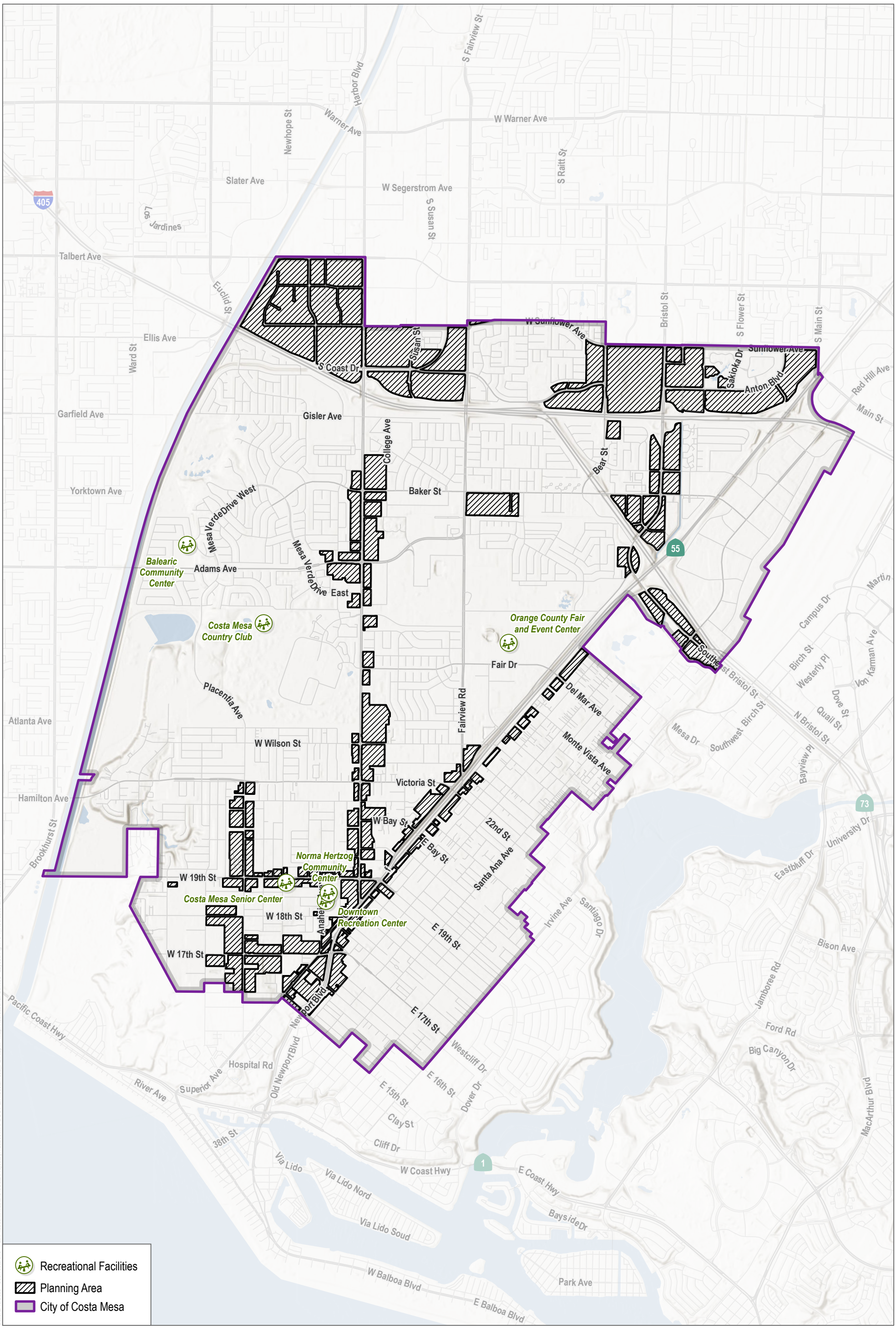

SOURCE: Esri, Open Street Map, Open Street Map 2019

FIGURE 4.16-2

Recreational Facilities

DUDEK

0 1,500 3,000 Feet

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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4.17 Transportation

This section of the Draft PEIR analyzes the potential impacts from the implementation of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation (Project) on transportation, including whether the Project would conflict with an applicable plan, ordinance or policy addressing transportation and consistency with CEQA Guidelines section 15064.3, subdivision (b). The threshold related to increase hazards due to a design feature or incompatible use, and inadequate emergency access were screened per Initial Study prepared by Dudek in 2025.

Pursuant to Senate Bill (SB) 743, the City's draft Transportation Impact Analysis (TIA) Guidelines (October 2020) (referred as TIA Guidelines herein) include vehicle miles traveled (VMT) as the new metric to evaluate the significance of transportation impacts. These guidelines and thresholds apply to land use and transportation projects in the city that are subject to CEQA analysis. Therefore, this section uses VMT as the basis for evaluating transportation impacts of the Project under CEQA. The VMT analysis was conducted by Dudek with a project-specific VMT model run using the regional travel demand model, as described in this section. The analysis is summarized in this section and the land use inputs used for VMT analysis are included as Appendix J. Other sources consulted are listed in Section 4.17.8, References.

As noted above, this PEIR uses the metric of VMT for analyzing transportation impacts under CEQA. Therefore, non-CEQA analysis which includes, level of service (LOS) based analysis of roadway segments and intersections is not warranted per the scope of this document. The City would use criteria[1] specified in the Draft TIA Guidelines to determine if individual projects as and when those are reviewed, have a potential effect on transportation.

4.17.1 Existing Conditions

4.17.1.1 Transportation System in the City

Vehicle Miles Traveled and Traffic Analysis Zone

CEQA Section 15064.3(a), Purpose, established VMT as the most appropriate measure of transportation impacts. The subdivision (a) defines vehicle miles traveled as "the amount and distance of automobile travel attributable to a project." The term "automobile" refers to on-road passenger vehicles, specifically cars and light trucks. For land use projects and plans, such as the Project, based on the predominant use, the following VMT efficiency metrics and method of estimation can be used:

> **Total VMT per Service Population**: The total VMT to and from all zones in the geographic area are divided by the total service population to get the efficiency metric of VMT per service population. The total service population is the sum of the number residents and the number of employees.
>
> **Home-based VMT per capita:** All home-based auto vehicle trips are traced back to the residence of the trip-maker (non-home-based trips are excluded) and then divided by the population within the geographic area to get the efficiency metric of home-based VMT per capita (or per resident).

[1] Page 22, TIA Guidelines: A transportation impact study including an LOS analysis shall be required for all development projects estimated by Public Services Director or designee to generate fifty or more vehicle trip end during a peak hour. A transportation study may also be required for smaller projects at the discretion of the Public Services Director or designee.

Home-based Work VMT per employee: All auto vehicle trips between home and work are counted, and then divided by the number of employees within the geographic area to get the efficiency metric of home-based work VMT per employee.

The traffic analysis zone (TAZ) is the spatial unit (or geographical area) within which travel behavior and traffic generation are estimated in a travel demand model. The City of Costa Mesa uses the Orange County Transportation Analysis Model (OCTAM). Figure 4.17-1 depicts the TAZs from the OCTAM for the City that have been used in the VMT analysis of the Project as discussed under 4.11.3 Methodology.

Roadway System

The functional roadway classifications used by the City of Costa Mesa and associated descriptions are provided in Table 4.17-1.

Table 4.17-1. Roadway Classifications

Classification	Description
Major Arterial	A Major Arterial highway is a six-lane divided (raised or painted median) roadway. A Major Arterial may be designed with emphasis for automobile, goods movement, and/or transit. Major Arterials carry a large volume of regional through traffic not handled by the freeway system.
Primary Arterial	A Primary Arterial highway is a four-lane divided (raised or painted median) roadway. A Primary Arterial may be designed with emphasis for automobile, goods movement, transit, and/or bicycle. A Primary Arterial's function is similar to that of a Major Arterial. The principal difference between the two classifications is capacity.
Secondary Arterial Highway	A Secondary Arterial highway is a four-lane undivided (no median) roadway. A Secondary Arterial may be designed with emphasis for automobile and/or bicycle. A Secondary Arterial serves as a connector, distributing traffic between local streets and Major and Primary Arterials. Although some Secondary Arterials serve as through routes, most provide direct access to surrounding land uses.
Divided Collector Arterial	A Divided Collector Arterial is a modified Secondary Arterial with a reallocation of pavement width to emphasize bicycle and pedestrian use. It provides one bicycle lane per direction on bicycle corridors and one through vehicle lane per direction. The two directions of travel are divided by a continuous two-way left-turn lane.
Collector Street	A Collector Arterial is a two-lane undivided (no median), unrestricted access roadway. Collector Arterials differ from local collector streets in their ability to handle through traffic movements between two arterials.

Source: City of Costa Mesa General Plan Circulation Element, 2016.

The City of Costa Mesa is centrally located in the Orange County and is served by freeways Interstate (I)-405, State Route (SR)-73 and SR-55. I-405 traverses east-west across the northern portion of the city and includes freeway interchanges with SR-55 and SR-73 and local interchanges at Anton Boulevard/Bristol Street, South Coast Drive and Fairview Road/Harbor Boulevard. SR-73 begins at I-405 between Fairview Road and Bear Street and extends southeast where it becomes San Joaquin Hills Transportation Corridor. SR-55 enters at the northeast corner of the city and extends southwest, transitioning into a Caltrans managed arterial named Newport Boulevard south of 19th Street.

The circulation system in the city consists of two grid patterns. North/south six-lane arterial roadways serving the city including Harbor Boulevard, Fairview Road, Bear Street and Bristol Street and four-lane facilities of Placentia Avenue and Red Hill Avenue. East-west arterial roadways serving the city include six-lane facilities of Anton

Boulevard and Adams Avenue; Sunflower Avenue, which is a six-lane facility east of Bear Street and a four-lane facility west of Bear Street; and four-lane facilities of South Coast Drive, Baker Street, Fair Drive, Victoria Street, West 19th Street, and East 17th Street.

Figure 4.17-2 City of Costa Mesa Roadway Classifications illustrates the roadway network in the city.

Public Transit

The City of Costa Mesa operates the Let's Go Costa Mesa program within the southern portion of the city that provides rideshare services to people within the city. Orange County Transportation Authority (OCTA) provides local bus and paratransit services within Orange County with several routes in Costa Mesa. OCTA operates several local fixed routes, community and local routes, BRAVO routes, in and through the City of Costa Mesa. Figure 4.17-3 illustrates the Transit Corridors in Costa Mesa.

Let's Go Costa Mesa

The City operates the Let's Go Costa Mesa program utilizing three years of grant funds from the State of California's Clean Mobility Options program. Let's Go Costa Mesa is a free, on-demand electric rideshare service operated by a City-selected vendor. Let's Go Costa Mesa operates Monday through Friday from 8 a.m. to 8 p.m., and Saturday through Sunday from 10 a.m. to 8 p.m., and provides service throughout the south and central portion of the city surrounding downtown and to Hoag Memorial Hospital within the City of Newport Beach. The program serves popular destinations within the city such as West 19th Street, Northgate Market, East 17th Street, Triangle Square, and various local hotels, shops, and restaurants within the program's service area (City of Costa Mesa 2026).

OCTA Local Routes

Route 35 provides service between Costa Mesa and Fullerton, primarily via Brookhurst Street. The route serves destinations including Fullerton Park and Ride, Victoria-Placentia, Brookhurst-Adams, and Brookhurst-Talbert. The route operates daily, with service provided on weekdays from 4:30 a.m. to 10:00 p.m. with 30-minute headways, on Saturdays Sundays and Holidays from 4:45 a.m. to 8:40 p.m. with 60-minute headways, and from 5:00 a.m. to 9:00 p.m. with approximately 50-minute headways.

Route 43 provides service between the cities of Costa Mesa and Fullerton, primarily via Harbor Boulevard. This route serves destinations including Disneyland, Anaheim, Garden Grove, and Costa Mesa shopping centers and connects to Metrolink and Amtrak in Fullerton. The route operates daily, with service provided on weekdays from 4:00 a.m. to 8:30 p.m. with 20-minute headways and 8:30 p.m. to 1:45 a.m. with 60-minute headway. This route also operates on Saturdays, Sunday and holiday.

Route 47 provides service between the cities of Fullerton and Newport Beach, via Placentia and Fairview Avenue in Costa Mesa. The route serves destinations including Orange Coast College, the Outlets at Orange, and Fullerton Transportation Center. The route operates daily, with service provided on weekdays from 3:55 a.m. to 7:23 p.m. with 20-minute headways and to 10:30 p.m. with 60-minute headways, and on weekends and holidays from 5:00 a.m. to 10:57 p.m. with 20-minute headways most of day.

Route 55 provides service between the cities of Santa Ana and Newport Beach, via Costa Mesa. The route serves destinations including Newport Transportation Center, Triangle Square, Orange Coast College, and the Flower Street and 6th Street area. The route operates daily, with service provided on weekdays from

4:15 a.m. to 11:42 p.m. with 30-minute headways and 9:30 p.m. to 1:45 a.m. with 60-minute headways, on Saturdays from 4:00 a.m. to 9:40 a.m. with 15-minute headways, 4:40 a.m. to 11:12 p.m. with 30-minute headways.

Route 57 provides service between the cities of Brea and Newport Beach and passes via South Coast Plaza area and Bristol Street in Costa Mesa. The route serves destinations including Newport Transportation Center, South Coast Plaza, the Outlets at Orange, the Cal State Fullerton/Hope International University area, and the Brea Mall. The route operates daily, with service provided on weekdays from 4:00 a.m. to 9:30 p.m. with 15 to 30-minute headways and 9:30 p.m. to 1:45 a.m. with 60-minute headways. The route also operates on Saturdays, Sundays and holidays with 20-30 minutes headways during the day and peak hours and 60 minutes frequency after 9:00 p.m.

Route 71 provides service between the cities of Placentia and Newport Beach predominantly via Rose Drive, Tustin Avenue, Red Hill Avenue, and Newport Boulevard. The route serves destinations including the University of California Irvine Health – Placentia Linda Hospital, Anaheim Canyon Metrolink Station, the Lincoln Park & Ride, Western Medical Center, and the Triangle Square area. The route operates daily, with service provided on weekdays from 5:21 a.m. to 11:13 p.m. with approximately 35- to 45-minute headways. The route also operates on Saturdays, Sundays and holidays with approximately 45- to 50-minute headways.

Route 76 provides service between the city of Huntington Beach and John Wayne Airport and passes destinations such as the South Coast Plaza area and Bristol Street in Costa Mesa. The route operates daily with service provided on weekdays from 5:51 a.m. to 6:55 p.m. with 60-minute headways.

Route 86 provides service between Costa Mesa and Mission Viejo via Alton Parkway. The route serves destinations including the Norman Murray Community Center, the Irvine Metrolink/Amtrak Station area, Kaiser Permanente Hospital, Irvine Civic Center, John Wayne Airport, and the South Coast Plaza area. The route operates daily with service provided on weekdays from 5:36 a.m. to 9:43 p.m. with 60-minute headways.

OCTA Community Routes

Route 150/151 provides service between the cities of Santa Ana and Costa Mesa with stops in Costa Mesa such as the South Coast Plaza area and Santa Ana College. The route operates only on weekdays, with service provided from 5:00 a.m. to 7:00 p.m. with 40-minute headways.

Route 178 provides service between the cities of Huntington Beach and Irvine, passing by destinations such as Orange Coast College, Orange County Fairgrounds, and University Center area in Irvine. The route operates daily with service provided on weekdays from 5:51 a.m. to 6:55 p.m. with 60-minute headways.

OCTA BRAVO Routes

Route 543 provides service between the cities of Costa Mesa, Fullerton and Santa Ana, primarily along Harbor Boulevard. The route serves destinations including Fullerton Transportation Center, Disneyland, the Anaheim Convention Center, Harbor Learning Center, and Kaiser Permanente Hospital. The route operates only on weekdays, with service provided from 5:00 a.m. to 8:00 p.m. with 20-minute headway. Bravo! extends from the Fullerton Transportation Center through Anaheim, Garden Grove and Santa Ana, ending at MacArthur Boulevard at the Costa Mesa northerly city limit.

Route 553 provides service between the cities of Costa Mesa and Anaheim via Santa Ana, primarily along Main Street and Katella Avenue. The route serves destinations including Disneyland, Angel Stadium of Anaheim, the Honda Center, Orange County School of the Arts, and the South Coast Plaza area. The route operates only on weekdays, with service provided from 5:30 a.m. to 8:00 p.m. with 20-minute headway.

Metrolink

Metrolink is a commuter rail program operated by the Southern California Regional Rail Authority, providing service from outlying suburban communities to employment centers such as Burbank, downtown Los Angeles and Irvine. The nearest Metrolink stations to the city for Orange County Line and Inland Empire-Orange County Line are the Santa Ana and Tustin Metrolink stations.

Orange County Line provides daily service between the City of Oceanside and Downtown Los Angeles. The route operates on weekdays in the mornings from 4:00 a.m. to 10:00 a.m. with approximately 60-minute headways, and in the evenings at 1:00 p.m. and 7:00 p.m. On weekends, the route operates 8:30 a.m. and 6:30 p.m. with longer headways.

Inland Empire-Orange County Line provides daily service between the City of Oceanside/Laguna Niguel-Mission Viejo and Downtown San Bernardino. The route operates in the mornings from 3:50 a.m. to 6:49 a.m. with approximately 60-minute headways, and 11:10 a/m. to 5.10 pm with 120 minute headways. On weekends, the route operates at 6:57 a.m. and 8:56 a.m from San Bernardino to Oceanside and at 2:35 p.m. and 6:23 p.m. from Oceanside to San Bernardino.

Amtrak Pacific Surfliner

Amtrak Pacific Surfliner is a major intercity rail service between the cities of San Luis Obispo, Santa Barbara, Los Angeles, and San Diego with multiple stops in Southern California along the way. The nearest station to the city for this rail service is in Santa Ana.

Paratransit

Paratransit is a transportation service that provides door-to-door or curb-to-curb rides for people who cannot use regular public transit because of a disability, health condition, or mobility limitation. The City supports discounted bus fares to seniors and flexible paratransit shuttles through OCTA's Senior Mobility Program and ACCESS. ACCESS is OCTA's shared-ride service for people who are unable to use the regular fixed route bus service because of functional limitations caused by a disability. OCTA's Senior Mobility Program is designed to fill the gap between local fixed route buses and Americans with Disabilities Act paratransit by providing local transportation services to seniors.

Active Transportation

Active transportation refers to travel modes such as walking and biking. Pedestrian and bicycle facilities are a critical component of Complete Streets and increase connectivity throughout Costa Mesa and regional destinations. The City's pedestrian network generally includes sidewalks, shared use paths, trails, and pedestrian oriented traffic control devices. To enhance walkability in the communities, the General Plan aims to promote complete streets and improve upon the multi-modal network. Per the City's Bicycle Master Plan (City of Costa Mesa 2017), bicycle facilities in the city are classified as follows:

Class I – Off-Street Paved Bicycle Paths: Class I paths provide a dedicated space for people to walk and bicycle, with no motor vehicle use. Costa Mesa has extensive Class I paths within and adjacent to the city boundaries. Examples of Class I trails include Joann Street Bicycle Trail, Harbor Boulevard Bicycle Trail, Victoria Street Bicycle Trail, Fairview Channel Trail, Santa Ana River Trail, and the Greenville-Banning Channel Trail.

Class II – On-Street Striped and Signed Bicycle Lanes: Most of the functional bicycle trips in Costa Mesa are on Class II bicycle lanes on many of the arterial and collector streets in the city. The lanes are striped and signed for exclusive use of bicycles and are located adjacent to curb. The Class II bike lanes use existing rights-of-way. Class II can be found along Placentia Avenue, Newport Boulevard, Santa Ana Avenue, Fairview Road, and South Coast Drive.

Class III – On-Street Shared-Lane Signed Bicycle Routes: Class III routes are multimodal but generally are located on low-traffic residential streets; they are identified as bikeways through signage and striping only. On these routes, several short-distance "Bicycle Boulevards" are planned to connect the eastside and westside Class II bike lanes. Bicycle Boulevards are achieved mostly through signage, pavement markings, landscaping, and other vehicular traffic-calming measures to optimize bicycle travel. Typically Class III bikeways do not require widening of streets or removal of curb parking. Class III bikeways can be found on Wilson Street, East 19th Street, and Fulleton Avenue.

Class IV – Cycle Track Bikeways – On-Street and Separated Bike Lanes: A cycle track is marked out by a separate bike lane, or multidirectional bike lane, that protects it from other traffic—vehicular, transit, and pedestrian—by a physical barrier such as a curb, planters, or parked cars. Cycle tracks can be configured either for one-way travel (with a lane on each side of the street) or for two-way travel (with each lane on one side of the street). The lane is for exclusive use by bicycles. Examples of Class IV Cycle Tracks in Costa Mesa include Merrimac Way, West 19th Street, Bristol Street, Placentia Avenue, and Fairview Road south of Fair Drive.

Figure 4.11-4 illustrates the existing and planned bike facilities in the city.

4.17.2 Regulatory Requirements

4.17.2.1 Federal

There are no federal policies or regulations applicable to land use and planning with respect to the proposed Project.

4.17.2.2 State

Senate Bill 743

On September 27, 2013, Governor Brown signed SB 743, which became effective on January 1, 2014. The purpose of SB 743 is to streamline review under the CEQA process for several categories of development projects including the development of infill projects in transit priority areas and 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 (Public Resources Code 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, which is 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 induces more vehicular travel and greater pollutant emissions. Additionally, improvements to increase vehicular capacity can often discourage alternative modes of transportation such as biking, walking, and transit. SB 743 directed the Office of Planning and Research[2] (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 by promoting the development of multimodal transportation system and providing clean, efficient access to destinations. Under SB 743, it was anticipated that the focus of transportation analysis will shift from vehicle delay (and LOS) 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. Additionally, OPR released updates to the Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018), 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" (CEQA Guidelines Section 15064.7[c]).

In December 2018, the CEQA Guidelines were updated to add Section 15064.3, Determining the Significance of Transportation Impacts, that describes specific considerations for evaluating a project's transportation impacts using VMT methodology. This new methodology was required to be used for projects starting on July 1, 2020.

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[3] or a stop along an existing high-quality transit corridor[4] 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

[2] Effective July 1, 2024, the Governor's Office of Planning and Research was renamed the Governor's Office of Land Use and Climate Innovation.

[3] OPR's Technical Advisory 2018: Pub. Resources Code, § 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 or 20 minutes (per AB 2553) or less during the morning and afternoon peak commute periods.")

[4] OPR's Technical Advisory 2018: Pub. Resources Code, § 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.")

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.

The CEQA Guidelines Section 15064.3, subdivision (b)1 and (b)2 apply to the Project. The City has adopted screening criteria and impact criteria meant to serve as guidance for projects to determine whether a transportation impact analysis should be performed, and whether a project generates a significant transportation impact. Therefore, the City's adopted Traffic Impact Analysis Guidelines have been used in this section to determine Project's VMT impact.

Sustainable Communities Strategies: Senate Bill 375

The Sustainable Communities and Climate Protection Act of 2008 (Sustainable Communities Act, SB 375, Chapter 728, Statutes of 2008) supports the state's climate action goals to reduce greenhouse gas emissions through coordinated transportation and land use planning with the goal of more sustainable communities. Under the Sustainable Communities Act, the California Air Resources Board sets regional targets for greenhouse gas emissions reductions from passenger vehicle use. In 2010, the California Air Resources Board established these targets for 2020 and 2035 for each region covered by one of the state's Metropolitan Planning Organizations (MPOs). The California Air Resources Board will periodically review and update the targets, as needed.

Each of California's MPOs must prepare a Sustainable Communities Strategy (SCS) as an integral part of its Regional Transportation Plan (RTP). The SCS contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet its greenhouse gas emission reduction targets. Once adopted by the MPO, the RTP/SCS guides the transportation policies and investments for the region. California Air Resources Board must review the adopted SCS to confirm and accept the MPO's determination that the SCS, if implemented, would meet the regional greenhouse gas targets. If the combination of measures in the SCS would not meet the regional targets, the MPO must prepare a separate alternative planning strategy to meet the targets. The alternative planning strategy is not a part of the RTP.

The Sustainable Communities Act also establishes incentives to encourage local governments and developers to implement the SCS or the alternative planning strategy. Developers can get relief from certain CEQA requirements if their new residential and mixed-use projects are consistent with a region's SCS (or alternative planning strategy) that meets the targets (see Cal. Public Resources Code Sections 21155, 21155.1, 21155.2, 21159.28.).

Statewide Transportation Improvement Program

The State Transportation Improvement Program (STIP) is the biennial five-year plan adopted by the California Transportation Commission for future allocations of certain state transportation funds for state highway projects, intercity rail, and regional highway and transit projects, and active transportation projects (CTC 2024). State law requires the Commission to update the STIP biennially, with each new STIP adding two new years to prior programming commitments. Each new STIP will include projects carried forward from the previous STIP plus new projects and reserves from among those proposed by regional agencies in their regional transportation improvement programs and by Caltrans in its interregional transportation improvement program. The STIP contains

all capital and noncapital transportation projects or identified phases of transportation projects for funding under the Federal Transit Act and CFR Title 23, including federally funded projects.

Caltrans

Caltrans Draft Transportation Impact Study Guide (TISG) replaced the Guide for the Preparation of Traffic Impact Studies (2002). Per the 2020 TISG, Caltrans' primary review focus is VMT, replacing LOS as the metric used in CEQA transportation analyses (Caltrans 2020). Caltrans recommends use of OPR's recommended thresholds and guidance on methods of VMT assessment found in OPR's Technical Advisory (OPR 2018) for land use projects.

4.17.2.3 Regional

Southern California Association of Governments Regional Transportation Plan/Sustainable Communities Strategy

The Southern California Association of Governments (SCAG) develops the RTP, which presents the transportation vision for Los Angeles, Orange, San Bernardino, Imperial, Riverside, and Ventura Counties. SB 375 was enacted to reduce greenhouse gas emissions from automobiles and light trucks through integrated transportation, land use, housing and environmental planning. Under the law, SCAG is tasked with developing a Sustainable Communities Strategy (SCS), an element of the RTP that provides a plan for meeting emissions reduction targets set forth by the California Air Resources Board (CARB). The SCS outlines the plan for integrating the transportation network and related strategies with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. The SCS focuses the majority of new housing and job growth in high-quality transit areas and other opportunity areas in existing main streets, downtowns, and commercial corridors, resulting in an improved jobs-housing balance and more opportunity for transit-oriented development. This overall land use development pattern supports and complements the proposed transportation network that emphasizes system preservation, active transportation, and transportation demand management measures.

The RTP/SCS is updated every four years and SCAG adopted its current RTP/SCS, Connect SoCal 2024, in April 2024 (SCAG 2024). The vision and goals for Connect SoCal 2024 are rooted in the direction set forth by Connect SoCal 2020. The Connect SoCal 2024 outlines a vision for a more resilient and equitable future, with policies and strategies for achieving the region's shared goals through 2050. Goals and subgoals for year 2050 pertain to building and maintaining an integrated multimodal transportation network; developing, connecting, and sustaining livable and thriving communities; creating a healthy region for the people today and tomorrow; and supporting a sustainable, efficient, and productive regional economic environment that provides opportunities for all people. The Mobility Policies and Strategies in Connect SoCal 2024 include System Preservation and Resilience, Complete Streets, Transit and Multimodal Integration, Transportation Systems Management, and Transportation Demand Management.

Orange County Transportation Authority (OCTA)

The Orange County Transportation Authority (OCTA) is the county transportation planning commission, responsible for funding and implementing transit and capital projects for a balanced and sustainable transportation system (OCTA 2024). The OCTA is responsible for projects, programs and services including bus and rail transit, rideshare, environmental programs, active transportation and express lanes and freeways. This is achieved by administering

a variety of Measure M[5] funding programs. On September 25, 2017, the Board of Directors approved externally rebranding M2 as OC Go to promote OCTA's Measure M awareness. The 2019 Orange County Congestion Management Program (CMP) was adopted by OCTA in November 2019. The goals of Orange County's CMP are to support regional mobility objectives by reducing traffic congestion, to provide a mechanism for coordinating land use and development decisions that support the regional economy, and to support gas tax funding eligibility. The City of Costa Mesa is required to show continued compliance with the CMP in order to obtain Measure M2 funds.

OCTA OC Active: Bike + Ped Plan

The OCTA adopted the 2019 OC Active: Bike + Ped Plan (OC Active) in December 2019 to provide a framework for bikeway and pedestrian planning across Orange County and to encourage the enhancement of Orange County's regional bike and pedestrian network, in order to make bicycle commuting a more viable and attractive travel option. OC Active is the first countywide Active Transportation Plan (ATP) for Orange County that addresses both bicycle and pedestrian networks and was drafted to be compliant with the Caltrans Active Transportation Program guidelines to allow cities within Orange County to use this document as a foundation to apply for state funding to plan and implement local bicycle and pedestrian projects. OC Active is intended to create a comprehensive blueprint of the existing pedestrian conditions and bikeways in Orange County, as well as to propose new facilities to complete a network of bikeways. OC Active is provided to the cities and the County to adopt, if they so choose. As the plan is implemented by local jurisdictions, bikeways and improved bicycle facilities would make a positive contribution to Orange County's goal of a balanced transportation system (OCTA 2019).

OC Active proposed a total of 39 bikeway projects for the City of Costa Mesa in addition to existing bike and pedestrian facilities. According to Orange County Council of Government's & OCTA's District 1 and 2 Bikeways Strategy, of the eleven regional bicycle facilities proposed by the Districts 1 and 2 collaborative strategy, two Corridors (B and K) would pass through Costa Mesa (OCTA 2013). Corridor B: Bristol-Bear is a 12.3-mile proposed corridor that would run primarily north to south within the city. It would run from the Santiago Creek Trail in the north to the Upper Newport Bay trail in Newport Beach. The corridor would utilize Bristol Street to cross under the SR-55 freeway and would use Bear Street to cross over the I-405 and under SR-73. Corridor K: Indianapolis-Fairview is an 11.1-mile bike facility that is proposed within Costa Mesa. The bikeway would form a loop that connects the Pacific Coast Highway corridor in downtown Huntington Beach and Newport Beach at Back Bay. The corridor would travel along Indianapolis Avenue, cross the Santa Ana River Trail, pass along the northern edge of Fairview Park and the western side of the Upper Newport Bay before linking to Pacific Coast Highway at Dover Drive (OCTA 2013).

4.17.2.4 Local

Costa Mesa 2015-2035 General Plan Circulation Element

The Circulation Element of the General Plan contains goals and policies designed to expand bicycle and pedestrian travel capabilities, manage the established roadway system efficiently and effectively, enhance transit facilities, and implement "complete street" strategies (City of Costa Mesa 2016). As mentioned previously, a project's effect

[5] In 1990, Orange County voters approved Measure M, a 20-year program for transportation improvements funded by a half-cent sales tax. Measure M allocates all sales tax revenues to specific Orange County transportation improvement projects in three major areas: freeways, streets and roads, and transit. Renewed Measure M (or Measure M2) was passed by the voters of Orange County in 2006 and extended the half-cent sales tax from 2011 to 2041 to fund specific transportation projects and programs in the County. The goal of M2 is to relieve congestion, improve street conditions, synchronize signals, expand Metrolink, reduce costs for seniors and persons with disabilities, and reduce transportation related air and water pollution. Revenue generated by Measure M2 is returned to local jurisdictions for use on local and regional transportation improvement and maintenance projects. Significant progress continues with projects completing construction, projects in and advancing towards construction, as well as regular funding allocations to local jurisdictions through local programs.

on automobile delay or LOS is no longer a consideration when identifying a significant impact under CEQA; therefore, the City's General Plan policies related to performance of roadway system are not included in this section. The relevant goals and policies within the Circulation Element are presented below. The Project would support and/or would not conflict with the implementation of the following goals and policies:

Policy C-1.10: Encourage non-motorized transportation in residential areas by providing sidewalks, implementing pedestrian and bicycle friendly design of local streets, and incorporating street trees in new projects wherever feasible.

Policy C-1.19: Develop a network of walking paths in different commercial districts and neighborhoods to encourage community members to walk. The walking paths could be artistic and each path could have its own wayfinding signs and stylistic flair to create a sense of place.

Goal C-4: **Promote Transportation Demand Management, Transit, and Efficiency.** Utilize Transportation Demand Management strategies to manage demand and maximize available capacity.

Policy C-4.9: Encourage the integration of compatible land uses and housing into major development projects to reduce vehicle use.

Policy C-4.14: Encourage new development along major transit corridors to provide safe and efficient access to transit stops and public sidewalks.

Goal C-5: **Ensure Coordination between the Land Use and Circulation Systems.** Facilitate close coordination between development of land use and circulation system.

Policy C-5.1: Ensure that new development projects are consistent with the vehicular trip budgets, where adopted.

Policy C-5.2: Require that large developments and redevelopments provide short-term and long-term vehicular traffic impact studies.

Policy C-5.4: Maintain balance between land use and circulation systems by phasing new developments to levels that can be accommodated by roadways existing or planned to exist at the time of completion of each phase of the project.

Policy C-5.5: Promote development of mixed-use projects to reduce number of vehicle trips.

Policy C-5.6: Coordinate the design and improvement of pedestrian and bicycle ways in major residential, shopping and employment centers, parks, schools, other public facilities, public transportation facilities, and bicycle networks with adjacent cities.

Policy C-5.7: Require dedication of right-of-way, in an equitable manner, for development that increases the intensity of land use.

Policy C-5.8: Minimize circulation improvements that will necessitate the taking of private property on existing developed properties.

Policy C-5.9: Require that circulation necessary to provide or attain the minimum traffic level of service standard at an intersection to which a development project contributes measurable traffic be completed within three years of issuance of the first building permit for such development project, unless additional right-of-way or coordination with other government agencies is required to complete the improvement. Improvements may be required sooner if, because of extraordinary traffic generation characteristics of the project or extraordinary impacts to the surrounding circulation system, such improvements are necessary to prevent significant adverse impacts.

Policy C-5.10: Allow for construction of circulation improvements for a phased development project to be constructed commensurate with the project construction, based upon the findings of a traffic study approved by the City of Costa Mesa.

Policy C-5.13: Require that new development projects improve access to and accommodations for multimodal transportation, provide pedestrian access that serves the intensity of use and compliments the existing pedestrian network, and whenever feasible incorporate pedestrian improvements in to the public right-of-way as a part of conditions of approval.

Policy C-5.15: Consider the needs of the transportation and infrastructure system early for large developments and coordinate with developers to design projects that minimize traffic impacts and infrastructure demands, and implement complete streets wherever feasible. Alternatively, address transportation and infrastructure system impacts through the implementation of development agreements.

Policy C-6.13: Require that every new development project pay its share of costs associated with the mitigation of project generated impacts.

Goal C-7: **Promote a Friendly Active Transportation System in Costa Mesa.** Create a bicycle and pedestrian friendly environment throughout Costa Mesa for all types of users and all trip purposes in accordance with the five "Es:" Education, Encouragement, Enforcement, Engineering, and Evaluation.

Policy C-7.4: Where feasible, Class I shared-use paths should be a priority for future developments.

Goal C-8: **Create a Safer Place to Walk and Ride a Bicycle.** Provide a safe, convenient, and attractive bicycling and pedestrian environment. Apply design standards, enforcement of traffic laws, maintenance practices, and safety awareness campaigns to encourage and increate the use of bicycle and pedestrian facilities.

Policy C-8.17: Where feasible, reduce or eliminate conflict points such as driveways that cross the sidewalk.

Goal C-9: **Integrate Active Transportation Elements into Circulation System and Land Use Planning.** Provide bikeway and walkway facilities that are integrated with other transportation systems and land use planning decisions.

Policy C-9.2: Ensure that all current and proposed land use planning is consistent with the Costa Mesa Active Transportation and Pedestrian Master Plan.

Policy C-9.3: Require new developments provide adequate bicycle parking and pedestrian access.

Policy C-9.4: Collaborate with property owners to increase bicycle parking over time.

Policy C-9.5: Encourage the integration of compatible land uses and housing into major development projects to reduce vehicle use.

Policy C-9.8: Make commercial and recreational areas more enjoyable for pedestrians by implementing measures such as providing shade, planting trees, eliminating visible parking lots and vacant land minimizing long stretches of blank building façade, and orienting new development toward the street where feasible.

Policy C-9.10: Promote the preservation of bicycle access within all roadway rights-of-way, as well as the development of innovative, safety-enhanced on-street facilities, such as bicycle boulevards and cycle tracks.

Policy C-9.14: Detours through or around construction zones should be designed for safety and convenience, and with adequate signage and minimum impacts for cyclists and pedestrians.

Policy C-9.16: Along commercial corridors, identify opportunities to reduce surface parking and driveways along the pedestrian infrastructure network. Whenever possible, have storefronts face the street to encourage pedestrian safety and access.

Goal C-10: **Promote an Active Transportation Culture.** Develop educational and promotional programs to increase bicycle and pedestrian usage that respects and accommodates all users to foster a more balance transportation system.

Policy C-11.7: Encourage developers to include features, amenities and programs that are proven to increase walking and/or bicycling.

Goal C-12: **Monitor, Evaluate, and Pursue Funding for Implementation of the Bicycle and Pedestrian Master Plan.** Continuously monitor and evaluate Costa Mesa's implementation progress on the Bicycle and Pedestrian Master Plan policies, programs, and projects.

Active Transportation Plan

The Costa Mesa Active Transportation Plan (ATP), April 2018 (City of Costa Mesa 2018) outlines the vision, strategies, and actions that will be implemented to improve active transportation experience in Costa Mesa. The Plan focuses on completion of the bicycle network by identifying the existing and absent connectivity and providing recommendations for potential improvements to the system and programs. The Active Transportation Plan is designed to:

- Encourage bicycling and walking for both commuting and recreational purposes.
- Outline the needed facilities and services
- Maximize funding sources for implementation of bicycle infrastructure
- Enhance quality of life and safety

Bicycle Master Plan

The Costa Mesa General Plan (2015-2035) was adopted by the City Council on June 21, 2016, and per later amendments the Bicycle Master Plan became a part of the Circulation Element of the General Plan.

Major gaps identified per City's BMP include:

- Connectivity to the east of SR-55 via Del Mar Avenue, 22nd Street, and Baker Street
- Bicycle lane on 18th Street connecting Monrovia Avenue and Orange Avenue
- Bicycle lane on Sunflower Avenue between Park Center Drive and Fairview Road
- Bicycle lane on Adams Avenue between Harbor Boulevard and Mendoza Drive
- Bicycle route on College Avenue, Village Way and Pinecreek Drive connecting to Adams Avenue
- Regional trail on Santa Ana Avenue between Bristol Street and University Drive.

Pedestrian Master Plan

The Costa Mesa Pedestrian Master Plan, June 2024 (City of Costa Mesa 2024), also known as the Plan or CMPMP, offers additional support to the City's 2018 ATP and the Circulation Element of the General Plan. The CMPMP supplements the ATP by providing additional infrastructure, programs, and policy recommendations specific to improving the pedestrian experience in the city. Adapted from the ATP, the Costa Mesa Pedestrian Master Plan, has the following goals:

Goal 1.0: Promote a pedestrian-friendly system in Costa Mesa

Goal 2.0: Create a safer place to walk

Goal 3.0: Integrate pedestrian elements into the circulation system and land use planning

Goal 4.0: Promote a culture of walking

Goal 5.0: Promote the positive air quality, health, and economic benefits of walking

Goal 6.0: Monitor, evaluate, and pursue funding for implementation of the Pedestrian Master Plan

Community-Based and Specific Plans

The 19 West Urban Plan, SoBECA Urban Plan, Mesa West Bluffs Urban Plan, Mesa West Residential Ownership Urban Plan/Mixed-Use Overlay, Harbor Mixed-Use Overlay, Residential Incentive Overlay, North Costa Mesa Specific Plan, and the Newport Boulevard Specific Plan are the only existing urban and specific plans within the city. However, these plans do not include any applicable goals or policies pertaining to transportation.

City of Costa Mesa Municipal Code

Section 13-270, *Development Impact Fees*, of the Municipal Code imposes fees on any project requiring a building permit or other land development permit that will result in the attraction or generation of traffic trips. Traffic attraction and generation are determined through a special study that also serves to apportion a project's "fair share" impact on existing or future infrastructure. These funds are permitted to be used for any traffic-related capital

improvement project, meaning transportation planning, preliminary engineering, engineering design studies, land surveys, right-of-way acquisition, engineering, permitting, construction, and inspection of all the necessary features for any road construction project. As such, the Project would not result in direct development or site-specific development, therefore individual developments would be required to comply with applicable parts of this City code.

Transportation Demand Management Ordinance

Transportation Demand Management, or TDM, is a general term for strategies that promote the efficient use of transportation systems without adding physical capacity (additional lanes or widening) on the roadway system. TDM strategies can help address a variety of traffic problems and provide secondary economic, social, and environmental benefits. Article 12 TDM, Section 13-193 to 200, the City policy requires that new commercial, industrial and mixed-use development including employment centers of 100 persons or more would be required to:

- Reduce the number of peak-period vehicle trips generated in association with additional development.
- Promote and encourage the use of alternative transportation modes such as ridesharing, carpools, vanpools, public bus and rail transit, bicycles and walking, as well as those facilities that support such modes.
- Achieve related reductions in vehicle trips, traffic congestion and public expenditure and achieve air quality improvements through utilization of existing local mechanisms and procedures for project review and permit processing.
- Promote coordinated implementation of strategies on a countywide and citywide basis to reduce transportation demand.
- Achieve the most efficient use of local resources through coordinated and consistent regional and/or local TDM programs.

(Ord. No. 97-11, § 2, 5-5-97)

4.17.3 Thresholds of Significance

The significance criteria used to evaluate the Project's 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 transportation would occur if the Project would:

Threshold 4.17-1: Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Threshold 4.17-2: Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).

The following threshold questions for this topic required in accordance with Appendix G of the CEQA Guidelines were scoped out of this Draft PEIR, having been adequately addressed in the Initial Study, wherein it was determined that the Project would have no impact or a less than significant impact on the environment:

- 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)?
- Would the project result in inadequate emergency access?

Thus, an analysis of these thresholds is included in Appendix A-1, NOP and Initial Study, of this Draft PEIR.

4.17.4 Impact Analyses

4.17.4.1 Methodology

The methodology for each threshold is discussed under the impact analyses below.

4.17.4.2 Environmental Analyses

Threshold 4.17-1 ***Would the project conflict with an applicable plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?***

Consistency with General Plan

The Project is comprised of Zoning Code changes, including amendments to the Mixed-Use Overlay District (MUOD), and amendments to the General Plan would facilitate housing and various commercial uses in order to meet the City's RHNA goals and rezoning process. While no direct development is proposed as part of the Project, the Project would facilitate the zoning required for future development to be constructed across the Planning Area resulting in net new 21,522 dwelling units and net new 10,630,361 square feet of non-residential uses. The proposed Project would facilitate housing and various commercial uses in order to meet the City's RHNA goals and rezoning process. The Project would create an amended MUOD that allows a property owner to develop multi-family housing on a parcel with a non-residential underlying zoning classification and would not directly result in the construction of the total buildout potential. Rather, the Project would facilitate the construction of housing units and non-residential uses with the adoption of the MUOD. The construction would occur over a period of time and would be spread out in the city. Based on the location and size of the Project , there would be a potential for temporary effects to the existing circulation system, including transit, roadway, bicycle, and pedestrian facilities. For any construction in the public right-of-way, the City would require a traffic control plan be implemented to ensure access for all road users. Operation of these future projects could result in changes to the existing traffic levels due to the introduction of residential and mixed-use land uses. Pursuant to California Public Resources Code Section 21099(b)(2) and CEQA Guidelines Section 15064.3(a), a project's effect on automobile delay is not considered a significant environmental effect. Therefore, no discussion or analysis of level of service or delay is provided in this document.

Given the well-developed transportation system, a number of parcels in the Planning Area are served by existing transit, bike and pedestrian facilities in the city. Transit services in the city are provided by OCTA. As described in Section 4.17.1, several OCTA bus routes provide transit services within the city. The Metrolink rail lines that service the City of Costa Mesa include the Orange County line and Inland Empire-Orange County line. These lines provide service at the Santa Ana and Tustin transit stations; however, there is no Metrolink station within the city. There are several existing and proposed bike facilities along Placentia Avenue, Harbor Boulevard, Newport Boulevard, Fairview Street, Bear Street, 17th Street, 19th Street, Victoria Street, Bristol Street, Baker Street and Sunflower Avenue. The City's BMP would ensure construction of the proposed network and completion of the gaps and missing bike facilities throughout the city. It should be noted that a detailed inventory or assessment of the existing mobility conditions in the city is not within the scope of analysis of the Project. However, the Project would not conflict with or impede implementation of policies, plans, ordinances, and programs addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian paths.

Therefore, the proposed Project would result in a less-than-significant impact related to conflicts with the adopted General Plan addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Impacts would be less than significant.

Consistency with Regional and Local Plans

The Project's consistency with the Connect SoCal (the SCAG RTP/SCS), and City's General Plan are discussed. The 2024–2050 RTP/SCS outlines a series of actions and strategies for integrating the transportation network with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. Thus, successful implementation of the 2024–2050 RTP/SCS would result in more complete communities with a variety of transportation and housing choices. The 2024-2050 RTP/SCS contains the following high-level goal categories: mobility, communities, environment, and economy.

- **Mobility:** Build and maintain an integrated multimodal transportation network
- **Communities:** Develop, connect and sustain livable and thriving communities
- **Environment:** Create a healthy region for the people of today and tomorrow

The Project would not conflict with the goals of Connect SoCal. Figure 4.1-1 illustrates the Transit Priority Areas[6] in the city as determined in SCAG's documentation for Connect SoCal. Several Measure K parcels that are part of the Project are located within TPAs and would have accessibility to transit which would allow for housing and job growth in high-quality transit areas and other opportunity areas along existing main streets and commercial corridors of the city. This would result in an improved jobs-housing balance and more opportunity for transit-oriented development. It will provide diverse housing types and improve accessibility and opportunities for all households. The Project would use the transportation network and conserve City's resources to create a healthy environment.

The Project would not preclude OCTA from implementing any projects, programs and services including bus and rail transit, rideshare, environmental programs, active transportation and express lanes and freeways, nor conflict with existing programs and policies or new policies and initiative required to achieve its regional goals. The Project would not conflict with any of the OCTA initiated plans, as discussed in Section 4.17.2 Regulatory Setting.

The Costa Mesa General Plan Circulation Element establishes policies governing the system of roadways, intersections, bike paths, pedestrian ways, and other components of the circulation system, which collectively provide for the movement of persons and goods throughout Costa Mesa. It applies Complete Streets strategies for street improvements, defines active transportation improvements, coordinates land use planning and transportation improvements and identifies linkages and connectivity among all transportation modes. As discussed in Section 4.17-2, the Project would not conflict with General Plan policies applicable to the circulation system including bike and pedestrian facilities.

The City has prepared Bicycle Master Plan (BMP) and Pedestrian Master Plan (PMP) which became a part of the Active Transportation Plan (ATP) and were incorporated into the Circulation Element of the General Plan per General Plan Amendment PGPA-23-0001. The goals C7-C12 and corresponding recommendations related to bicycle and pedestrian facilities were revised to become policies and some recommendations were removed. The Project would support these policies to promote alternative modes of transportation, including walking and bicycling, to reduce total VMT. Implementation of the Project would not conflict with the policies included in the BMP and PMP. With the implementation of initiatives and recommendations from these plans the use of alternative modes of transportation would be encouraged and needs of bicyclists and pedestrians would be accommodated within the circulation system.

6 Transit Priority Area, as defined in CA Public Resources Code Section 21099(a), means an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations. Major transit stop, as defined in CA Public Resource Code Section 21064.3, means a site containing a rail or bus rapid 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.

Therefore, as shown in the consistency analysis with the applicable regional, community, and local plans addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, the Project's impacts would be **less than significant**.

Threshold 4.17-2 Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less Than Significant Impact. The following discusses the proposed Project's VMT impacts and its consistency with CEQA Guidelines section 15064.3, subdivision (b). The Project's proposed land use changes would accommodate more residents and employees. Per the City's Guidelines, the Project would have an impact if it results in average daily VMT per service population that exceeds 15 percent below the City Baseline daily VMT per service population. The Project area within the city was analyzed as described below using a regional travel demand model. The results of the VMT analysis for the Project under baseline and cumulative conditions are provided in Table 4.17-3 and 4.17-4. The daily VMT per service population has been compared to the citywide baseline VMT to estimate the Project's potential impacts.

Methodology for VMT Analysis

As described in Chapter 3, Project Description, the Project is comprised of Zoning Code changes, including amendments to the Mixed-Use Overlay District, and amendments to the General Plan. While no direct development is proposed as part of the Project, the Project would facilitate the zoning required for future development to be constructed across the Planning Area resulting in a net new 21,522 dwelling units and net new 10,630,361 square feet of non-residential uses. Implementation of the proposed Project would occur over time with a horizon year of 2056 (or 30 years from adoption). Therefore, the Project does not include or propose any site-specific development that could directly result in construction or operational impacts to the environment. Therefore, this PEIR does not assess the site-specific construction and operation details of each future development. Rather, it assesses the potential VMT impacts associated with changes to existing land uses and the associated overall effects of buildout of the proposed Project, where reasonably foreseeable physical changes to the environment could occur.

A Project's VMT analysis follows the process of first using screening criteria, identifying an efficiency metric, identifying the significance threshold and, lastly, determining requirements for modeling and assessment. Per the City's Transportation Guidelines requirements for VMT analysis for large land use projects which cannot be screened, the Orange County Transportation Analysis Model[7] (OCTAM) Version 5.0 with socioeconomic data (SED) and efficiency metric of VMT per service population was used. The OCTAM model runs on the TransCAD software platform and is based on a four-step model structure, which includes trip generation, trip distribution, mode choice, and trip assignment. The model is made up of TAZs (see Figure 4.11-1 for OCTAM TAZs) that include the SED (e.g., population, employment, households, workers, and school enrollment). The land use assumptions and inputs for the Project's TAZs using the OCTAM are provided in Appendix J.

The base and future networks were taken from the OCTAM base and future years with no modifications. The Planning Area consists of most TAZs within the city. Since it is a planning level analysis, the additive method for

[7] OCTAM is a travel demand model developed and maintained by OCTA, designed to provide a greater level of detail and sensitivity in Orange County compared to the regional model developed by the Southern California Association of Governments (SCAG) and the statewide model developed by Caltrans. It is provided to jurisdictions and traffic consultants under a modeling user agreement. Following review by Fehr & Peers of the Technical Advisory on Evaluating Transportation Impacts in CEQA, State of California, Governors Office of Planning and Research, December 2018 as well as CEQA Guidelines, case law, and other relevant national guidance of model applications and forecasting, Fehr & Peers recommends that OCTAM be considered the best available model currently available to Orange County cities for SB 743 implementation.

Project data was used for the analysis. Under this method, Project related SED was added to the existing (or future) SED of the TAZs to evaluate with Project VMT.

Table 4.17-2. Project Socio-Economic Data

Input	Value
Population	52,872[a]
Employees	14,454[b]
Service Population (Population plus Employees)	**67,326**

Notes:

[a] Population estimated using household size corresponding to the average household size 2.46 pph derived from the traffic analysis zones in the OCTAM model which includes net new number of residential units (i.e. 21,522) proposed in the parcels that lie within each traffic analysis zone.

[b] Employment estimation methodology used in the Project's buildout calculation is included in the Project Description.

The VMT analysis below summarizes the average VMT per Service Population values utilizing OCTAM for the City of Costa Mesa and the Project. The Project's development totals were converted into SED and input into OCTAM for each TAZ. The Project's TAZ analysis is based on the combination of the TAZs that include the 1,079 parcels, and the Service Population in the calculation includes the population and employee as shown in Table 4.17-2. The current OCTAM's base year is 2019 and horizon year is 2050. The analysis for the Project is representative of years 2025 and 2056 to correspond with the Project's baseline and horizon year. The daily total VMT per service population has been compared to the City's average total daily VMT per service population to estimate the Project's potential VMT impacts under baseline and cumulative conditions.

Project Generated VMT: The City has selected the Origin/ Destination[8] VMT methodology to provide a more complete capture of all travel (car and truck trips) within the study area, including trips that may begin or end outside of the study area. VMT per service population is utilized to normalize VMT into a standard unit for comparison purposes while accounting for the population and/or employment in a given area. To determine whether or not there is a potentially significant impact, the analysis shall compare the Project - generated VMT to the citywide VMT for baseline conditions.

Project Effect on VMT: The City has selected the Boundary Method[9] VMT to capture all trips, including those trips that do not begin or end in the city (i.e. cut-through traffic) and/or displaced traffic, on the City's roadway network. VMT per service population is utilized to normalize VMT into a standard unit for comparison purposes while accounting for the population and/or employment in a given area. To determine whether or not there is a significant impact, the City's transportation guidelines compares the citywide VMT with and without the Project. The City has chosen citywide VMT as the basis for this threshold because of its comprehensive geography and appropriateness for a city-wide analysis.

[8] Origin Destination Method: The OD methodology is utilized to estimate project-generated VMT. The OD methodology for calculating VMT sums all weekday VMT generated by trips with at least one trip end in the study area (i.e., City boundary) and tracks those trips to their estimated origins/destinations. Origins are all vehicle trips that start in a specific traffic analysis zone (TAZ) and destinations are all trips that end in a specific TAZ. This methodology includes both passenger car and truck trips.

[9] Boundary Method: The boundary method is utilized to measure the project's effect on VMT. The boundary method is the sum of all weekday VMT on a roadway network within a designated boundary. Boundary method VMT estimates VMT by multiplying the number of trips on each roadway segment by the length of that segment. This approach includes all trips, including those trips that do not begin or end in the designated boundary. This is the only VMT method that captures the effect of cut-through and/or displaced traffic.

VMT Impact Threshold

A project would result in a potentially significant project-generated VMT impact if it resulted in either of the following conditions:

1. The baseline project-generated VMT per service population exceeds 15 percent below the City of Costa Mesa baseline VMT per service population (85 percent of the Costa Mesa baseline VMT per service population), or
2. The cumulative project-generated VMT per service population exceeds 15 percent below the City of Costa Mesa baseline VMT per service population (85 percent of the Costa Mesa baseline VMT per service population).

The City's Draft TIA guidelines state that if the Baseline plus project scenario results in a less-than-significant impact, then additional cumulative scenario analysis may not be required.

The Project's effect on VMT would be considered significant if it resulted in either of the following conditions:

1. The baseline link-level citywide VMT per service population increases under the plus project condition compared to the no project condition, or
2. The cumulative link-level citywide VMT per service population increases under the plus project condition compared to the no project condition.

As mentioned above, the output used for Project's VMT analysis is primarily VMT per service population. The baseline ad cumulative model runs were conducted with and without the Project, by adjusting the model's land use (i.e., SED) inputs (see Appendix J).

Project-Generated VMT:

The results of the Project generated VMT analysis using the OCTAM model for the Project under baseline and cumulative conditions are provided in Table 4.11-2.

- **Baseline Project-Generated VMT** – Based on the Origin-Destination (OD) VMT methodology, as shown in Table 4.17-3, the project's baseline Project generated VMT per Service Population is 16.7. The citywide average daily VMT per Service Population is 29.9 and the baseline threshold is 25.4.
- **Cumulative Project-Generated VMT** – Based on the OD methodology, as shown in Table 4.17-3, the project's cumulative Project-generated VMT per Service Population is 14.4. The citywide average daily VMT per Service Population is 29.3 and the baseline threshold is 25.4.

The Project's baseline Project-generated VMT (i.e 16.7) and cumulative Project-generated VMT (14.4) would not exceed the City of Costa Mesa baseline VMT per service population (i.e. 25.4). The proposed Project would not exceed the City of Costa Mesa VMT per Service Population threshold. Therefore, the Project would not have a significant Project-generated VMT impact under both the Baseline and Cumulative scenarios.

Table 4.17-3. Project Generated VMT

Area	OD VMT	Service Population	OD VMT/Service Population
Baseline			
Project	1,123,710	67,326	16.7
Citywide Average	6,786,444	227,111	29.9
Significance Threshold (15 percent below citywide VMT/SP)	—	—	*25.4*
Exceeds Threshold/Potentially Significant Impact	**No**		
Cumulative			
Project	968,889	67,326	14.4
Citywide Average	8,325,117	284,101	29.3
Significance Threshold (15 percent below citywide VMT/SP)	—	—	*25.4*
Exceeds Threshold/Potentially Significant Impact	**No**		

Source: OCTAM Travel Demand Forecast Model, Appendix J

Project Effect on VMT:

The results of the Project effect on VMT analysis using the OCTAM model for the Project under baseline and cumulative conditions are provided in Table 4.11-3.

- **Baseline Project's Effect on VMT** – Based on the boundary methodology, as shown below, with Project boundary citywide VMT per Service Population is 15.7 and the no Project Baseline boundary citywide VMT per Service Population is 19.2.
- **Cumulative Project's Effect on VMT** –As shown in Table 4.17-4 with Project Cumulative boundary citywide VMT per Service Population is 14.4 and the no Project Cumulative boundary citywide VMT per Service Population is 16.7.

As shown above, with Project VMT per service population it would not exceed the no Project VMT per Service Population under baseline and cumulative conditions. Therefore, the Project would not have a significant Project-effect on VMT impact under both the Baseline and Cumulative scenarios.

Table 4.17-4. Project Effect on VMT – Baseline and Cumulative Conditions

Criteria	No Project	With Project
Baseline		
Boundary VMT	4,350,607	4,629,012
Service Population	227,111	294,437
Boundary VMT per service population	19.2	15.7
Exceeds Threshold/Potentially Significant Impact	**No**	**No**
Cumulative		
Boundary VMT	4,731,643	4,963,085
Service Population	284,101	351,427
Boundary VMT per service population	16.7	14.1
Exceeds Threshold/Potentially Significant Impact	**No**	**No**

Source: OCTAM Travel Demand Forecast Model, Appendix J

Impact Determination:

As shown above, the Project would not have a significant Project-generated VMT impact under both the Baseline and Cumulative scenarios. The Project would not have a significant Project-effect on VMT impact under both the Baseline and Cumulative scenarios. Therefore, the Project would not conflict with CEQA Guidelines section 15064.3, subdivision (b) related to the VMT threshold. Impacts would be **less than significant**, and no mitigation is required.

4.17.5 Cumulative Impact Analyses

Where a lead agency concludes that the cumulative effects of a project, taken together with the impacts of other closely related past, present, and reasonably foreseeable future projects are significant, the lead agency then must determine whether the project's incremental contribution to such significant cumulative impact is "cumulatively considerable" (and thus significant in and of itself). The cumulative study area used to assess potential cumulative transportation impacts includes the city. The full list of related plans applicable to the Project's cumulative analyses is provided in Section 2.5, Cumulative Impact Analysis, in Chapter 2, Environmental Setting of this Draft PEIR.

Threshold 4.17-1. The Project would not be anticipated to conflict with the goals and policies of the General Plan or Connect SoCal. For projects of scale, including future commercial projects and residential projects that do not qualify for streamlining pursuant to City's requirements, impacts identified for an individual project per the City's TIA guidelines would be addressed through the discretionary project approval process, including, environmental review, and mitigation measures specific to any identified impacts related to consistency with applicable regional and local plans, including Connect SoCal and the General Plan Circulation Element. Therefore, pursuant to existing state and City requirements, all future development would comply with planning, design, and safety standards and would not cumulatively impact the transportation thresholds of significance for compliance with existing regulations, roadway hazards, incompatible use, or emergency access. Therefore, the Project's incremental contribution to impacts related to conflicts with applicable plans would not be cumulatively considerable.

Threshold 4.17-2. Per the City's TIA Guidelines, a cumulative scenario analysis is also required in addition to the Baseline plus Project scenario to determine the significance of VMT impact. Further, according to the City's TIA Guidelines, if a project is consistent with the Regional Transportation Plan/Sustainable Communities Strategy

(RTP/SCS), then the cumulative impacts (project effect on VMT) shall be considered less than significant. Based on the SED provided in OCTAM, the proposed Project is not consistent with the RTP/SCS since the Project has additional employees and residents. The Project's cumulative analysis of the Project's effect on VMT has been conducted, and the results are summarized in Section 4.17.4. The cumulative conditions are representative of long-term future conditions and include major cumulative development in the city such as the Fairview Development Center. As shown in Table 4.17-4, the Project would not result in a significant impact under cumulative conditions.

As the City implements its Circulation Element policies and adopts the Climate Action Plan related goals and policies which encourages increased multi-modal travel, the plans, policies and programs would continue to work toward decreasing VMT. Therefore, the Project's incremental contribution to VMT impacts would not be cumulatively considerable.

4.17.6 Mitigation Measures

All impacts related to transportation would be less than significant and no mitigation is required.

4.17.7 Level of Significance Conclusion

Threshold 4.17-1. The Project would have a **less than significant impact** related to conflicts with an applicable plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities and would not be cumulatively considerable.

Threshold 4.17-2. The Project would have a **less than significant impact** related to conflicts or inconsistencies with CEQA Guidelines section 15064.3, subdivision (b) and would not be cumulatively considerable.

4.17.8 References

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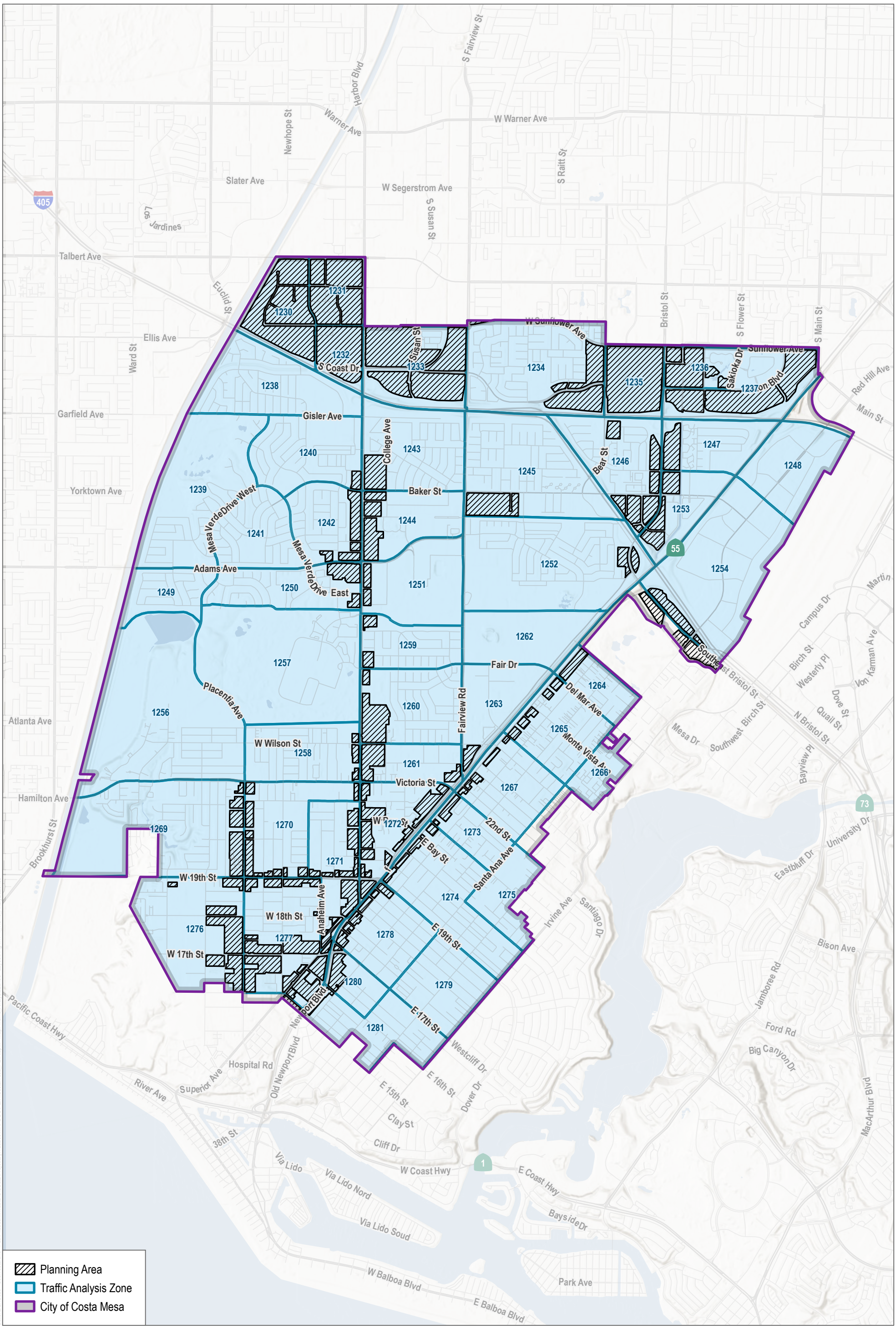

SOURCE: Esri, Open Street Map, Open Street Map 2019

FIGURE 4.17-1

Traffic Analysis Zones

DUDEK

0 1,500 3,000 Feet

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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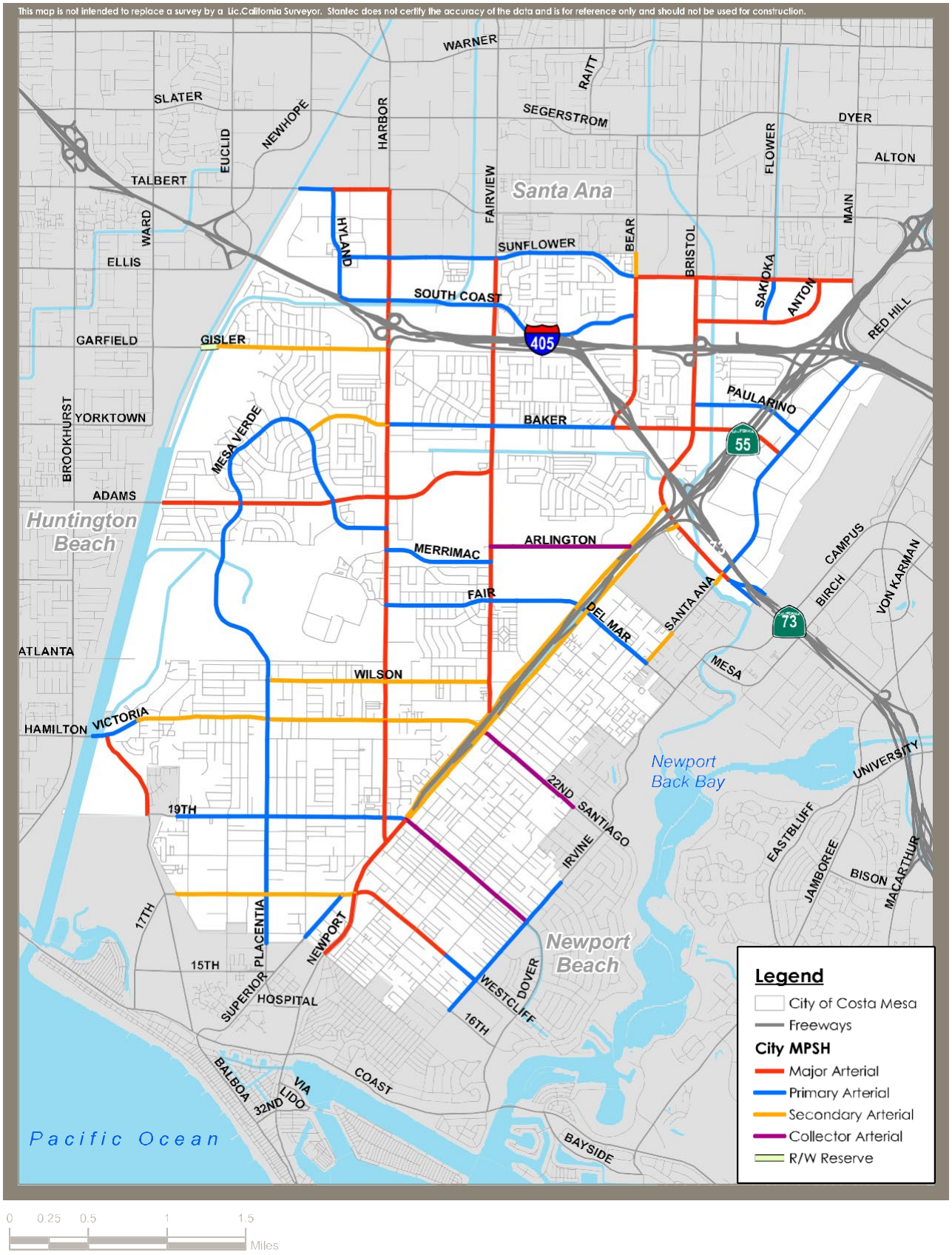

SOURCE: City of Costa Mesa General Plan

FIGURE 4.17-2

City of Costa Mesa Roadway Classifications

DUDEK

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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SOURCE: City of Costa Mesa General Plan

FIGURE 4.17-3

Transit Corridors in Costa Mesa

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Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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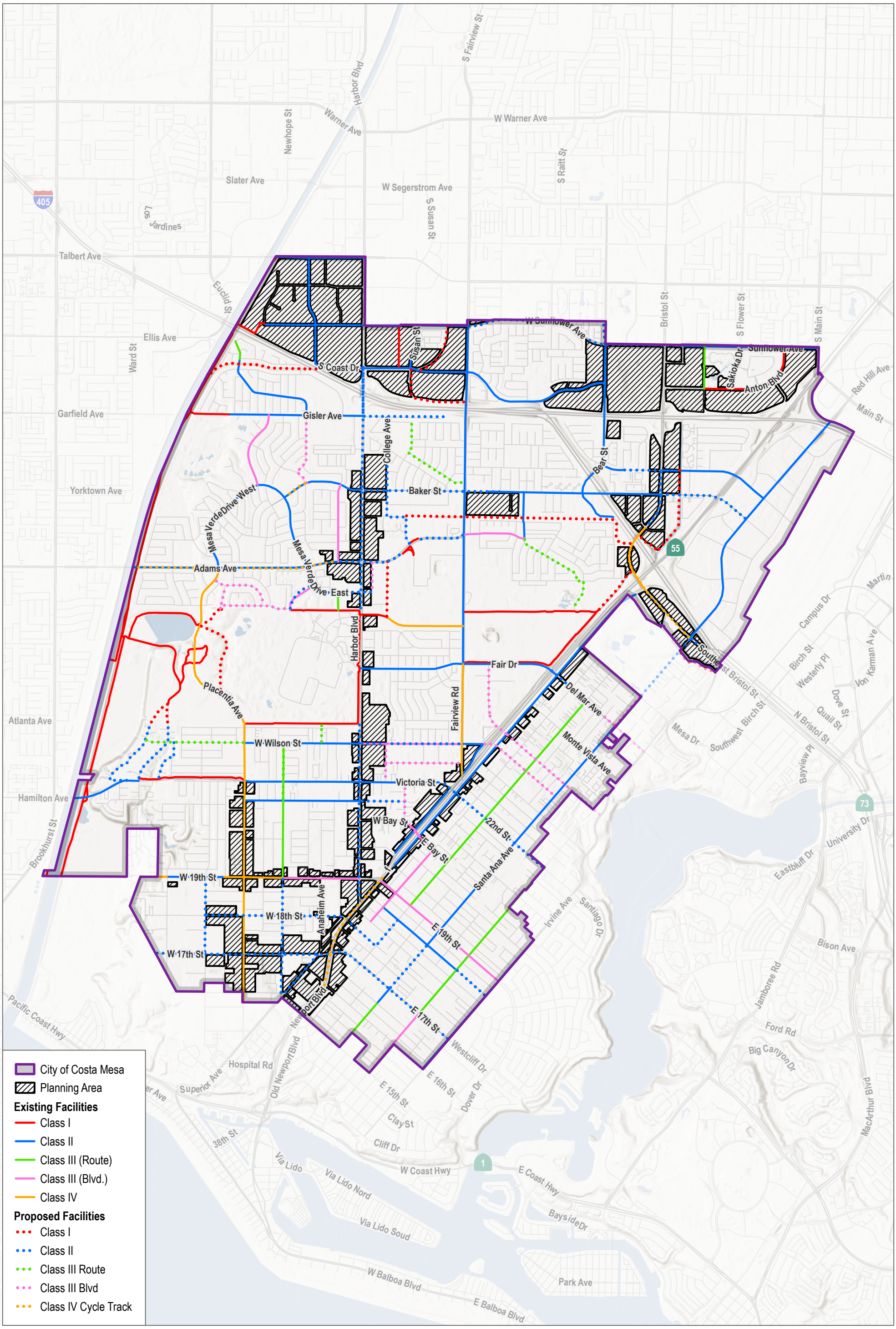

SOURCE: Esri, Open Street Map, City of Costa Mesa 2026

DUDEK

0 1,500 3,000 Feet

Figure 4.17-4

Existing and Proposed Bike Facilities

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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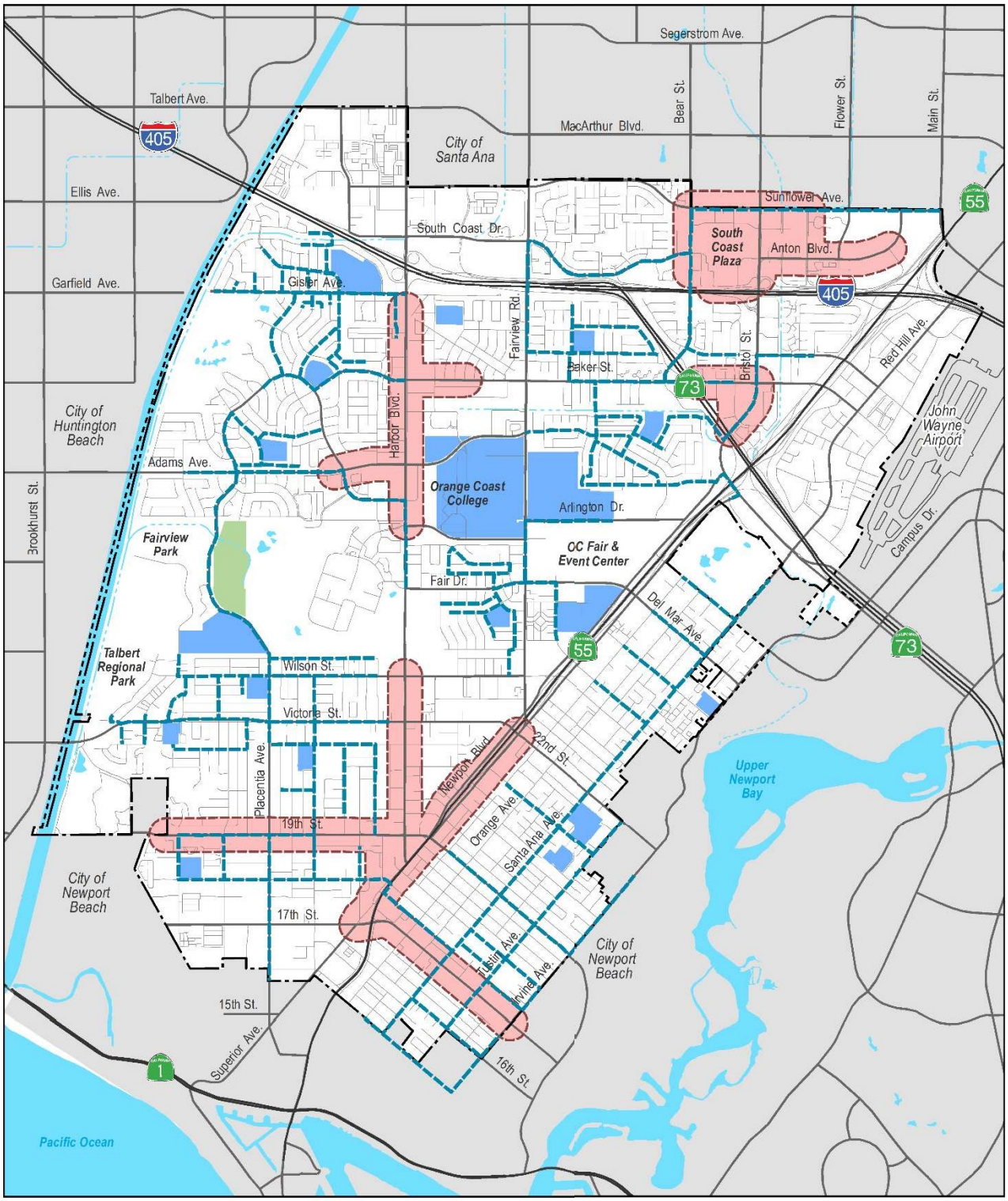

SOURCE: City of Costa Mesa General Plan

FIGURE 4.17-5

Pedestrian Opportunity Zones

Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation

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4.18 Tribal Cultural Resources

This section of the Draft PEIR analyzes the potential impacts from the implementation of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation (project) on tribal cultural resources (TCRs). A discussion of the cultural resources in the Planning Area and the surrounding areas is included in this section to present the environmental baseline conditions. As defined in Public Resources Code (PRC) Section 21074, TCRs can include 1) sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a Tribe that are listed, or determined to be eligible for listing, in the national or state register of historical resources, or listed in a local register of historic resources; or (2) resources that the lead agency determines, in its discretion, are TCRs. The analysis in this section is based, in part, on records search results obtained from the California Historical Resources Information System at the South Central Coastal Information Center (SCCIC), background research, and a desktop review of literature, maps, and archival documents summarized in Section 4.5, Cultural Resources. The analysis also incorporates the results of a Native American Heritage Commission (NAHC) Sacred Lands File (SLF) search for the project and communication with California Native American tribal representatives conducted pursuant to Assembly Bill (AB) 52 and Senate Bill (SB) 18. Additional details are provided in the appendices listed below:

Appendix K-1 NAHC SLF Search Results and AB 52 and SB 18 Notification Letters

Appendix K-2 *Confidential* Tribal Communications Records (on file with the City and available for review by eligible individuals)

Non-confidential documents related to these efforts such as the NAHC Sacred Land File search results and the City's original AB 52 and SB 18 project notification letters are provided in Appendix K-1; all confidential documents protected pursuant to PRC Section 21082.3(c)(1), such as communication records and documents provided by the Tribes, are on file with the City and available for review by eligible individuals. Other sources consulted are listed in Section 4.18.8, References.

4.18.1 Existing Conditions

The existing conditions discussion provided in Section 4.5, Cultural Resources, including the SCCIC database records search, results of a NAHC SLF search, an archival review of historic aerial photographs and historic topographic maps (including the Kirkman–Harriman historical map), and an assessment of the regional geological setting, also applies to TCRs and is incorporated herein by reference to avoid repetition.

4.18.1.1 Environmental Setting

Evidence for continuous human occupation in the region spans the last 10,000 years. Various attempts to parse out variability in archaeological assemblages over this broad time frame have led to the development of several cultural chronologies; some of these are based on geologic time, most are based on temporal trends in archaeological assemblages, and others are interpretive reconstructions. Each of these reconstructions describes essentially similar trends in assemblage composition in more or less detail. This research employs a common set of generalized terms used to describe chronological trends in assemblage composition: Paleoindian (pre-5500 BC), Archaic (8000 BC–AD 500), Late Prehistoric (AD 500–1750), and Ethnohistoric (post-AD 1750).

Paleoindian (pre-5500BC)

Evidence for Paleoindian occupation in the region is tenuous; the knowledge of associated cultural pattern(s) is informed by a relatively sparse body of data that has been collected from within an area extending from coastal San Diego through the Mojave Desert and beyond. One of the earliest dated archaeological assemblages in this area (excluding the Channel Islands) derives from SDI-4669/W-12, in La Jolla, San Diego County. A human burial from SDI-4669 was radiocarbon dated to 9,590–9,920 years before present (95.4 percent probability) (Hector 2006). The burial is part of a larger site complex that contained more than 29 human burials associated with an assemblage that fits the Archaic profile (i.e., large amounts of groundstone, battered cobbles, and expedient flake tools). In contrast, typical Paleoindian assemblages include large stemmed projectile points, high proportions of formal lithic tools, bifacial lithic reduction strategies, and relatively small proportions of groundstone tools. Prime examples of this pattern are sites that were studied by Emma Lou Davis (1978) on China Lake Naval Air Weapons Station near Ridgecrest, California. These sites contained fluted and unfluted stemmed points and large numbers of formal flake tools (e.g., shaped scrapers, blades). Other typical Paleoindian sites include the Komodo site (MNO-679), a multicomponent fluted point site, and MNO-680, a single component Great Basined stemmed point site (Basgall et al. 2002). At MNO-679 and MNO-680, groundstone tools were rare, while finely made projectile points were common.

Warren et al. (2004) claimed that a biface manufacturing tradition present at the Harris site complex (SDI-149) is representative of typical Paleoindian occupation in the Southern California region that possibly dates between 10,365 and 8200 BC (Warren et al. 2004, p. 26). Termed San Dieguito (Rogers 1945), assemblages at the Harris site, located in the area now occupied by City of Escondido, are qualitatively distinct from most others in the region because the site has large numbers of finely made bifaces (including projectile points), formal flake tools, a biface reduction trajectory, and relatively small amounts of processing tools (Warren 1964, 1968). Despite the unique assemblage composition, the definition of San Dieguito as a separate cultural tradition is debated. Gallegos (1987) suggested that the San Dieguito pattern is simply an inland manifestation of a broader economic pattern. Gallegos' interpretation of San Dieguito has been widely accepted in recent years, in part because of the difficulty in distinguishing San Dieguito components from other assemblage constituents. In other words, it is easier to ignore San Dieguito as a distinct socioeconomic pattern than it is to draw it out of mixed assemblages.

The large number of finished bifaces (i.e., projectile points and non-projectile blades), along with large numbers of formal flake tools at the Harris site complex, is very different than nearly all other assemblages throughout the region, regardless of age. Warren et al. (2004) made this point, tabulating basic assemblage constituents for key early Holocene sites. Producing finely made bifaces and formal flake tools implies that relatively large amounts of time were spent for tool manufacture. Such a strategy contrasts with the expedient flake-based tools and cobble-core reduction strategy that typifies non-San Dieguito Archaic sites. It can be inferred from the uniquely high degree of San Dieguito assemblage formality that the Harris site complex represents a distinct economic strategy from non-San Dieguito assemblages.

If San Dieguito truly represents a distinct socioeconomic strategy from the non-San Dieguito Archaic processing regime, its rarity implies that it was not only short-lived, but that it was not as economically successful as the Archaic strategy. Such a conclusion would fit with the general trends in Southern California deserts, wherein hunting-related tools are replaced by processing tools during the early Holocene (Basgall and Hall 1990).

Archaic (8000 BC-AD 500)

The more than 1500-year overlap between the presumed age of Paleoindian occupations and the Archaic period highlights the difficulty in defining a cultural chronology in the region. If San Dieguito is the only recognized Paleoindian component in the region, then the dominance of hunting tools implies that it derives from Great Basin adaptive strategies and is not necessarily a local adaptation. Warren et al. (2004) admitted as much, citing strong desert connections with San Dieguito. Thus, the Archaic pattern is the earliest local socioeconomic adaptation in the region (Hale 2001, 2009).

The Archaic pattern is relatively easy to define with assemblages that consist primarily of processing tools: millingstones, handstones, battered cobbles, heavy crude scrapers, incipient flake-based tools, and cobble-core reduction. These assemblages occur in all environments across the region, with little variability in tool composition. Low assemblage variability over time and space among Archaic sites has been equated with cultural conservatism (Byrd and Reddy 2002; Warren 1968; Warren et al. 2004). Despite enormous amounts of archaeological work at Archaic sites, little change in assemblage composition occurs until the bow and arrow is adopted at around AD 500, as well as ceramics at approximately the same time (Griset 1996; Hale 2009). Even then, assemblage formality remains low. After the bow is adopted, small arrow points appear in large quantities, and already low amounts of formal flake tools are replaced by increasing amounts of expedient flake tools. Similarly, shaped millingstones and handstones decrease in proportion relative to expedient, unshaped groundstone tools (Hale 2009). Thus, the terminus of the Archaic period is equally as hard to define as its beginning because basic assemblage constituents and patterns of manufacturing investment remain stable, complimented only by the addition of the bow and ceramics.

Late Prehistoric (AD 500-1750)

The period of time following the Archaic and prior to Ethnohistoric times (AD 1750) is commonly referred to as the Late Prehistoric (Rogers 1945; Wallace 1955; Warren et al. 2004). However, several other subdivisions continue to be used to describe various shifts in assemblage composition, including the addition of ceramics and cremation practices. The post-AD 1450 period is called the San Luis Rey Complex (Meighan and True 1977). Rogers (1929) also subdivided the last 1,000 years into the Yuman II and III cultures, based on the distribution of ceramics. Despite these regional complexes, each is defined by the addition of arrow points and ceramics and the widespread use of bedrock mortars. Vagaries in the appearance of the bow and arrow and ceramics make the temporal resolution of the San Luis Rey complex difficult. For this reason, the term Late Prehistoric is well-suited to describe the last 1,500 years of prehistory in the region.

Temporal trends in socioeconomic adaptations during the Late Prehistoric period are poorly understood. This is partly due to the fact that the fundamental Late Prehistoric assemblage is very similar to the Archaic pattern but includes arrow points and large quantities of fine debitage from producing arrow points, ceramics, and cremations. While steatite was commonly the material of choice for vessel production, it was generally replaced near the time of missionization by locally procured clay to produce ceramic vessels. The appearance of mortars and pestles is difficult to place in time because most mortars are on bedrock. Some argue that the Ethnohistoric intensive acorn economy extends as far back as AD 500 (Bean and Shipek 1978). However, there is no substantial evidence that reliance on acorns, and the accompanying use of mortars and pestles, occurred prior to AD 1400. True (1980) argued that acorn processing and ceramic use in the region did not occur until the San Luis Rey pattern emerged after approximately AD 1450.

Ethnographic Setting

The history of the Native American communities prior to the mid-1700s has largely been reconstructed through later mission-period and early ethnographic accounts. The first records of the Native American inhabitants of the region come predominantly from European merchants, missionaries, military personnel, and explorers. These brief, and generally peripheral, accounts were prepared with the intent of furthering respective colonial and economic aims and were combined with observations of the landscape. They were not intended to be unbiased accounts regarding the cultural structures and community practices of the newly encountered cultural groups. The establishment of the missions in the region brought more extensive documentation of Native American communities, though these groups did not become the focus of formal and in-depth ethnographic study until the early twentieth century (Bean and Shipek 1978; Boscana 1846; Fages 1937; Geiger and Meighan 1976; Harrington 1934; Laylander 2000; White 1963). The principal intent of these researchers was to record the precontact, culturally specific practices, ideologies, and languages that had survived the destabilizing effects of missionization and colonialism. This research, often understood as "salvage ethnography," was driven by the understanding that traditional knowledge was being lost due to the impacts of modernization and cultural assimilation. Alfred Kroeber applied his "memory culture" approach (Lightfoot 2005, p. 32) by recording languages and oral histories within the region. Ethnographic research by Dubois, Kroeber, Harrington, Spier, and others during the early twentieth century seemed to indicate that traditional cultural practices and beliefs survived among local Native American communities.

It is important to note that even though there were many informants for these early ethnographies who were able to provide information from personal experiences about Native American life before European immigration, a significantly large proportion of these informants were born after 1850; therefore, the documentation of pre-contact, aboriginal culture was being increasingly supplied by individuals born in California after considerable contact with Europeans. This is an important issue to note when examining these ethnographies, since considerable culture change had undoubtedly occurred by 1850 among the Native American survivors of California.

Gabrielino/Tongva

The archaeological record indicates that the proposed project and vicinity was occupied by the Gabrielino/Tongva. Surrounding cultural groups included the Chumash and Tataviam to the northwest, the Serrano and Cahuilla to the northeast, and the Juaneño and Luiseño to the southeast.

The name "Gabrielino" (also spelled "Gabrieliño" and "Gabrieleño") denotes those people who were administered by the Spanish from the San Gabriel Mission, which included people from the Gabrielino area proper as well as other social groups (Bean and Smith 1978; Kroeber 1925). Therefore, in the post-Contact period, the name does not necessarily identify a specific ethnic or tribal group. The names by which Native Americans in southern California identified themselves have, in some cases, been lost. Many modern California Native Americans identify themselves as the Tongva (King 1994), within which there are a number of regional bands. Though the names "Tongva" or "Gabrielino" are the most common names used by modern Native American groups in Los Angeles County and are recognized by the California Native American Heritage Commission, there are groups within the region that self-identify differently.

Tongva lands encompassed the greater Los Angeles Basin and three Channel Islands, San Clemente, San Nicolas, and Santa Catalina. The Tongva established large, permanent villages in the fertile lowlands along rivers and streams, and in sheltered areas along the coast, stretching from the foothills of the San Gabriel Mountains to the Pacific Ocean. A total tribal population has been estimated of at least 5,000 (Bean and Smith 1978), but recent

ethnohistoric work suggests a number approaching 10,000 (O'Neil 2002). Houses constructed by the Tongva were large, circular, domed structures made of willow poles thatched with tule that could hold up to 50 people (Bean and Smith 1978). Other structures served as sweathouses, menstrual huts, ceremonial enclosures, and probably communal granaries. Cleared fields for races and games were created adjacent to Tongva villages (McCawley 1996). Archaeological sites composed of villages with various sized structures have been identified.

The largest, and best documented, ethnographic Tongva village in the vicinity was that of Yanga (also known as Yaangna, Janga, and Yabit), which was in the vicinity of downtown Los Angeles (McCawley 1996:56-57; NEA and King 2004). This village was reportedly first encountered by the Portola expedition in 1769. In 1771, Mission San Gabriel was established. Yanga provided a large number of the recruitments to this mission; however, following the founding of the Pueblo of Los Angeles in 1781, opportunities for local paid work became increasingly common, which had the result of reducing the number of Native American neophytes from the immediately surrounding area (NEA and King 2004). Mission records indicate that 179 Native inhabitants of Yanga were recruited to San Gabriel Mission (King 2000; NEA and King 2004: 104). Based on this information, Yanga may have been the most populated village in the Western Gabrielino territory. Second in size, and less thoroughly documented, the village of Cahuenga was located slightly closer, just north of the Cahuenga Pass.

Father Juan Crespí passed through the area near Yanga on August 2-3, 1769. The pertinent sections from his translated diary are provided here:

> *Sage for refreshment is very plentiful at all three rivers and very good here at the Porciúncula [the Los Angeles River]. At once on our reaching here, eight heathens came over from a good sized village encamped at this pleasing spot among some trees. They came bringing two or three large bowls or baskets half-full of very good sage with other sorts of grass seeds that they consume; all brought their bows and arrows but with the strings removed from the bows. In his hands the chief bore strings of shell beads of the sort that they use, and on reaching the camp they threw the handfuls of these beads at each of us. Some of the heathens came up smoking on pipes made of baked clay, and they blew three mouthfuls of smoke into the air toward each one of us. The Captain and myself gave them tobacco, and he gave them our own kind of beads, and accepted the sage from them and gave us a share of it for refreshment; and very delicious sage it is for that purpose.*
>
> *We set out at a half past six in the morning from this pleasing, lush river and valley of Our Lady of Angeles of La Porciúncula. We crossed the river here where it is carrying a good deal of water almost at ground level, and on crossing it, came into a great vineyard of grapevines and countless rose bushes having a great many open blossoms, all of it very dark friable soil. Keeping upon a westerly course over very grass-grown, entirely level soils with grand grasses, on going about half a league we came upon the village belonging to this place, where they came out to meet and see us, and men, women, and children in good numbers, on approaching they commenced howling at us though they had been wolves, just as before back at the spot called San Francisco Solano. We greeted them and they wished to give us seeds. As we had nothing at hand to carry them in, we refused* [Brown 2002:339-341, 343].

The Portola party passed westward through the La Brea Tar Pits area (CA-LAN-159) the following day. This was a known area of Native American use for hunting and the gathering of tar and other area-specific resources (Westec 1983). A pertinent excerpt from Father Juan Crespí's August 3, 1769 diary entry is provided here:

> *The Captain told me that when they scouted here, in a ravine about half a league to the westward they came upon about forty springs of pitch, or tar, boiling in great surges up out of the ground, and saw very large swamps of this tar, enough to have caulked many ships.* [Brown 2002:341]

Upon leaving the La Brea Tar Pits, the Portola expedition continued westward, camping on August 4, 1769 near what is now the route Interstate 405 before heading northward into the mountains. Details of the day's travels are provided below:

> *At a quarter past six in the morning we set out from this copious spring at the San Esteban Sycamores …. We pursued our way northwestward and on going about a quarter-league [0.85 mile], we came into a little flat hollow between small knolls, and then onward across level tablelands of dark friable soil….we turned west-northwestward and on going two hours, all over level soil, came to the watering place: two springs rising at the foot of a high tableland, their origin being higher up on the large plain here….At this spot we came upon a village at the aforesaid tableland and as soon as we arrived and set up camp, six very friendly, compliant tractable heathens came over, who had their little houses roofed with grass, the first we have been seeing of this sort. They brought four or six bowls of the usual seeds and good sage which they presented to our Captain. On me they bestowed a good-sized string of the sort of beads they all have, made of white seashells and red ones, though not very bright-colored, that look to be coral.* [Brown 2002:345-349]

The name of this village referenced to be near the August 4, 1769 Portola camp is unknown, and would have been located approximately 3 miles from the named village near Santa Monica (*Kuruvungna*) and 5 miles from *Sa'anga* near the mouth of Ballona Creek. *Sa'anga*, has also been commonly referred to as *Guaspet* or *Guashna*, (NEA and King 2004), *Saan* (Kroeber 1925), or Saa'anga or Waachnga (McCawley 1996). Ethnohistoric research completed by John Johnson (1988) pertaining to the inhabitants of San Clemente Island and Santa Catalina Island has indicated that there were many marriage ties between these islands and this village in the vicinity of the Ballona wetlands. Mission records indicate that a total of 95 neophytes came from this village; 87 of these individuals at Mission San Gabriel and the remaining eight at Mission San Fernando (NEA and King 2004). These records further suggest that marriage was common with the surrounding outside villages, but perhaps most often occurring with members of the large village of Yanga.

The Tongva subsistence economy was centered on gathering and hunting. The surrounding environment was rich and varied, and the Tribe exploited mountains, foothills, valleys, deserts, riparian, estuarine, and open and rocky coastal eco-niches. Like that of most Native Californians, acorns were the staple food (an established industry by the time of the early Intermediate Period). Acorns were supplemented by the roots, leaves, seeds, and fruits of a wide variety of flora (e.g., islay, cactus, yucca, sages, and agave). Fresh water and saltwater fish, shellfish, birds, reptiles, and insects, as well as large and small mammals, were also consumed (Bean and Smith 1978: 546; Kroeber 1925; McCawley 1996).

A wide variety of tools and implements were used by the Tongva to gather and collect food resources. These included the bow and arrow, traps, nets, blinds, throwing sticks and slings, spears, harpoons, and hooks. Groups residing near the ocean used oceangoing plank canoes and tule balsa canoes for fishing, travel, and trade between the mainland and the Channel Islands (McCawley 1996).

Tongva people processed food with a variety of tools, including hammerstones and anvils, mortars and pestles, manos and metates, strainers, leaching baskets and bowls, knives, bone saws, and wooden drying racks. Food was

consumed from a variety of vessels. Catalina Island steatite was used to make ollas and cooking vessels (Blackburn 1963; Kroeber 1925; McCawley 1996).

At the time of Spanish contact, the basis of Tongva religious life was the Chinigchinich cult, centered on the last of a series of heroic mythological figures. Chinigchinich gave instruction on laws and institutions, and also taught the people how to dance, the primary religious act for this society. He later withdrew into heaven, where he rewarded the faithful and punished those who disobeyed his laws (Kroeber 1925). The Chinigchinich religion seems to have been relatively new when the Spanish arrived. It was spreading south into the Southern Takic groups even as Christian missions were being built and may represent a mixture of Native and Christian belief and practices (McCawley 1996).

Deceased Tongva were either buried or cremated, with inhumation more common on the Channel Islands and the neighboring mainland coast and cremation predominating on the remainder of the coast and in the interior (Harrington 1942; McCawley 1996). Cremation ashes have been found in archaeological contexts buried within stone bowls and in shell dishes (Ashby and Winterbourne 1966), as well as scattered among broken ground stone implements (Cleland et al. 2007). Archaeological data such as these correspond with ethnographic descriptions of an elaborate mourning ceremony that included a wide variety of offerings, including seeds, stone grinding tools, otter skins, baskets, wood tools, shell beads, bone and shell ornaments, and projectile points and knives. Offerings varied with the gender and status of the deceased (Johnston 1962; McCawley 1996; Reid 1926). At the behest of the Spanish missionaries, cremation essentially ceased during the post-Contact period (McCawley 1996).

4.18.2 Regulatory Requirements

4.18.2.1 Federal Regulations

No federal regulations are known to pertain to this project.

4.18.2.2 State Regulations

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 the California Environmental Quality Act (CEQA) and also provided for additional Native American consultation requirements for the lead agency. PRC 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 PRC Section 5024.1.

AB 52 formalizes the lead agency–tribal consultation process. Specifically, it requires the lead agency to notify a California Native American Tribe of proposed projects in the geographic area that is traditionally and culturally affiliated with the Tribe if that Tribe has requested such notification, in writing, to the lead agency (PRC Section 21080.3.1(b)). Additionally, prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report, the lead agency is required to begin consultation with a California Native American Tribe that requested consultation within 30 days of receipt of project notification (PRC Section 21080.3.1(e)).

PRC Section 21084.2 establishes that "A project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment." Effects on TCRs should be considered under CEQA. PRC Section 21080.3.2 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 (Government Code Section 65352.3) was signed into law September of 2004 and took effect March 1, 2005. SB 18 refers to PRC Sections 5097.9 and 5097.995, which define 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 and Public Resources Code Section 5097.98

CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. As described below, these procedures are detailed in California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98.

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. Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further

disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the County coroner has examined the remains (California Health and Safety Code Section 7050.5(b)). If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the NAHC within 24 hours (California Health and Safety Code Section 7050.5[c]). In accordance with California Public Resources Code Section 5097.98(a), the NAHC will notify the Most Likely Descendant (MLD). With the permission of the landowner, the MLD may inspect the site of discovery. Within 48 hours of being granted access to the site, the MLD may recommend means of treatment or disposition, with appropriate dignity, of the human remains and associated grave goods.

4.18.2.3 Local

City of Costa Mesa 2015 - 2035 General Plan

Chapter 11, the Historical and Cultural Resources Element of the Costa Mesa 2015 - 2035 General Plan, provides the following goals and policies potentially relevant to the Project (City of Costa Mesa 2016). The following summarizes goals and policies specific to tribal cultural resources.

Goal HCR-1: Historical, Archaeological, and Paleontological Resource Preservation.

Objective HCR-1A: Encourage preservation and protection of the City's archaeological, paleontological, and historical resources.

Preserving Archaeological Resources

Policy HCR-1.7: Require cultural resources studies (i.e., archaeological and historical investigations) for all applicable discretionary projects, in accordance with CEQA regulations. The studies should identify cultural resources (i.e., prehistorical sites, historical sites, and isolated artifacts and features) in the project area, determine their eligibility for inclusion in the California Register of Historical Resources, and provide mitigation measures for any resources in the project area that cannot be avoided. Cultural resources studies shall be completed by a professional archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards in prehistorical or historical archaeology.

Policy HCR-1.8: Comply with requirements of the California Environmental Quality Act regarding protection and recovery of archaeological resources discovered during development activities.

4.18.3 Thresholds of Significance

The significance criteria used to evaluate 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:

Threshold 4.18-1: 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:

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

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

4.18.4 Impact Analyses

4.18.4.1 Methodology

As described in Chapter 3, Project Description, the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation project is a policy document that does not include or propose any site-specific development that could directly result in construction or operational impacts to the environment. However, implementation of the project would facilitate additional future development in the city. Therefore, this Draft PEIR does not assess the site-specific construction and operation details of each future development within the Planning Area. Rather, it assesses the impacts associated with changes to existing land uses and the associated overall effects of buildout of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation project through 2056, where reasonably foreseeable physical changes to the environment could occur. Analysis at a parcel or site-specific level was not conducted because, unless otherwise noted within this assessment, the actual locations of project development (and its chronologic sequence or concurrence) that may be implemented in the future are speculative.

The following analysis considers the existing environmental setting and regulatory environment applicable to the Planning Area. This analysis considers the CEQA Guidelines in determining whether implementation of the project could adversely affect TCRs within the Planning Area.

AB 52 Consultation

The project is subject to compliance with AB 52 (primarily PRC Section 21074, 21080.3.1 and 21082.3) which requires consideration of impacts to TCRs as part of the CEQA process, and that the lead agency provide notification of the project and pertinent details to California Native American Tribal representatives (that have requested notification), who are traditionally or culturally affiliated with the geographic area of the project. Pursuant to AB 52, 23 NAHC-listed California Native American Tribal representatives were sent letters via certified U.S. Postal Service (USPS) mail, by the City on November 19, 2025. The letters contained a project description, outline of AB 52 timing, an invitation to consult, and contact information for the appropriate lead agency representative. AB 52 allows tribes 30 days after receiving notification to request consultation in writing. If a tribe does not respond within the 30-day period, the lead agency is not required to initiate consultation with that tribe (PRC Section 21080.3.1(b)).

SB 18 Consultation

The project is also subject to compliance with SB 18 (Government Code Section 65352.3), which requires local governments to invite California Native American Tribal representatives to participate in consultation regarding proposed General Plan and Specific Plan adoptions or amendments. The NAHC identified 23 representatives from California Native American Tribes who would potentially have specific knowledge of the cultural resources identified

within the Planning Area, all of whom were also notified pursuant to AB 52. All 23 California Native American Tribal representatives provided by the NAHC were sent notification letters via certified USPS mail, by the City on November 19, 2025. SB 18 allows tribes 90 days after receiving notification to request consultation in writing. If a tribe does not respond within the 90-day period, the lead agency is not required to initiate consultation with that tribe (Government Code Section 65352.3(a)).

At the close of both allotted 30-day (AB 52) and 90-day (SB 18) response periods, two tribes, the Juaneño Band of Mission Indians Acjachemen Nation – Belardes, and the Juaneño Band of Mission Indians Acjachemen Nation 84A, have responded to the City's notifications pursuant to AB 52 and SB 18. An account of all communication can be found in Table 4.18-1. Confidential documents related to AB 52 and SB 18 consultation are on file with the City (Appendix K-2) and available for review by eligible individuals.

Table 4.18-1. Tribal Communications Log

Native American Tribal Representatives	Method and Date of Notification	Response to City Notification Letters	Consultation Date and Results
Cahuilla Band of Indians; Erica Schenk, Chairperson	**AB 52:** November 19, 2025, Letters sent to Chairperson Erica Schenk **SB 18:** November 19, 2025, Letters sent to Chairperson Erica Schenk	**AB 52:** No response **SB 18:** No response	N/A
Cahuilla Band of Indians; BobbyRay Esparza, Cultural Director	**AB 52:** November 19, 2025, Letters sent to Cultural Director BobbyRay Esparaza **SB 18:** November 19, 2025, Letters sent to Cultural Director BobbyRay Esparaza	**AB 52:** No response **SB 18:** No response	N/A
Cahuilla Band of Indians; Anthony Madrigal, Tribal Historic Preservation Officer (THPO)	**AB 52:** November 19, 2025, Letters sent to THPO Anthony Madrigal **SB 18:** November 19, 2025, Letters sent to THPO Anthony Madrigal	**AB 52:** No response **SB 18:** No response	N/A
Gabrieleno Band of Mission Indians – Kizh Nation; Anderw Salas, Chairperson	**AB 52:** November 19, 2025, Letters sent to Chairperson Andrew Salas, **SB 18:** November 19, 2025, Letters sent to Chairperson Andrew Salas,	**AB 52:** No response **SB 18:** No response	N/A
Gabrieleno Band of Mission Indians – Kizh Nation; Christina Swindall Martinez, Secretary	**AB 52:** November 19, 2025, Letters sent to Secretary Christina Swindall Martinez, **SB 18:** November 19, 2025, Letters sent to Secretary Christina Swindall Martinez,	**AB 52:** No response **SB 18:** No response	N/A

Table 4.18-1. Tribal Communications Log

Native American Tribal Representatives	Method and Date of Notification	Response to City Notification Letters	Consultation Date and Results
Gabrileno/Tongva San Gabriel Band of Mission Indians; Anthony Morales, Chairperson	**AB 52:** November 19, 2025, Letters sent to Chairperson Anthony Morales. **SB 18:** November 19, 2025, Letters sent to Chairperson Anthony Morales.	**AB 52:** No response **SB 18:** No response	N/A
Gabrielino Tongva Indians of California Tribal Council; Christina Conley, Cultural Resource Administrator	**AB 52:** November 19, 2025, Letters sent to Cultural Resource Administrator Christina Conley. **SB 18:** November 19, 2025, Letters sent to Cultural Resource Administrator Christina Conley.	**AB 52:** No response **SB 18:** No response	N/A
Gabrielino Tongva Indians of California Tribal Council; Robert Dorame, Chairperson	**AB 52:** November 19, 2025, Letters sent to Chairperson Robert Dorame. **SB 18:** November 19, 2025, Letters sent to Chairperson Robert Dorame.	**AB 52:** No response **SB 18:** No response	N/A
Gabrielino/Tongva Nation; Sandonne Goad, Chairperson	**AB 52:** November 19, 2025, Letters sent to Chairperson Sandonne Goad. **SB 18:** November 19, 2025, Letters sent to Chairperson Sandonne Goad.	**AB 52:** No response **SB 18:** No response	N/A
Gabrielino-Tongva Tribe; Charles Alvarez, Chairperson	**AB 52:** November 19, 2025, Letters sent to Chairperson Charles Alvarez. **SB 18:** November 19, 2025, Letters sent to Chairperson Charles Alvarez.	**AB 52:** No response **SB 18:** No response	N/A
Gabrielino-Tongva Tribe; Sam Dunlap, Cultural Resource Director	**AB 52:** November 19, 2025, Letters sent to Cultural Resource Director Sam Dunlap. **SB 18:** November 19, 2025, Letters sent to Cultural Resource Director Sam Dunlap.	**AB 52:** No response **SB 18:** No response	N/A

Table 4.18-1. Tribal Communications Log

Native American Tribal Representatives	Method and Date of Notification	Response to City Notification Letters	Consultation Date and Results
Juaneño Band of Mission Indians Acjachemen Nation - Belardes; Joyce Perry, Cultural Resource Director	**AB 52:** November 19, 2025, Letters sent to Cultural Resource Director Joyce Perry. **SB 18:** November 19, 2025, Letters sent to Cultural Resource Director Joyce Perry.	**AB 52 and SB 18:** Joyce Perry, Cultural Resources Director, requested consultation on December 1, 2025.	The City and the Juaneño Band of Mission Indians Acjachemen Nation – Belardes, held a meeting on January 7, 2026. The City attempted to schedule two follow-up meetings, but both were cancelled due to scheduling conflicts. Consultation concluded on May 26, 2026.
Juaneño Band of Mission Indians Acjachemen Nation 84A; Nathan Banda, Chairman	**AB 52:** November 19, 2025, Letters sent to Chairman Nathan Banda. **SB 18:** November 19, 2025, Letters sent to Chairman Nathan Banda.	**AB 52 and SB 18:** Chris Garando, Cultural Director, requested consultation on November 19, 2025.	The City held two meetings with the Juaneño Band of Mission Indians Acjachemen Nation 84A on December 16, 2025 and March 17, 2026. Consultation concluded on May 22, 2026.
Juaneño Band of Mission Indians Acjachemen Nation 84A; Heidi Lucero, THPO/Most Likely Descendant (MLD)	**AB 52:** November 19, 2025, Letters sent to THPO/MLD Heidi Lucero. **SB 18:** November 19, 2025, Letters sent to THPO/MLD Heidi Lucero.	**AB 52:** No response **SB 18:** No response	N/A
Juaneño Band of Mission Indians Acjachemen Nation 84A; Shannon Wingfield, Secretary	**AB 52:** November 19, 2025, Letters sent to Secretary Shannon Wingfield. **SB 18:** November 19, 2025, Letters sent to Secretary Shannon Wingfield.	**AB 52:** No response **SB 18:** No response	N/A
Pala Band of Mission Indians; Shasta Gaughen, THPO	**AB 52:** November 19, 2025, Letters sent to THPO Shasta Gaughen. **SB 18:** November 19, 2025, Letters sent to THPO Shasta Gaughen.	**AB 52:** No response **SB 18:** No response	N/A
Pala Band of Mission Indians; Alexis Wallick, Assistant THPO	**AB 52:** November 19, 2025, Letters sent to Assistant THPO Alexis Wallick. **SB 18:** November 19, 2025, Letters sent to Assistant THPO Alexis Wallick.	**AB 52:** No response **SB 18:** No response	N/A

Table 4.18-1. Tribal Communications Log

Native American Tribal Representatives	Method and Date of Notification	Response to City Notification Letters	Consultation Date and Results
Pala Band of Mission Indians; Christopher Nejo, Legal Analyst/Researcher	**AB 52:** November 19, 2025, Letters sent to Legal Analyst/Researcher Christopher Nejo. **SB 18:** November 19, 2025, Letters sent to Legal Analyst/Researcher Christopher Nejo.	**AB 52:** No response **SB 18:** No response	N/A
Santa Rosa Band of Cahuilla Indians; Steven Estrada, Tribal Chairman	**AB 52:** November 19, 2025, Letters sent to Tribal Chairman Steven Estrada. **SB 18:** November 19, 2025, Letters sent to Tribal Chairman Steven Estrada.	**AB 52:** No response **SB 18:** No response	N/A
Santa Rosa Band of Cahuilla Indians; Mercedes Estrada, Cultural Director	**AB 52:** November 19, 2025, Letters sent to Cultural Director Mercedes Estrada. **SB 18:** November 19, 2025, Letters sent to Cultural Director Mercedes Estrada.	**AB 52:** No response **SB 18:** No response	N/A
Santa Rosa Band of Cahuilla Indians; Vanessa Minott, Tribal Administrator	**AB 52:** November 19, 2025, Letters sent to Tribal Administrator Vanessa Minott. **SB 18:** November 19, 2025, Letters sent to Tribal Administrator Vanessa Minott.	**AB 52:** No response **SB 18:** No response	N/A
Soboba Band of Luiseño Indians; Joseph Ontiveros, THPO	**AB 52:** November 19, 2025, Letters sent to THPO Joseph Ontiveros. **SB 18:** November 19, 2025, Letters sent to THPO Joseph Ontiveros.	**AB 52:** No response **SB 18:** No response	N/A
Soboba Band of Luiseño Indians; Jessica Valdez, Cultural Resource Specialist	**AB 52:** November 19, 2025, Letters sent to Cultural Resource Specialist Jessica Valdez. **SB 18:** November 19, 2025, Letters sent to Cultural Resource Specialist Jessica Valdez.	**AB 52:** No response **SB 18:** No response	N/A

The Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation does not propose any land use or zoning changes to parcels currently zoned or designated as open space. Instead, the Project would facilitate changes to development type/intensity (e.g., from commercial/industrial to mixed-use and residential to denser residential) on parcels that already support and/or are zoned for development. Potential future development would predominantly consist of infill development within previously disturbed and/or developed parcels.

4.18.4.2 Environmental Analyses

Threshold 4.18-1 ***Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:***

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

Significant and Unavoidable. In accordance with AB 52 and SB 18 requirements, the City sent the Project notification letters vis USPS Certified Mail to the California Native American Tribes on November 19, 2025, respectively, formally inviting Tribes to consult with the City on the Project. The City received two requests for consultation from two California Native American Tribes, the Juaneño Band of Mission Indians Acjachemen Nation – Belardes on December 1, 2025, and the Juaneño Band of Mission Indians Acjachemen Nation 84A on November 19, 2025. The City met with both Tribes as part of the consultation process to discuss the Project, potential impacts to TCRs, and proposed mitigation measures. MM-4.5-2, which is implemented as part of the Project and detailed in Section 4.5, Cultural Resources, of this PEIR, was presented to both Tribes. Both Tribes acknowledged the program-level nature of the Project and expressed interest in consulting on future projects subject to subsequent environmental review. Following transmittal of the draft MM-4.5-2 in May 2026, consultation with both Tribes was concluded, with the City intending to move forward with MM-4.5-2 as presented.

Although no analysis at a parcel or site-specific level was conducted due to the speculative nature of the Planning Area, the Project would facilitate changes to development type/intensity (e.g. from commercial/industrial to mixed-use and residential to denser residential). These changes could directly impact tribal cultural resources through the redevelopment of these properties. As such, the impact to tribal cultural resources resulting from the Project would be a significant and unavoidable impact.

The majority of the Planning Area has undergone substantial grading, construction, or other ground-disturbing activities that have reduced the likelihood that intact archaeological deposits remain. These areas are generally considered to have low archaeological sensitivity. However, areas of moderate and high archaeological sensitivity remain within the Planning Area.

Areas of low archaeological sensitivity are generally characterized by extensive prior ground disturbance and urban development, where intact archaeological deposits are unlikely to remain. Moderate sensitivity areas include locations with limited prior ground disturbance, areas where archaeological resources were previously recorded but documented as destroyed or heavily disturbed, or areas in proximity to the Santa Ana River. High sensitivity areas include locations where previously recorded archaeological resources with documented human remains have been identified, or where intact archaeological deposits may still be present underlying existing development.

Additionally, a search of the NAHC Sacred Lands File was conducted and the NAHC replied with positive results (i.e., results indicating that resources are present in the study area).

The Project is intended to guide regional-level growth and development within the Planning Area. No direct development is proposed, and the Project would not directly destroy or adversely change the significance of a TCR. The Project would facilitate additional future development. Some of the future projects that would be facilitated by the Project would involve the earthwork to demolish, renovate, and construct on properties within the Planning Area. Such activities could require grading and/or construction in native soils, such as earthwork for ground preparation, construction of foundations and driveways and installation of trenching for utilities and landscaping. It is not expected that all of these activities would occur in engineered fill and/or previously disturbed soils, and this analysis anticipates that native/undisturbed soils would be impacted by future development activities. Therefore, there is a potential to cause a substantial adverse change in the significance of both known and unknown TCRs, that are either listed or eligible for listing in the California Register, or listed in a local register of historical resources as defined in Public Resources Code section 5020.1(k).

As detailed in Section 4.18.2, Regulatory Requirements, there are existing federal and state regulations in place to identify, assess impacts to, and protect TCRs. Additionally, the City of Costa Mesa's Historic Preservation Ordinance and the City's General Plan include guidelines, goals and policies that promote the identification and preservation of TCRs as described in Section 4.18.2.3, Local Regulations. However, even with compliance with applicable regulations, there is a potential to cause a substantial adverse change in the significance of both known and unknown TCRs through the reasonably foreseeable future property development that may occur on existing properties in the Planning Area.

MM-4.18-1 would require the City to obtain a NAHC Sacred Land Files Search, as appropriate, and comply with all applicable requirements of AB 52, during subsequent environmental review. Pursuant to AB 52, the City must provide formal notification of applicable future development projects to designated contact of each traditionally and culturally affiliated California Native American tribe that has requested notice. Additionally, the City must begin the consultation process within 30 days after receiving a Tribe's request for consultation.

If the future project's impacts to TCRs are determined to be potentially significant, the City would require the project to incorporate appropriate measures to avoid or minimize impacts to TCRs. Appropriate measures would be determined in consultation with the California Native American Tribe and consistent with MM-4.5-2 in Section 4.5, Cultural Resources, of this Draft EIR. Measures may include an Archaeological Resources Work Plan (ARWP), construction worker archaeological/TCR sensitivity training, tribal monitoring, and/or protocols for archaeological/TCR discoveries. In addition, MM-4.5-2 would require all ground-disturbing activities within 50 feet of the find to cease if TCRs are encountered during construction. The evaluation and treatment of the discovered resources must be completed according to the protocol outlined in MM-4.5-2. Furthermore, all applicable requirements set forth in MM-4.5-2 must also be performed in coordination and consultation with the local Native American Tribes. The City would consider tribal preferences when deciding on the disposition of Native American archaeological resources, which may include curation at an accredited or nonaccredited repository; onsite or offsite reburial; and/or donation to a local tribe or public, nonprofit institution with a research interest in the materials, or local school or historical society in the area for educational purposes.

While background research, pedestrian surveys, archaeological assessments, evaluations, and avoidance of known resources are common mitigation measures for projects in which there are impacts to known TCRs, these measures do not ensure that all impacts from future development projects would be mitigated to a level of less than significant. Future non-discretionary projects that would be implemented under the Project would be subject to the

federal, state and local regulations mentioned above; however, these non-discretionary projects would not necessarily be subject to CEQA review, additional environmental assessments, or mitigation measures. As such, even with the implementation of existing regulations, applicable guidelines, goals and policies, and MM-4.18-1 and MM 4.5-2, potential impacts relative to TCRs would be significant and unavoidable because it is not possible to ensure the successful preservation of all TCRs where new development may occur.

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

Significant and Unavoidable Impact. In accordance with AB 52 and SB 18 requirements, the City sent the Project notification letters vis USPS Certified Mail to the California Native American Tribes on November 19, 2025, respectively, formally inviting Tribes to consult with the City on the Project. The City received two requests for consultation from two California Native American Tribes, the Juaneño Band of Mission Indians Acjachemen Nation – Belardes on December 1, 2025, and the Juaneño Band of Mission Indians Acjachemen Nation 84A on November 19, 2025. The City met with both Tribes as part of the consultation process to discuss the Project, potential impacts to TCRs, and proposed mitigation measures. MM-4.5-2, which is implemented as part of the Project and detailed in Section 4.5 of this PEIR, was presented to both Tribes. Both Tribes acknowledged the program-level nature of the Project and expressed interest in consulting on future projects subject to subsequent environmental review. Following transmittal of the draft MM-4.5-2 in May 2026, consultation with both Tribes was concluded, with the City intending to move forward with MM-4.5-2 as presented.

Although no analysis at a parcel or site-specific level was conducted due to the speculative nature of the proposed Planning Area, the Project would facilitate changes to development type/intensity (e.g. from commercial/industrial to mixed-use and residential to denser residential). These changes could directly impact TCRs through the redevelopment of these properties. As such, the impact to TCRs resulting from the Project would be a significant and unavoidable impact.

As detailed in Section 4.18.2, Regulatory Requirements, there are existing federal and state regulations in place to identify, assess impacts to, and protect tribal cultural resources. Additionally, the City of Costa Mesa's Historic Preservation Ordinance and the City's General Plan include guidelines, goals and policies that promote the identification and preservation of TCRs as described in Section 4.18.2.3, Local Regulations. However, even with compliance with applicable regulations, there is a potential to cause a substantial adverse change in the significance of both known and unknown TCRs through the reasonably foreseeable future property development that may occur on existing properties in the Planning Area.

MM-4.18-1 would require the City to obtain a NAHC Sacred Land Files Search, as appropriate, and comply with all applicable requirements of AB 52, during subsequent environmental review. Pursuant to AB 52, the City must provide formal notification of applicable future development projects to designated contact of each traditionally and culturally affiliated California Native American tribe that has requested notice. Additionally, the City must begin the consultation process within 30 days after receiving a tribe's request for consultation.

If the future project's impacts to TCRs are determined to be potentially significant, the City would require the project to incorporate appropriate measures to avoid or minimize impacts to TCRs. Appropriate measures would be determined in consultation with the California Native American Tribe and consistent with MM-4.5-2 in Section 4.5,

Cultural Resources section of this Draft EIR. Measures may include an ARWP, construction worker archaeological/TCR sensitivity training, tribal monitoring, and/or protocols for archaeological/TCR discoveries. In addition, MM-4.5-2 would require all ground-disturbing activities within 50 feet of the find to cease if TCRs are encountered during construction. The evaluation and treatment of the discovered resources must be completed according to the protocol outlined in MM-4.5-2. Furthermore, all applicable requirements set forth in MM-4.15-2 must also be performed in coordination and consultation with the local Native American Tribes. The City would consider tribal preferences when deciding on the disposition of Native American archaeological resources, which may include curation at an accredited or nonaccredited repository; onsite or offsite reburial; and/or donation to a local tribe or public, nonprofit institution with a research interest in the materials, or local school or historical society in the area for educational purposes.

While background research, pedestrian surveys, TCR assessments, evaluations, and avoidance are common mitigation measures for impacts to known TCRs, these measures do not assure that all impacts would be mitigated to a level of less than significant for those TCRs not yet identified. Future non-discretionary projects that would be implemented under the proposed Project would be subject to the federal, state and local regulations mentioned above; however, these non-discretionary projects would not necessarily be subject to CEQA review, additional environmental assessments, or mitigation measures. As such, even with implementation of existing regulations, applicable Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation goals and policies, and MM-4.5-2 and MM-4.18-1, impacts relative to TCRs could still occur and potential impacts would be significant and unavoidable.

4.18.5 Cumulative Impact Analyses

Where a lead agency concludes that the cumulative effects of a project, taken together with the impacts of other closely related past, present, and reasonably foreseeable future projects are significant, the lead agency then must determine whether the project's incremental contribution to such significant cumulative impact is "cumulatively considerable" (and thus significant in and of itself). The cumulative study area used to assess potential cumulative cultural resources impacts includes the entirety of the City and considers the future buildout of applicable local and regional plans. The full list of related plans applicable to the Project's cumulative analyses is provided in Section 2.5, Cumulative Impact Analysis, in Chapter 2, Environmental Setting of this Draft PEIR.

Threshold 4.18-1. The development of cumulative projects has the potential to cumulatively affect known and unknown TCRs. Development of related projects can affect TCRs if such projects adversely alter or destroy TCRs, such as TCRs that could contribute to understanding of an overall tribal cultural landscape. Over time, population growth and its accompanying development throughout the City has resulted in the destruction of TCRs during the early settlement days of the region and continuing to this day. Because all TCRs are unique and nonrenewable members of finite classes of resources that represent time periods, cultural landscapes, projects that destroy or alter certain TCRs have the potential to limit or eliminate an opportunity for a comprehensive understanding of the time periods and cultural landscapes a TCR belongs and could result in a cumulatively significant effect on TCRs. Therefore, implementation of future projects under the proposed Project could result in a cumulatively significant effect on TCRs. Even with existing state, and local regulations in place designed to protect TCRs, individual TCRs would still have the potential to be impacted or degraded from destruction, relocation, or alteration as a result of new private or public development or redevelopment allowable under cumulative projects.

Therefore, impacts to TCRs as a result of project implementation, in combination with other development that would occur in the region, would have the potential to result in a significant cumulative impact to TCRs. Even with

implementation of MM-4.5-2 and MM-4.18-1, impacts relative to TCRs could still occur, and the Project's incremental contribution would be cumulatively considerable.

4.18.6 Mitigation Measures

MM-4.5-2 Archaeological Resources. See Section 4.5, Cultural Resources.

MM 4.18-1 Tribal Cultural Resources. During subsequent project-level environmental review, the City shall obtain a State of California Native American Heritage Commission (NAHC) Sacred Land Files Search, as appropriate, and comply with all applicable requirements of AB 52. Pursuant to AB 52, the City shall provide formal notification of the project to designated contact of each traditionally and culturally affiliated California Native American Tribe that has requested notice. The City shall begin the consultation process within 30 days after receiving a Tribe's request for consultation. The City shall consider all relevant information available for the property to identify potential tribal cultural resources in the project area, evaluate the project's potential impacts to tribal cultural resources, and mitigate those potential impacts.

If project impacts to tribal cultural resources are determined to be potentially significant, the City shall require the project to incorporate appropriate measures to avoid or minimize impacts to tribal cultural resources, including but not limited to, the measures recommended in Public Resources Code Section 21084.3, tribal monitoring, or other alternative measures identified in consultation with the California Native American Tribe.

If an archaeological resource that is Native American in origin is identified in the preparation of a Phase I Archaeological Resources Inventory Report (see MM-4.5-2) or Native American archaeological resources are encountered during construction, the City shall consult and coordinate with the California Native American Tribal representatives who are traditionally or culturally affiliated with the geographic area of the development project to evaluate and mitigate impacts in accordance with the requirements set forth in MM-4.5-2.

4.18.7 Level of Significance Conclusion

Threshold 4.18-1. Even with implementation of MM-4.18-1 and MM-4.5-2, the Project has the potential to 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 impacts would be **significant and unavoidable** and cumulatively considerable.

4.18.8 References

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4.19 Utilities and Service Systems

This section of the Draft PEIR evaluates the potential impacts from the implementation of the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation (Project) on utilities and service systems, including the potential impacts to water, wastewater, storm drain, electric power, natural gas, telecommunication, conveyance capacity, as well as impacts to water supply, wastewater treatment, and solid waste disposal capacity. A discussion of the existing utilities and service systems in the City of Costa Mesa (City) and in the Planning Area is also included in this section to present the environmental baseline for the Project. The analysis is based, in part, on information provided in various City planning documents, as well as information from the Costa Mesa Sanitary District, the Costa Mesa Building Division, Mesa Water District, and Irvine Ranch Water District (IRWD), and the following appendix:

Appendix L Utility Services Correspondence

Other sources consulted are listed in Section 4.19.8, References.

4.19.1 Existing Conditions

4.19.1.1 Stormwater Service

While many of the regional flood control facilities in the city are owned, operated, and maintained by the Orange County Flood Control District, the City is responsible for operating and maintaining City-owned storm drainage facilities. There are over 50 miles of City-owned storm drain pipes and approximately 1,167 City-owned catch basins (City of Costa Mesa 2026a). The Orange County Flood Control District, Caltrans, the City of Santa Ana, and the City of Newport Beach also operate and maintain storm drain facilities inside the city as part of their respective storm drainage systems. Costa Mesa has experienced a history of stormwater ponding, especially within the western and southwestern portions of the city. Many of the known locations of recurring ponding (i.e. flooding) within the city occur in flat areas that typically reside along historic water courses and are serviced by undersized drainage infrastructure which was designed and built during the early development of the city when the engineering standards were less comprehensive than the current standards of today (City of Costa Mesa 2024). As part of the City's Storm Drain System Master Plan, the City prepared an Existing Conditions Assessment Report (ECAR) in 2024 to summarize the current conditions of the City's storm drain infrastructure. According to the ECAR, the City's storm drainage network is organized into three hydrologic regions or subareas (specifically, West, East and North). West of the 55fwy/Newport Blvd being one sub area, East of 55fwy/Newport Blvd being the second, and North of the 405fwy being the third. These subareas collectively route storm water runoff via catch basins, inlets, storm drain pipes, and channels that ultimately discharge into one of two watershed drainage basins; the Santa Ana River Watershed or the Newport Bay Watershed (City of Costa Mesa 2024). The Planning Area spans portions of all three subareas.

Most trunk facilities in and downstream of the city were built to pre-1986 "100 year Expected Value" criteria, which were ultimately reclassified as roughly equivalent to a 25-year "High Confidence" standard, meaning many pipes and channels now effectively provide approximately 25-year storm event capacity and cannot take more flow without overloading downstream infrastructure (City of Costa Mesa 2024). As a result, several locations in the city currently experience periodic flooding under existing conditions, led by the 17th Street/Pomona Avenue system in the West subarea (which is adjacent to several Planning Area parcels), and the Canyon storm drain along the south edge of Fairview Park (City of Costa Mesa 2024). Other recurring hotspots in the vicinity of the Planning Area include

19th Street/Anaheim Avenue, Farad Street/Ohms Way, and Newport Boulevard/23rd Street (City of Costa Mesa 2024). The 2024 ECAR report includes a preliminary prioritization combining hydraulic deficiency and public safety factors and identifies approximately 65,150 linear feet of storm drain as Moderate, High, or Highest priority for improvement, with many lines performing below the 25-year level (City of Costa Mesa 2024).

As discussed under "Storm Drain System Master Plan" in Section 4.19.2.3, Local (Regulatory Requirements), based on the results of the ECAR, the City also prepared a Proposed Drainage and Water Quality Improvements Report that identifies recommended storm drainage infrastructure improvements necessary to ensure the City achieves the desired flood control and water quality standards (City of Costa Mesa 2024).

4.19.1.2 Sewer Service

The Costa Mesa Sanitary District (CMSD) is an independent special district that encompasses the entire city. CMSD maintains a 224-mile wastewater collection system that collects and transmits wastewater to Orange County Sanitation District (OC San) facilities for treatment and disposal. There are approximately 4,707 sewer manholes within the system, which are used as access points for cleaning and inspection purposes (CMSD 2021a). The system also includes 20 pump stations that convey wastewater flow from low lying areas to higher elevations where it can continue its gravity flow (CMSD 2021a, 2026a). The wastewater generated within the city is collected and processed at OC San treatment plants in Fountain Valley and Huntington Beach (City of Costa Mesa 2016).

Resource Recovery Plant No. 1 (Fountain Valley), which receives flow primarily from the eastern and inland parts of the service area, has a peak influent wet weather flow (PWWF) capacity of 320 million gallons per day (mgd) and currently processes an average flow of approximately 116 mgd. Resource Recovery Plant No. 2 (Huntington Beach), which receives flow from the western and coastal parts of the service area, has a PWWF capacity of 340 mgd and currently processes an average flow of approximately 68 mgd. As such, the current average total sewage flow to these wastewater treatment plants is approximately 184 mgd (OC San 2026) and the combined total treatment PWWF capacity is approximately 660 mgd (OC San 2017). Accounting for the existing average sewage flow, the remaining treatment capacity is approximately 476 mgd.

At the regional level, OC San provides wastewater collection, treatment, disposal, and recycling services for approximately 2.6 million people in central and northwest Orange County. OC San owns and operates over 380 miles of regional sewer pipes, 15 pump stations, and two operating facilities that treat wastewater from residential, commercial, and industrial sources (OC San 2026).

4.19.1.3 Water Supply

Domestic water services within the city are provided by the Mesa Water District and IRWD. The Mesa Water District service area encompasses approximately 18 square miles, covering most of the city, part of Newport Beach, and John Wayne Airport. The IRWD service area encompasses approximately 181 square miles and covers a portion of properties within Costa Mesa located southeast of Newport Boulevard between 23rd Street and Bristol Street, as well as various other jurisdictions (City of Costa Mesa 2016). Both Mesa Water District and IRWD are member agencies of the Municipal Water District of Orange County (MWDOC), a wholesale importer of water from the Metropolitan Water District of Southern California. MWDOC serves all of Orange County except for the cities of Anaheim, Fullerton, and Santa Ana.

The current and projected water supplies are provided in Table 4.19-1, as included in Mesa Water District's and IRWD's 2020 Urban Water Management Plan (UWMP) (Mesa Water District 2021; IRWD 2021).

Table 4.19-1. City of Costa Mesa Water Supplies (Actual and Projected) (acre-feet)

Water Supply Source	2020 (Actual)	2025 (Projected)	2030 (Projected)	2035 (Projected)	2040 (Projected)	2045 (Projected)
Mesa Water District						
Groundwater (Orange County Basin)	16,118	16,354	18,009	19,001	19,376	19,751
Recycled Water (Orange County Water District)	1,100	1,100	1,100	1,100	1,100	1,100
Mesa Water District Subtotal	**17,218**	**17,454**	**19,109**	**20,101**	**20,476**	**20,851**
Irvine Ranch Water District						
Purchased or Imported Water (Mesa Water District)	12,861	51,027	51,027	51,027	51,027	51,027
Purchased or Imported Water (Mesa Water District [SAC])	1,168	3,048	3,048	3,048	3,048	3,048
Surface Water (Irvine Lake)	6,600	17,347	17,347	17,347	17,347	17,347
Groundwater	37,990	42,012	42,012	42,012	42,012	42,012
Groundwater (Non-Potable)	4,437	3,461	3,461	3,461	3,461	3,461
Recycled Water (MWRP & LAWRP)	24,627	12,352	12,352	12,352	12,352	12,352
IRWD Subtotal	**87,683**	**178,727**	**178,727**	**178,727**	**178,727**	**178,727**
Total	**104,901**	**196,181**	**197,836**	**198,828**	**199,203**	**199,578**

Source: Mesa Water District 2021; IRWD 2021.
Notes: MWRP: Michelson Water Recycling Plant; LAWRP: Los Alisos Water Recycling Plant; SAC: Santiago Aqueduct Commission, IRWD: Irvine Ranch Water District

Mesa Water District's main source of water supply is groundwater from the OC Basin. Mesa Water District operates eight groundwater wells within the city that pump water from the Orange County Groundwater Basin. However, because natural water supplies are limited in Orange County and demand generally exceeds the rate of replenishment of these sources, a majority of communities in Orange County rely on water imported from sources outside Orange County, including from the Colorado River Aqueduct and the State Water Project. Recycled water makes up the rest of Mesa Water District's water supply portfolio. Although Mesa Water District has historically relied on imported water to supplement its demands, Mesa Water District is projected to meet its future demands using local groundwater through 2045 (Mesa Water District 2021).

IRWD's water resource portfolio consists of imported water, local groundwater, recycled water, and local surface water. Treated and untreated imported water is purchased from the Metropolitan Water District of Southern California through MWDOC. Potable and non-potable groundwater supplies are extracted from both the Main Orange County Groundwater Basin and the Irvine Sub-Basin. Recycled water production at IRWD's Michelson and Los Alisos Water Recycling Plants are primary supplies to IRWD's non-potable distribution system. IRWD is projected to meet its future demands using local groundwater through 2045 (IRWD 2021).

4.19.1.4 Solid Waste

The Costa Mesa Public Works Department (Public Works) manages all commercial waste collection and recycling services within the city, while CMSD oversees all residential waste collection and recycling services. Public Works uses a non-exclusive franchise system to manage trash and recycling services to multi-family (5 or more units) and business properties, as well as any for-hire hauling of temporary waste collection containers from construction and demolition projects. Public Works also has a permit system that allows contractors to self-haul the waste generated by their primary business activity (i.e. roofing, land grading, etc.). Public Works contracts commercial, multi-family, and construction waste collection and recycling services with CR&R, Inc., Robert's Waste & Recycling, Haul-Away Rubbish Service Co., Waste Management of Orange County, Rainbow Disposal Co., Inc, Ware Disposal, and Universal Waste Systems (City of Costa Mesa 2026b). CMSD contracts curbside refuse and recycling collection services with CR&R Inc. (CMSD 2026).

Solid waste is primarily transported to the three active landfills in Orange County, as coordinated by Public Works, CMSD, and contracted waste management service providers (OC Waste and Recycling 2026a). Table 4.19-2 provides information on the three solid waste disposal facilities that are permitted to accept solid waste from the City and other municipalities in Orange County, including the estimated remaining disposal capacity (in tons).

Table 4.19-2. Solid Waste Disposal Facilities in Orange County

Class III Landfills						
Facility Name	Permit No.	Address	Average Daily Disposal (tons)	Maximum Permitted Daily Capacity (tons)	Remaining Capacity (tons)[2]	Remaining Life (years)[3]
Frank R. Bowerman Sanitary Landfill	30-AB-0360	11002 Bee Canyon Access Road, Irvine, CA 92618	8,500	11,500	Daily: 3,000 Total: 24.3 million	27
Olinda Alpha Landfill	30-AB-0035	North Valencia Avenue, Brea, CA 92823	7,000	8,000	Daily: 1,000 Total: 3.0 million	10
Prima Deshecha Landfill	30-AB-0019	32250 Avenida La Pata, San Juan Capistrano, CA 92675	2,536[1]	4,000	Daily: 1,464 Total: 33.4 million	76
		Total	**17,732**	**23,500**	**Daily: 5,464 Total: 60.7 million**	**—**

Source: OC Waste & Recycling 2026a; CalRecycle 2026a; CalRecycle 2026b; CalRecycle 2026c
Notes:
1 Average daily disposal for the Prima Deshecha land is based on 300 operating days per year. The Prima Deshecha Landfill is open six days per week, except federal holidays.
2 Remaining capacity is based on 300 operating days per year. All landfills are open six days per week, except federal holidays. Daily remaining capacity (tons) x operating days x remaining life (years) = total remaining capacity (tons).
3 Remaining life represents the difference in years between the "Ceased Operation Date" and the time of drafting this PEIR (2026).

As demonstrated in Table 4.19-2, there is a remaining landfill capacity of 5,464 tons per day at the Orange County facilities. The total remaining capacity for Orange County facilities is approximately 60.7 million tons. Currently, OC Waste & Recycling is proposing a project to increase capacity of the Prima Deshecha Landfill. At the time drafting of this analysis, OC Waste & Recycling has publicly circulated a Subsequent EIR to evaluate the potential effects of increasing the amount of waste the landfill can accept each day. If the project is approved, an additional disposal capacity of up to 8,000 tons per day will become available (OC Waste & Recycling 2026b).

It is expected that landfill space will diminish in Southern California, which will require jurisdictions to continue development of waste reduction and diversion efforts to avoid shortfalls in landfill capacity (City of Costa Mesa 2016). However, as stated in the 5-Year Countywide Integrated Waste Management Plan (CIWMP) Review Report, Orange County has overall landfill capacity of 50 years as of 2021 (OC Waste & Recycling 2021).

For hazardous waste, Orange County Waste and Recycling (OC Waste & Recycling) operates four regional Household Hazardous Waste Collection Centers (HHWCCs) located in the cities of Anaheim, Huntington Beach, Irvine, and San Juan Capistrano. HHWCCs offer convenient drop off locations for Orange County residents, meet all regulatory requirements, and offer a Materials Reuse Program area for residents to obtain partially used qualified materials. These programs are an effective way to manage household hazardous waste while reducing illegal and improper disposal of hazardous wastes (OC Waste & Recycling 2021). See Section 4.9, Hazards and Hazardous Materials, of this Draft PEIR for further discussion.

4.19.1.5 Electric Service

Electricity in the city is provided by Southern California Edison (SCE), a private franchise utility company and subsidiary of Sempra Energy. All standards, development requirements, and improvement strategies are set directly by SCE, with oversight by the California Public Utilities Commission (CPUC). Electricity is transmitted by a network of aboveground and underground power lines to supply sufficient power to all locations, including streetlights and traffic signals.

4.19.1.6 Natural Gas

Natural gas currently serving the city is provided by Southern California Gas Company (SoCalGas), which owns and operates two natural gas storage fields in Southern California. These storage fields help meet peak seasonal demand and allow Southern California customers to secure natural gas supplies more efficiently. SoCalGas also owns and operates four underground storage facilities located around Southern California. In addition, SoCalGas owns and operates all transmission mains, distribution pipelines, and service laterals within the city.

4.19.1.7 Telecommunication Service

Telecommunication facilities are installed in the city by a variety of private utility companies, including AT&T, Spectrum Services, Verizon, and Comcast Cable.

4.19.2 Regulatory Requirements

4.19.2.1 Federal

Safe Drinking Water Act

The United States Environmental Protection Agency (USEPA) administers the Safe Drinking Water Act, which is the primary federal law that regulates the quality of drinking water and establishes standards to protect public health and safety. The Department of Health Services (DHS) implements the requirements of the Act and oversees public water system quality statewide. DHS establishes legal drinking water standards for contaminants that could threaten public health.

Clean Water Act

The federal Clean Water Act, United States Code, Title 33, Sections 1251 et seq. requires that wastewater be treated prior to being discharged to waters of the United States. The Clean Water Act is described in further detail in Section 4.10, Hydrology and Water Quality, of this Draft PEIR.

4.19.2.2 State

Porter-Cologne Water Quality Control Act

In California, the State Water Resources Control Board and nine Regional Water Quality Control Boards (RWQCBs) are responsible for implementing the Clean Water Act and the California Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The Porter-Cologne Act authorizes the State Water Resources Control Board to implement programs to control polluted discharges into state waters. In compliance with the Porter-Cologne Act, the nine RWQCBs establish wastewater concentration limits for a number of specific hazardous substances in treated wastewater discharge.

California Urban Water Management Planning Act of 1983

The California Urban Water Management Planning Act (Assembly Bill [AB] 797, Water Code Division 6, Part 2.6, Section 10610-10656) requires that every urban water supplier that annually serves 3,000 or more customers, or provides more than 3,000 acre-feet of water, must prepare and adopt an Urban Water Management Plan (UWMP). UWMPs provide a description and evaluation of water supplies, reclamation programs, and conservation activities. Based on land use plans provided by local governments, population projections or other inputs, the UWMP calculates the projected water demand for the district and compares this demand against current and anticipated water supplies. These UWMPs, which must be updated every five years, are provided to local governments to help inform decisions on development proposals. UWMPs serve as building blocks for Integrated Regional Water Management Plans, which define a clear vision and strategy for the sustainable management of water resources within a specific region delineated by one or more watersheds. For the current planning cycle, 2025 Urban Water Management Plans must be adopted and submitted to California Department of Water Resources by July 1, 2026, consistent with updated requirements published in the 2025 UWMP Guidebook. The updated Guidebook includes clarifications to reliability tables, expanded guidance on potable reuse integration, and revised methods to avoid double-counting stored water.

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). SGMA 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 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 to manage basins sustainably and requires those Groundwater Sustainability Agencies to adopt Groundwater Sustainability Plans for crucial groundwater basins in California.

Model Water Efficient Landscape Ordinance

The Model Water Efficient Landscape Ordinance (California Code of Regulations [CCR] Title 23, Division 2, Chapter 2.7, Section 490) adopts water efficiency standards for new and retrofitted landscapes and encourages the use of more efficient irrigation systems, graywater usage, and on-site storm water capture, and limits the portion of landscapes that can be covered in turf. The Model Water Efficient Landscape Ordinance (MWELO), most recently updated and approved by the Office of Administrative Law with amendments effective January 2, 2025, establishes updated statewide standards for water-efficient landscapes. The 2025 amendments improve clarity, reduce ambiguities, and implement provisions from the Governor's Water Resilience Portfolio. Local agencies adopt and enforce a WELO at least as stringent as the updated MWELO.

California Water Resources Control Board Low Impact Development Policy

The State Water Resources Control Board (SWRCB) adopted the Low Impact Development (LID) Policy which, at its core, promotes the idea of "sustainability" as a key parameter to be prioritized during the design and planning process for future development. The SWRCB has directed its staff to consider sustainability in all future policies, guidelines, and regulatory actions. LID is a proven approach to manage stormwater. The RWQCBs are advancing LID in California in various ways, including provisions for LID requirements in renewed Phase I municipal stormwater NPDES permits.

Certified Sanitary Sewer Systems General Order Requirements

On December 6, 2022, the State Water Resources Control Board adopted a General Waste Discharge Requirement (Order No. 2022-0103-DWQ) for all publicly owned sanitary sewer collection systems in California with more than 1 mile of sewer pipes. A sewage discharge from sanitary sewers to waters of the State is prohibited by this Order. In addition, this Order: (1) further expands the existing prohibition of sewage discharges to include waters of the State, in addition to waters of the United States as provided in previous Order 2006-0003-DWQ, and (2) enhances the ability for Water Board enforcement of violations of the established prohibitions. 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 Requirements also require that storm sewer overflows be reported to the State Water Resources Control Board using an online reporting system.

California Green Building Standards Code

California Green Building Standards Code ([CALGreen], Part 11 of California Code of Regulations Title 24) requires that at least 65 percent diversion of the nonhazardous construction and demolition waste from most residential construction projects be recycled and/or salvaged for reuse, or that the conditions of a local construction and demolition waste management ordinance are met, whichever is more stringent.

California Public Utilities Commission

California Public Utilities Commission (CPUC) General Order 112E, which is based upon the Federal Department of Transportation Guidelines contained in Part 192 of the Federal Code of Regulations, specifies a variety of design, construction, inspection, and notification requirements. The CPUC conducts annual audits of pipeline operations to ensure compliance with these safety standards. In addition, the Southern California Gas Company (SoCalGas) has a safety program which has reduced the risk of gas distribution fires by improving welds on the larger diameter (24- to 30-inch) pipelines and by replacing old distribution pipes with flexible plastic pipes. According to SoCalGas staff, high-pressure gas mains are common in developed areas throughout the country, and SoCalGas lines are inspected regularly and must comply with CPUC mandated safety requirements.

California Energy Commission

The California Energy Commission (CEC) was created as the state's principal energy planning organization in 1974, in order to meet the energy challenges facing the state in response to the 1973 oil embargo. The CEC is charged with six basic responsibilities when designing state energy policy:

- Forecasting statewide electricity needs;
- Licensing power plants to meet those needs;
- Promoting energy conservation and efficiency measures;
- Developing renewable energy resources and alternative energy technologies;
- Promoting research, development, and demonstration; and
- Planning for and directing state response to energy emergencies.

Title 24, California Code of Regulations, Part 6: Energy Efficiency Standards for Buildings

Title 24, Part 6, of the California Code of Regulations contains the CEC's Energy Efficiency Standards for Residential and Nonresidential Buildings. Title 24 was first established in 1978 in response to a legislative mandate to reduce California's energy consumption. Since that time, Title 24 has been updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

Title 20, California Code of Regulations, Sections 1601 et seq: Appliance Efficiency Regulations

The 2012 Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608) took effect February 13, 2013. The regulations include standards for both federally regulated appliances and non-federally regulated appliances.

California Integrated Waste Management Act and Solid Waste Diversion Mandates

The California Integrated Waste Management Act of 1989 (Assembly Bill [AB] 939) was enacted to reduce, recycle, and reuse solid waste generated in the state to the maximum extent feasible. Specifically, the act required city and

county jurisdictions to identify an implementation schedule to divert 50 percent of the total waste stream from landfill disposal by the year 2000. The act also required each city and county to promote source reduction, recycling, and safe disposal or transformation. AB 939 further required each city to conduct a Solid Waste Generation Study and to prepare a Source Reduction and Recycling Element to describe how it would reach the goals. The Source Reduction and Recycling Element contains programs and policies for fulfillment of the goals of the act, including the above-noted diversion goals, and must be updated annually to account for changing market and infrastructure conditions. As projects and programs are implemented, the characteristics of the waste stream, the capacities of the current solid waste disposal facilities, and the operational status of those facilities are upgraded, as appropriate. California cities and counties are required to submit annual reports to CalRecycle (formerly the County Integrated Waste Management Board) to provide an update on their progress toward the AB 939 goals. AB 939, as amended, requires that the 50 percent solid waste diversion goal continue be achieved by jurisdictions annually.

California's solid waste diversion requirements are governed primarily by the California Integrated Waste Management Act (AB 939) and subsequent legislation, most notably Senate Bill 1383 (Short-Lived Climate Pollutants). While earlier statutes such as AB 341 (Mandatory Commercial Recycling) and AB 1826 (Mandatory Commercial Organics Recycling) established foundational diversion and recycling programs, their requirements have largely been subsumed by SB 1383, which took effect January 1, 2022, and is now the controlling regulatory framework. SB 1383 mandates universal organic waste separation, organics recycling services, and edible food recovery, with active statewide enforcement by CalRecycle. SB 1383 requires the City to provide and enforce mandatory organic waste collection services for all waste generators, including residents, businesses, and City-owned facilities. Failure of the City to comply with SB 1383 implementation and enforcement requirements may subject the jurisdiction to administrative civil penalties imposed by CalRecycle of up to $10,000 per day.

California Solid Waste Reuse and Recycling Act

The California Solid Waste Reuse and Recycling Act of 1991 (AB 2176) was enacted to assist local jurisdictions with accomplishing the goals of AB 939. In accordance with AB 2176, any application submitted for a building permit must include adequate, accessible areas for the collection and loading of recyclable materials. Furthermore, the areas to be used must be demonstrated as adequate in capacity, number, and distribution to serve the proposed program. Moreover, the collection areas are to be situated as close as possible to existing exterior refuse collection areas.

Public Resources Code Sections 41813 and 41850(a)

CalRecycle has statutory requirements under Public Resources Code Sections 41813 and 41850(a) to enforce the provisions of AB 939 if a local jurisdiction fails to submit an adequate element or plan or if a local jurisdiction fails to implement its Source Reduction and Recycling Element or Household Hazardous Waste Element. Administrative civil penalties of up to $10,000 per day may be imposed on local jurisdictions until the element or plan is submitted to CalRecycle and is deemed adequate or until the element or plan is implemented.

4.19.2.3 Local

Water Quality Control Plans (Basin Plans)

The Porter-Cologne Act, Section 13000, directs each RWQCB to develop a water quality control plan (Basin Plan) for all areas within its region. The Basin Plan is the basis for each RWQCB's regulatory program. The city and Planning Area are within the purview of the Santa Ana RWQCB (Region 8), and the Project must comply with

applicable elements of the Basin Plan for Region 8. 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 Plans.

Costa Mesa Sanitary District–Sewer Connection Fees

Capital improvements to Costa Mesa Sanitary District (CMSD) water reclamation plants are funded from connection fees charged to new developments, redevelopments, and expansions of existing land uses. The connection fee is a capital facilities fee used to provide additional conveyance, treatment, and disposal facilities (capital facilities) required by new users connecting to the CMSD sewerage system or by existing users that significantly increase the quantity or strength of their wastewater discharge.

Storm Drain System Master Plan (SDSMP)

The City's Storm Drain System Master Plan (SDSMP) is a comprehensive set of citywide planning documents prepared and maintained by the City to guide long-term storm drainage infrastructure planning, capital improvements, and related drainage fee programs. The SDSMP evaluates the City's storm drain infrastructure on a systemwide basis through hydrologic and hydraulic modeling, identification of existing and future system deficiencies, and prioritization of recommended drainage and water quality improvements. The plan serves as the technical foundation for the City's storm drainage capital improvement programming and drainage fee nexus studies and supports the City's ongoing efforts to achieve desired flood control and water quality standards.

The SDSMP was developed and implemented in two phases. Phase I included preparation of the Existing Conditions Assessment Report (ECAR) and the Proposed Drainage and Water Quality Improvements Report, both of which were completed and accepted by the City Council in October 2024. Based on the findings of the ECAR, the Proposed Drainage and Water Quality Improvements Report identified recommended storm drainage infrastructure improvements necessary to address system deficiencies and improve flood control and water quality performance throughout the City.

Phase II included preparation of the Storm Drainage Impact Fee Nexus Study and the Storm Drain Capital Improvement Program (CIP), both of which were completed and adopted by the City Council in April 2026. The Nexus Study provides planning-level CIP schedules, technical data, and fee calculations necessary to implement future storm drainage improvements and establish updated storm drainage impact fees. Presentation of the updated storm drainage impact fees, Storm Drain CIP, proposed ordinance amendments, and associated resolution occurred at the regularly scheduled City Council meeting on April 7, 2026, where the items were approved with revisions to the ordinance language. The second reading and adoption of the ordinance was subsequently continued from the April 21, 2026 meeting and formally adopted by the City Council on May 5, 2026.

Costa Mesa Municipal Code

Components of the Costa Mesa Municipal Code ("CMMC") that are applicable to the subject of utilities and service systems are identified below.

Title 8, Chapter III, Drainage. Chapter III regulates urban runoff, prohibits illicit discharges, and authorizes the City to impose conditions and controls on new development and redevelopment to protect receiving waters. It sets forth requirements for a Water Quality Management Plan (WQMP), which is a project-level planning document that evaluates how a proposed development or redevelopment will prevent, reduce, and treat stormwater pollutants generated by the project. A WQMP typically includes: identification of pollutant-generating activities; determination

of whether the project is a priority development project; selection and sizing of post-construction Best Management Practices (BMPs); and documentation of long-term operation and maintenance responsibilities for those BMPs. The technical content and applicability of WQMPs are implemented through the City's MS4 compliance program, which relies on Orange County's Model Water Quality Management Plan and Technical Guidance Document and City-specific checklists and templates made available by Costa Mesa Public Works. The WQMP requires incorporation of structural stormwater controls—such as infiltration, biofiltration, capture and reuse, or treatment systems—that are physically integrated into the project's site design to treat runoff before it enters the municipal storm drain system.

Title 15, Chapter III, Section 15-65 – Drainage fees established. Section 15-65 of the CMMC establishes a Drainage Fee that is set periodically by the City Council to pay for upgrades/improvements to the City's storm drain system. The fee is tiered to take into account the intensity of proposed development. The fee tiers include the following: low-density residential; medium-density residential; high-density residential; and commercial/industrial. The Drainage Fee shall be imposed on a pro rata, per acre basis upon any parcel or other piece of property for which an owner, developer or other applicant has requested approval to develop or redevelop, or to construct or reconstruct any structure upon such property pursuant to Section §15-70, prior to, and as a condition of approval being granted for such development or construction. The funds collected are deposited into one of two of the City's Drainage Fee Funds. One for property that tributary to the Santa Ana River Watershed and another for property that is tributary to the Newport Bay Watershed. Chapter III related to the collection of storm drainage fees was updated by Ordinance No. 2026-05 on May 5, 2026 and marked the completion of the 2026 Storm Drainage Impact Fee Nexus Study, and the Storm Drain System Master Plan (SDSMP).

Costa Mesa 2015-2035 General Plan

The General Plan guides policy for land use within the city of Costa Mesa. The following provides a summary of the applicable goals and policies that pertain to the Project. The Project would support and/or would not conflict with the implementation of the following goals and policies.

Land Use Element

The Land Use Element of the Costa Mesa 2015-2035 General Plan (General Plan) provides the following goals and policies potentially relevant to the Project. The Housing Element Implementation Program would support and/or would not conflict with the implementation of the following goals and policies, as discussed in Section 4.11, Land Use and Planning (City of Costa Mesa 2025):

Policy LU-2.2 Pursue maximum use of utility company funds and resources in undergrounding existing overhead lines, and encourage undergrounding of utilities in the public right-of-way for residential development consisting of five units or more, to the extent feasible and practical.

Goal LU-5 Adequate Community Services, Transportation System, and Infrastructure to Meet Growth.

Policy LU-5.8 Include an evaluation of impacts on utility systems and infrastructure in EIRs for all major general plan amendment, rezone, and development applications.

Safety Element

The Safety Element of the General Plan provides the following goals and policies relevant to the Project (City of Costa Mesa 2016):

Policy S-2.6: Require that water supply systems for development are adequate to combat structural fires in terms of location and minimum required fire-flow pressures.

Existing Community-Based and Specific Plans

The 19 West Urban Plan, SoBECA Urban Plan, Mesa West Bluffs Urban Plan, Mesa West Residential Ownership Urban Plan/Mixed-Use Overlay, Harbor Mixed-Use Overlay, Residential Incentive Overlay, North Costa Mesa Specific Plan, One Metro West Specific Plan, and the Newport Boulevard Specific Plan are the existing community-based or specific plans within the Planning Area. However, none of these plans include goals or policies pertaining to utilities and service systems in the city.

4.19.3 Thresholds of Significance

The significance criteria used to evaluate the Project's impacts on utilities and service systems 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 utilities and service systems would occur if the Project would:

Threshold 4.19-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

Threshold 4.19-2: Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.

Threshold 4.19-3: 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.

Threshold 4.19-4: 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.

The following threshold question for this topic required in accordance with Appendix G of the CEQA Guidelines was scoped out of this Draft PEIR, having been adequately addressed in the Initial Study, wherein it was determined that the Project would have no impact or a less than significant impact on the environment:

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

Thus, an analysis of this threshold is included in Appendix A-1, NOP and Initial Study, of this Draft PEIR.

4.19.4 Impact Analyses

4.19.4.1 Methodology

As described in Chapter 3, Project Description, the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation is a policy document that does not include or propose any site-specific development that could directly result in construction or operational impacts to the environment. However, implementation of the Project would facilitate additional future development in the city. Therefore, this Draft PEIR does not assess the site-specific construction and operation details of each future development within the Planning Area. Rather, it assesses the impacts associated with changes to existing land uses and the associated overall effects of buildout of the Project through 2056, where reasonably foreseeable physical changes to the environment could occur. Analysis at a parcel or site-specific level was not conducted because, unless otherwise noted within this assessment, the actual locations of Project development (and its chronological sequence or concurrence) that may be implemented in the future are speculative.

The potential for adverse impacts on utilities and service systems has been evaluated based on information concerning current service levels and the ability of the service providers to accommodate the increased demand generated by the proposed Project.

Water/Sewer Infrastructure Capacity

The analysis of water and sewer infrastructure capacity focuses on the projected increase in water demand and wastewater generation over the 2056-year horizon of the Project, in comparison to existing conditions. Impacts are considered significant if buildout of the Project would result in the need for construction of water and wastewater facilities that could result in a significant impact on the environment.

Storm Drain Infrastructure Capacity

The analysis of storm drain capacity focuses on the potential increase in stormwater generation that is anticipated to occur from added impervious area and buildout of the Project, in comparison to existing conditions. Impacts would be considered significant if the development of future projects pursuant to the MUOD would result in a substantial increase in impervious area and stormwater generation, which would necessitate construction or expansion of drainage facilities that may cause a significant impact on the environment.

Energy System Capacity

A number of factors are considered when weighing whether a project would use a proportionately large amount of energy (i.e., electricity and natural gas) that could result in energy capacity problems for existing infrastructure and requiring the expansion of infrastructure or energy supplies. Impacts would be considered significant if the Project would result in a substantial increase in energy demand that would necessitate construction or expansion of energy facilities that could cause a significant impact on the environment.

Water Supply

The water supply analysis focuses on the potential increased demand associated with buildout of the Project. The primary resources used for this analysis include the respective UWMPs for each retail water supplier, including Mesa Water District and IRWD (Mesa Water District 2021, IRWD 2021). The demand generated by the Project at

buildout compared to existing water supplies determines whether an impact from implementation of the Project would occur.

Wastewater Treatment

The analysis of wastewater treatment capacity focuses on the magnitude of the change in demand for wastewater treatment from buildout of the Project, based on the projected increase in water demand and wastewater generation over the 2056-year horizon of the Project. Impacts are considered significant if buildout of the Project would necessitate construction or expansion of wastewater facilities that could result in a significant impact on the environment.

Landfill Capacity

The analysis of landfill capacity focuses on whether existing and projected landfill capacity in the greater Orange County region will be sufficient to accommodate increased construction and operational waste generation associated with buildout of the Project. Impacts would be considered significant if the Project would result in a substantial increase in solid waste that would affect landfill capacity to the extent that a new or expanded landfill facility would be required, the development of which could result in an impact on the environment.

4.19.4.2 Environmental Analyses

Threshold 4.19-1 ***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. For the reasons discussed below, the Project would result in less than significant impacts regarding the requirement or in the relocation or construction of new or expanded water, wastewater treatment, electric power, natural gas, or telecommunication facilities.

Wastewater Treatment

As detailed in Table 4.10-4, Project-Related Population Increase by Service Area, of Section 4.10, Hydrology and Water Quality, of this Draft PEIR, the total population increase in the Planning Areas as a result of Project implementation (by 2056) is 66,026 (inclusive of the residential population and employment). Of that total population increase, approximately 97 percent (63,966) would be within Mesa Water District's service area, while approximately 3 percent (2,060) would be within IRWD's service area.

As presented in Table 4.19-3, based on the projected population and employment growth in the Planning Area and using the average per capita water use factor, the results estimate that sewage loads will increase by 3.38 mgd, a 1.84 percent increase over existing sewage loads for the Planning Area. As detailed in Section 4.19.1.2, Sewer Service, the current average total sewage flow to the Resource Recovery Plants No. 1 and No. 2 is approximately 184 mgd (OC San 2026) and the combined total treatment PWWF capacity is approximately 660 mgd (OC San 2017). Thus, Resource Recovery Plants No. 1 and No. 2 would have an additional 472.62 mgd of available, unused treatment capacity before they reach their permitted design capacity of 660 mgd. While it is not possible to fully evaluate future treatment capacity without fully understanding the potential increase in sewage loads across all of Resource Recovery Plants No. 1 and No. 2 collection areas, the collective Project-area population increase constitutes less than 2 percent of the Resource Recovery Plants No. 1 and No. 2 combined additional treatment capacity.

Table 4.19-3. Projected Project-Related Increase in Sewer Loads by Service Area

Location	Project-Related Pop. Increase	2020 UWMP Actual GPCD[1]	Est. Increased Average Water Demand (mgd)[2]	Est. Increased Average Sewer Load (mgd)[3]
Mesa Water District Service Area	63,966	85	5.44	3.26
IRWD Service Area	2,060	95	0.20	0.12
Planning Area	**66,026**	**—**	**5.63**	**3.38**

Sources: Mesa Water District 2021; IRWD 2021
Notes: Figure totals may not sum precisely due to rounding; IRWD = Irvine Ranch Water District; Pop. = population; GPCD = gallons per capita per day; GPD = gallons per day; AFY = acre feet per year.
1 The actual 2020 GPCD rates are derived from the UWMPs for each water purveyor (Mesa Water District 2021, IRWD 2021).
2 The estimated increased water demand was based on the total increase in population/employees times the 2020 actual rate in gallons per capita per day.
3 Assumes sewer return rate of 60 percent of the water demand.

Further, as described in OC San's 2023 Asset Management Plan, OC San evaluates wastewater treatment capacity using system condition data, operational performance data, and regulatory requirements. Existing infrastructure is assessed based on asset condition, risk, and performance to determine whether facilities can meet current service demands. These evaluations inform ongoing maintenance needs and identify where rehabilitation, replacement, or expansion may be required to maintain reliable treatment capacity. Their Asset Management Plan functions as a coordinating framework that aligns operational planning with long-range capital planning, ensuring that capacity decisions are based on documented system conditions and performance considerations (OC San 2023).

Future capacity needs are assessed by incorporating growth projections associated with adopted General Plan buildout within OC San's service area. OC San coordinates with its member agencies to obtain land use and development projections, which are translated into projected wastewater flows. These projections are evaluated alongside historical flow data, including wet-weather inflow and infiltration and observed trends in water use, to assess whether existing conveyance and treatment facilities can accommodate buildout conditions. Where capacity limitations are identified, improvements are incorporated into OC San's long-range capital planning, including its rolling 20-year Capital Improvement Program, which is updated regularly to reflect revised growth assumptions and system needs (OC San 2023). Therefore, as part of OC San's ongoing assessment of facility capacity and infrastructure, growth projections in its service area (including Costa Mesa) are periodically reviewed and considered in their Asset Management Plan.

Because the collective Project-related population increase would constitute less than 2 percent of the combined remaining treatment capacity for their service area, and because OC San is regularly updating its facility and infrastructure capacity and adjusting accordingly, it is anticipated that adequate treatment capacity will be available to accommodate the increased sewage loads associated with future development as growth occurs incrementally over time. As such, the Project would not require or result in the relocation or construction of new or expanded wastewater treatment facilities that could result in significant environmental impacts, and impacts would be less than significant.

Stormwater Drainage

Conversion of the two existing sparsely developed agricultural parcels, as well as landscaped and un-paved areas on developed parcels, into impervious surfaces as part of future Project-facilitated development could marginally increase stormwater runoff from the Planning Area. Furthermore, as discussed above in Section 4.19.1.1,

Stormwater Service, several locations near or adjacent to Planning Area parcels currently experience local flooding as a result of deficiencies in the existing stormwater drainage system.

Future development in the Planning Area facilitated by the Project would be located in developed areas of the city where storm drain infrastructure already exists. The vast majority of the Planning Area parcels are developed and drain into the City's storm drain system. Accordingly, future development facilitated by the Project is not anticipated to require or result in the relocation or construction of new storm drain facilities that could cause significant environmental effects. Under the Costa Mesa Municipal Code, land development projects are required to provide storm drainage facilities that are consistent with the City's adopted drainage framework and engineering standards. Title 15 (Public Works), Chapter III (Drainage) establishes the City's authority over storm drainage and formally identifies an adopted master drainage plan as the basis for drainage planning, facility construction, and drainage fee programs. New development is required to construct or upgrade storm drainage improvements as necessary to safely convey runoff, connect to the City's storm drain system, and avoid adverse impacts on downstream facilities. The Code authorizes the City to require drainage improvements and impose drainage fees to fund public storm drain facilities that serve development.

The City's Storm Drain System Master Plan (SDSMP) is a citywide document that evaluates existing storm drain capacity, identifies deficiencies, and establishes priorities for system improvements based on hydrologic and hydraulic modeling. For individual projects, the City typically requires preparation of a project-specific drainage study or hydrology and hydraulics analysis demonstrating that post-development runoff can be safely accommodated by on-site facilities and the downstream public system, and that the project is consistent with assumptions and constraints identified in the SDSMP.

Future development projects would be required to: (1) design on-site storm drainage facilities in accordance with City standards; (2) demonstrate adequate conveyance and connection to the public storm drain system; (3) construct any required on-site or off-site improvements identified through City review; and (4) comply with applicable drainage fee requirements established under Title 15.

Further, the City requires projects that disturb more than 5,000 square feet of impervious surfaces to prepare a preliminary water quality management plan (WQMP) as part of the City's grading permit requirements. Preliminary WQMPs detail pre-development and post-development conditions and how project flows drain to local or regional drainage facilities. Smaller, non-priority projects that are not subject to a WQMP would be required to prepare a Non-Priority Project Water Quality Plan that requires a project proponent to document the selection of site design, source control and any other best Management Practices included in a project (refer to Section 4.10, Hydrology and Water Quality, of this PER for further discussion of required water quality control standards).

Future development facilitated by Project would also be required to comply with Title 15, Chapter III, Section 15-65 (Drainage Fees Established), which establishes a drainage fee for development or redevelopment projects. The Drainage Fees would be used by the City to pay for the cost of constructing storm drains and related facilities, including repair, maintenance and upkeep of existing drainage facilities. The City's recent Storm Drainage Impact Fee Nexus Study updated the required Drainage Fees to account for the specific improvements in the Planning Area necessary to address the existing deficiencies identified in the Storm Drain System Master Plan. Therefore, all future development facilitated by the Project would be subject to the City's development review process, which may include review pursuant to CEQA, and be subject to payment of drainage fees per Title 15, Chapter III, Section 15-65.

The Planning Area is predominantly developed with impervious surfaces as a majority of the lots are currently developed, future development is expected to generate a minimal overall increase in runoff. Furthermore, the City's

Storm Drain System Master Plan currently identifies and prioritizes capital upgrades to address the existing deficiencies with a Storm Drain Impact Fee Nexus Study to fund improvements proportionally through development impact fees. Further, impacts associated with construction of water laterals and upgraded water mains have been considered as part of the reasonably foreseeable environmental impact of future project development throughout this PEIR, for example, as quantified in Table 4.3-6, Open Trench Construction Infrastructure Scenario Assumptions in Section 4.3, Air Quality of this PEIR. Further, standard best management practices in the Construction Runoff Guidance Manual (Orange County Stormwater Program 2012) would be employed during construction to minimize pollutants. In summary, the City's Engineering Division development review process and implementation of a WQMP (or Non-Priority Project Water Quality Plan), together with the City's adopted storm drainage planning document requirements and payment of applicable fees, would ensure that future development facilitated by the Project would be adequately served by storm drain infrastructure. As such, the Project would not require or result in the relocation or construction of new or expanded stormwater drainage facilities that could result in significant environmental impacts, and impacts would be less than significant.

Other Infrastructure

Wastewater Conveyance. According to an audit of the Costa Mesa Sanitary District's (CMSD) Sewer System Management Plan (SSMP) conducted in 2021, CMSD identified no deficiencies in its wastewater collection facilities serving the City that would result in a notice of violation, fine, or other enforcement action by the applicable regulatory agency (CMSD 2021b). With Project implementation, localized segments of the sewer collection system may be required to convey additional wastewater flows associated with increased density and intensification of land uses within the Planning Area.

CMSD is responsible for reviewing sewer plans, processing sewer permits, and calculating and collecting applicable sewer permit fees and system development (fixture) fees for development projects within its service area. As part of the City of Costa Mesa's development review process, applicants are required to obtain CMSD approval for sewer service prior to issuance of grading or building permits, and City review relies on confirmation of compliance with CMSD requirements. Consistent with CMSD policies, individual development projects are required to pay applicable sewer permit fees and fixture (capacity) fees at the time of sewer permit issuance or service connection. Fixture fees are intended to recover a new customer's proportionate share of wastewater system capacity and to fund capital improvements to the local sewer collection and conveyance system, while permit fees are used to recover the cost of plan review, inspection, and administrative services. In addition, CMSD also collects capacity fees on behalf of OC San (Appendix L).

Because future development within the Planning Area would primarily consist of infill development within existing urbanized areas, any sewer collection system improvements needed to serve such development would be expected to occur largely within existing street rights-of-way and would not require expansion into new, previously undisturbed areas. Future development projects would be required to undergo project-level plan check, obtain CMSD sewer approval, pay applicable sewer permit and capacity fees, and submit sewer plans demonstrating compliance with CMSD standards and the California Plumbing Code. Through this process, CMSD would determine whether adequate sewer service is available or whether localized improvements are necessary to serve a proposed development.

In addition, as discussed within Appendix L, CMSD requires projects which exceed the residential density prescribed in the SSMP (highest residential density is 30 dwelling units per acre) to conduct flow monitoring for 14 days and conduct hydraulic analysis for sewer pipe(s) and/or pump station(s) that would be impacted by the project. Generally, CMSD requires a sewer study to include flow testing and hydraulic analysis whenever a project would

substantially increase the sewer flows from the current development or land use. The sewer study should show what the current flow depth to diameter ratio (d/D) and the expected d/D with the proposed development's flows added to the pipe. If there is available capacity, then the project can move forward without any improvements to the public sewer system. If there is not capacity, then improvements to the sewer system would be required to sufficiently serve the proposed development. As the proposed Project would include allowable densities greater than the highest residential density prescribed in the SSMP (30 dwelling units per acre), various future projects within the Planning Area would be subject to this 14-day flow and hydraulic monitoring and analysis requirement (Appendix L).

Potential impacts associated with construction of sewer laterals or localized upgrades to sewer conveyance mains have been evaluated as part of the reasonably foreseeable environmental impacts of future development addressed in this PEIR, including the assumptions summarized in Table 4.3-6, Open Trench Construction Infrastructure Scenario Assumptions, in Section 4.3, Air Quality. In addition, construction activities would be required to implement standard best management practices identified in the Construction Runoff Guidance Manual (Orange County Stormwater Program, 2012) to minimize pollutant generation and runoff.

In summary, CMSD's sewer permitting and capacity fee programs and requirements, the City's development review process, implementation of a Water Quality Management Plan (WQMP) or Non-Priority Project Water Quality Plan, and compliance with the City's adopted storm drainage planning requirements would ensure that future development facilitated by the Project would be adequately served by wastewater infrastructure. As previously discussed, the PEIR does not address specific projects; however, construction of expanded sewer pipeline infrastructure upgrades would not result in any new adverse physical impacts on the environment beyond what has already been assessed in this PEIR, and impacts would be less than significant.

Water Conveyance. The Planning Area is served by Irvine Ranch Water District (IRWD) and Mesa Water District, which function as the retail potable water purveyors for properties within their respective service areas. Retail water purveyors require new customers to obtain water service approval and pay applicable meter connection, connection, and capacity related fees to connect to potable water transmission and distribution facilities. These requirements apply to all new development and redevelopment projects that request new or modified water service.

With respect to local water conveyance systems that may be required to accommodate increased potable water demand associated with higher densities or intensified land uses, review of potential system constraints would occur through project level plan check and water service approval processes administered by the applicable water district, with coordination through the City of Costa Mesa's development review process prior to grading and building permit issuance. The City's role is primarily to ensure that applicants demonstrate compliance with the requirements of the applicable water purveyor as part of overall project approval.

Within the city, either IRWD or Mesa Water District is responsible for reviewing development plans, processing water service and connection approvals, and assessing applicable fees for new development projects, depending on project location. Consistent with IRWD and Mesa Water District requirements, individual development projects are required to obtain water service approval and pay applicable connection, meter, and capacity related charges at the time-of-service connection. These fees are used by the respective water districts to fund water system capacity and infrastructure improvements, including facilities necessary to serve both new development and cumulative growth within their service areas.

Because future development within the Planning Area would primarily consist of infill development within existing urbanized areas, any water system improvements needed to serve such development would be expected to occur

largely within existing street rights-of-way and would not require expansion into new, previously undisturbed areas. Meter connection and capacity related fees would fund water system improvements, if necessary, consistent with adopted water district capital improvement programs. Such improvements may involve either trenchless construction methods or conventional open trench installation to the depth of existing underground water lines.

Potential construction impacts associated with installation of water laterals or localized upgrades to water mains have been considered as part of the reasonably foreseeable environmental impacts of future development evaluated in this PEIR, including, for example, the assumptions summarized in Table 4.3-6, Open Trench Construction Infrastructure Scenario Assumptions, in Section 4.3, Air Quality. In addition, construction activities would be required to implement standard best management practices identified in the Construction Runoff Guidance Manual (Orange County Stormwater Program, 2012) to minimize pollutant generation and runoff. As previously discussed, the PEIR does not address specific projects; however, construction of expanded water pipeline infrastructure upgrades would not result in any new adverse physical impacts on the environment beyond what has already been assessed in this PEIR, and impacts would be less than significant..

Electric Power. The existing system supplies a sufficient level of electrical service to the Planning Area. Electric supply and demand are generally determined on a case-by-case basis. In accordance with the City's Electrical Code (City Municipal Code Title 5) Chapter II, Electricity, the City has adopted and enforces the California Electrical Code (CEC) as its electrical standard. Thus, all wiring, equipment, grounding, bonding, and electrical connections must follow state electrical safety regulations, and installations must meet CEC design, material, and performance requirements. New development or redevelopment would be responsible for upgrades and undergrounding as determined by SCE, in coordination with the City's Building Safety Division after building plan submittal. Underground electricity is more reliable, safer, and more aesthetically pleasing. Ultimately, the City, SCE, and CPUC will determine which overhead sections will be relocated underground. Project-related development would generally consist of infill development in urban/suburban areas with existing access to electrical infrastructure. As such, upgrades would be likely be confined to new wires, replacement utility poles, and lateral connections to the future project site, and not any centralized facilities. For any required connections to underground powerlines, upgrades would likely be completed by either trenchless technology or open trenching, to the depth of the underground utilities. The construction of the laterals to existing underground or overhead utility infrastructure would be temporary and would be subject to all applicable regulatory requirements discussed above in Section 4.19.2.3, Local. Growth facilitated by the Project would also be subject to Part 6 of Title 24 of the California Code of Regulations, requiring energy efficient technologies to be incorporated as part of new development, which would reduce electricity demand associated with the Project (see Section 4.6, Energy, of this Draft PEIR for further discussion of energy-saving requirements applicable to the Project). Furthermore, MM-4.8-1, Electrify Temporary and Portable Sources; MM-4.8-2, Building Energy Performance; MM-4.8-3, Energy Conservation; and MM-4.8-5, On-site Solar, discussed in Section 4.8, Greenhouse Gas Emissions, of this Draft PEIR, would require several energy-reducing measures. It should be noted that trenching for utilities was considered throughout the impact analyses sections of the Draft PEIR. As previously discussed, the PEIR does not address specific projects; however, construction of expanded electrical infrastructure upgrades would not result in any new adverse physical impacts on the environment beyond what has already been assessed in this PEIR, and impacts would be less than significant.

Telecommunication. The telecommunication provider chosen for individual projects would assess demand for services and the ability to serve new developments on a case-by-case basis after building plans are submitted by developers. The provider would pay for any assessed upgrades or new services and recoup the cost later with the additional revenue from new customers. As Project-related development would generally consist of infill development in urban areas, existing telecommunications and wireless infrastructure exists to serve the Planning Area. Telecommunications upgrades, including wireless facility upgrades, would likely be confined to local connections

and/or improvements on the individual project sites or within the public rights-of way, and would not require large-scale improvements to any centralized facilities. The small cell wireless communication facilities that may be required to boost local cellular signals in service of the Project would typically be attached to existing buildings or utility infrastructure (e.g., streetlights, utility poles). These types of facilities would typically qualify for a Class 2 Categorical Exemption under CEQA and would require approval of a conditional use permit in compliance with Title 22 County Code standards. Conditional use permits for wireless communications facilities expire 10 years from the date of approval unless amended or extended by the planning commission or hearing officer. Other required upgrades related to telecommunication facilities would likely be completed by either trenchless technology (e.g., horizontal drilling for fiber-optic cables, etc.), completion of open trenching to the depth of the underground utilities, or aboveground connections to overhead utility lines. The construction associated with these improvements would be temporary and would be subject to all applicable regulatory requirements, including the City's design standards and permitting process for small cell wireless facilities located in the public rights-of-way. As previously discussed, the PEIR does not address specific projects; however, construction of expanded telecommunication upgrades would not result in any new adverse physical impacts on the environment beyond what has already been assessed in this PEIR, and impacts would be less than significant..

Natural Gas. The analysis and decision on capacity to meet future demand under buildout of the Project would be conducted by SoCalGas in coordination with the City at the time building plans are submitted and development occurs. The developers would be responsible for the cost of required upgrades and new or relocated services for new development or redevelopment. Natural gas upgrades would be confined to the lateral connections to the individual project sites and not any centralized facilities, as Project-related development would consist of infill development. Upgrades would likely be completed by either trenchless technology or completion of open trenching, to the depth of the underground utilities. As previously discussed, the PEIR does not address specific projects; however, construction of expanded natural gas pipeline upgrades would not result in any new adverse physical impacts on the environment beyond what has already been assessed in this PEIR, and impacts would be less than significant..

Conclusion for Other Infrastructure

If an individual project or multiple projects would have the potential to exceed existing wastewater treatment capacity, wastewater conveyance system capacities, water conveyance system capacities, electric or natural gas system capacities, and/or telecommunication system capacities, the Project could require the relocation or construction of new or expanded facilities, the construction or relocation of which could cause significant environmental effects. As detailed above, specific future construction-related impacts associated with the potential facility upgrades would be reduced with the incorporation of Project mitigation measures, which are discussed throughout this Draft PEIR. Overall, the City would rely on regional plans, interagency coordination, and periodic capacity studies to maintain adequate infrastructure to keep pace with growth in the city. As the Planning Area already contains existing land uses that require existing utilities demand and the Project's future land uses would replace said uses, it is not anticipated that the Project would require the relocation or construction of new or expanded facilities, the construction or relocation of which could cause significant environmental effects, and impacts are anticipated to be less than significant.

Threshold 4.19-2 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. Implementation of the Project would include infill and redevelopment that would accommodate population and employment growth, thereby increasing demand for water supplies. However, the Project is intended to guide city-wide growth and development with a focus on land use and policy issues that are specific to the unique characteristics of the city, and no specific development is proposed as part of the Project that

could directly impact water supplies. Nonetheless, increases in residential density, as well as employment associated with commercial uses facilitated by the Project, would result in increased potential water usage, including potable water and fire prevention demand, and these are discussed below.

As detailed in Table 4.10-4, Project-Related Water Demand Increase by Service Area, of Section 4.10, Hydrology and Water Quality, of this Draft PEIR, future development accommodated as a result of Project implementation would result in a total increase in population and employees of 66,026, and as a result, the estimated water usage would increase by approximately 5.63 mgd, or approximately 6,310 acre-feet per year, by 2056. Specifically, the Project is anticipated to require 6,090 acre-feet per year by 2056 within the Mesa Water District service area and 219 acre-feet per year for the IRWD service area, as detailed in Table 4.10-3, Project-Related Water Demand Increase by Service Area, of Section 4.10, Hydrology and Water Quality, of this Draft PEIR.

As the UWMPs for Mesa Water District and IRWD provide water supply projections to 2045 (which is prior to the Project's operational buildout year of 2056), this analysis compares the Project's proposed water demand increases by 2045 to anticipated supply within the water districts.

Mesa Water District's water supply for 2025 was 16,515 acre-feet per year (AFY) and IRWD's water supply in 2025 was 90,287 AFY (Mesa Water District 2026, IRWD 2026). It should be noted that the current (2025) estimates for water supplies in Mesa Water District and IRWD are less than the projections for 2025 that were anticipated by the water districts (see Table 4.19-1). Thus, for purposes of providing a current analysis, the Project's interpolated demand for water, by 2045, is compared to the delta of anticipated water demand from 2027 to 2045. Table 4.19-4, Project-Related Water Demand Comparison by 2045, demonstrates the Project-related water demands compared to Mesa Water District and IRWD's anticipated delta of water demand from project initiation (2027) to 2045 using linear interpolation.

Table 4.19-4. Project-Related Water Demand Comparison by 2045

Service Areas of Water Districts	Delta of Projected Water Supply between 2027 and 2045[a] (AFY)	Project Demand for Water by 2045 (AFY)	Remaining Anticipated Supply with Project Implementation by 2045[b] (AFY)
Mesa Water District	3,902	3,857	45
IRWD	79,596	139	79,457
Total	**83,498**	**3,996**	**79,503**

Sources: Mesa Water District 2021; IRWD 2021
Notes: Figure totals may not sum precisely due to rounding; IRWD = Irvine Ranch Water District; AFY = acre feet per year.
[a] This is calculated using linear interpolation from Mesa Water District and IRWD's current water supply (from 2025) between 2027 (Project initiation) and 2045 (Mesa Water District 2026, IRWD 2026).
[b] This is calculated by subtracting the Project's anticipated demand for water by 2045 from the delta of projected water supply for the water districts between 2027 and 2045.

Because the most recent UWMPs for both water districts include supply and demand projections only through 2045, an interpolated comparison was conducted to evaluate whether the Project's proportional demand in 2045 would fall within available supplies. As shown in Table 4.194, the Project's interpolated water demand through 2045 would be fully accommodated within the anticipated water supply portfolios of both districts. A combined surplus of approximately 79,503 AFY is projected for 2045 across the two service areas, indicating that Project-related demand represents a small fraction of total available supply. For the years between 2045 (UWMP projections) and 2056 (Project buildout), while the UWMPs do not include data for the Project's buildout year of 2056, UWMPs are

required to be updated every five years as established in the Urban Water Management Planning Act. UWMPs require water shortage contingency plans describing responses to shortage levels and demand reduction actions. UWMPs must be developed in coordination with local planning agencies and incorporate adopted general plans, reflect unique land uses, and aligned projections with anticipated development patterns. Thus, with certification of the PEIR for the Project, the future UWMPs prepared by Mesa Water District and IRWD must consider the projections of land use changes, such as those that would be implemented under the Project, in their planning horizon projection, and the UWMPs would thus be updated to include the buildout assumptions (to 2056) for the Project.

Furthermore, Mesa Water District and IRWD have indicated in their UWMPs that they would meet or exceed the demands for water for single and multiple dry years.[1] The Mesa Water District and IRWD maintain full access to Metropolitan Water District of Southern California supplies through MWDOC and explicitly identify that imported water is available at any time should demand exceed projections (Mesa Water District 2021, IRWD 2021). For example, IRWD has 126,000 acre-feet of storage, plus recharge and recovery capacity, in Kern County through the Strand Ranch and Stockdale Integrated Banking Projects. Stored water can be withdrawn and delivered to IRWD during droughts, imported water shortages, or higher-than-expected local demands (IRWD 2021).

Additionally, as shown in Appendix L of this PEIR, Mesa Water District indicated in its letter to the City (dated May 18, 2026) that it has adequate potable water supplies to meet current and future demand based on its recently adopted Water System Master Plan and 2025 UWMP, relying primarily on local groundwater sources (Appendix L). For new development, Mesa Water District confirmed that it requires applicants of new development or redevelopment within its service area to submit detailed domestic, irrigation, and fire flow demand information, along with project plans, which are reviewed through a plan check and permitting process that may include hydraulic analysis to evaluate system capacity and infrastructure needs (Appendix L). Development/redevelopment must also comply with Mesa Water District's Standard Specifications and Rules and Regulations for Water Service, and applicants are responsible for constructing any necessary site-specific infrastructure improvements (Appendix L). In addition, new development and redevelopment in the Mesa Water District's service area are subject to payment of applicable fees and charges, including capacity (connection) fees, plan check and inspection fees, and other deposits or bonds required to support service provision.

While unnecessary to reduce impacts to water supply to less than significant, MM-4.8-6, Water Conservation, discussed in Section 4.8, Greenhouse Gas Emissions, of this Draft PEIR, requires several options for water conservation measures for future development. Existing regulations would also serve to facilitate installation of water efficient fixtures with new development. For example, the California Green Building Standards Code requires 20 percent reduction in indoor water use relative to specified baseline levels. As a result, it is anticipated that sufficient water supplies would be available to serve the reasonably foreseeable future development because of Project implementation, during normal, dry, and multiple dry years, and the Project would result in a less than significant impact.

Threshold 4.19-3 ***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. See impact analysis regarding wastewater treatment as provided under Threshold 4.19-1. Because the collective Project-related increase in sewage generation would constitute less than 2 percent of the combined treatment capacity, it is anticipated that adequate treatment capacity will be available to

[1] For Mesa Water District, see Tables 7-3 and 7-4 of their 2020 UWMP (Mesa Water District 2021), and for IRWD, see Tables 7-3 (A and B) and Table 7-4 (A and B) of their 2020 UWMP (IRWD 2021).

accommodate the increased sewage loads within the Planning Area at full plan buildout. As such, additional treatment capacity would not be required, and impacts would be less than significant, and no mitigation is required.

Threshold 4.19-4 ***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. Implementation of the Project's proposed land use changes and amendments to the Zoning Code would result in increases in population density, dwelling units, and commercial square footage. The anticipated population growth and intensification of land uses would result in an increase of solid waste generation within the Planning Area. Table 4.19-5 outlines the anticipated increase in solid waste. As shown in Table 4.19-5, implementation of the Project would result in an approximate net increase of approximately 45,361 tons per year of solid waste compared to existing conditions; however, compliance with CALGreen's 50 percent diversion requirement diversion rate would reduce the Project's net solid waste generation to approximately 22,680 tons per year.

Table 4.19-5. Project Net Increase in Solid Waste Generation

Land Uses[1]	Solid Waste Generation (tons per year)[1]
Residential	16,342
Commercial	29,019
Total[2]	**45,361**
Post-Diversion Total[3]	**22,680**

Source: Appendix D (California Emissions Estimator Model (CalEEMod), Version 2022.1, Table G-36, Solid Waste Disposal Rates by Analysis Level and Land Use Subtype).
Note: Totals may not sum due to rounding.
1 Statewide and Orange County average disposal rates were applied based on CalEEMod default values for "Apartment Mid Rise" (Orange County) dwelling units designation for residential land uses and Statewide designations for commercial uses.
2 For the purpose of solid waste generation modeling, the anticipated buildout of the Project was assumed to be approximately 21,522 and 10,630,361 square feet of commercial building square footage.
3 AB 939, as amended, requires that the 50 percent solid waste diversion goal continue be achieved by jurisdictions. Orange County is currently meeting this goal (OC Waste & Recycling 2021). Thus, it is reasonable to assume that only 50 percent of the total generated waste would be deposited at landfills.

According to the 5-Year CIWMP Review Report, Orange County currently has adequate permitted landfill capacity of approximately 50 years (OC Waste & Recycling 2021). As discussed above in Section 4.19.1.4, Solid Waste, Orange County landfills have an estimated remaining capacity of 60.7 million tons to meet all solid waste debris demands, including construction and demolition, of the Project (OC Waste & Recycling 2026a; CalRecycle 2026a; CalRecycle 2026b; CalRecycle 2026c). Furthermore, at least 50 percent of waste would be diverted through source reduction, recycling and composting, and 65 percent of construction and demolition waste would be diverted in accordance with CALGreen, AB 939, and City Municipal Code regulations.

Therefore, based on current landfill capacity for construction waste and operational (i.e., ongoing daily) solid waste and required compliance with state and local, implementation of the Project 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, and no mitigation is required.

4.19.5 Cumulative Impact Analyses

Where a lead agency concludes that the cumulative effects of a project, taken together with the impacts of other closely related past, present, and reasonably foreseeable future projects are significant, the lead agency then must determine whether the project's incremental contribution to such significant cumulative impact is "cumulatively considerable" (and thus significant in and of itself). The cumulative study area used to assess potential cumulative greenhouse gas emissions impacts includes the entire planet and is not limited to any particular region. The full list of related plans applicable to the Project's cumulative analyses is provided in Section 2.5, Cumulative Impact Analysis, in Chapter 2, Environmental Setting of this Draft PEIR.

Threshold 4.19-1 (Wastewater Treatment). Cumulative growth as a result of buildout of related plans would further increase the demand for wastewater treatment. Cumulative wastewater treatment requirement impacts are considered on a system-wide basis and are associated with operations at OC San. Cumulative developments in the areas served by OC San would likely consist of infill and redevelopment projects that could include those that would be implemented by the Project. As detailed in Table 4.19-3, the collective Project-area population increase constitutes less than 2 percent of the Resource Recovery Plants No. 1 and No. 2 Joint Water Pollution Control Plant and Terminal Island Water Reclamation Plant's combined additional treatment capacity.

Additionally, cumulative projects would include infill and redevelopment of existing urban land uses that are not expected to discharge wastewater that would exceed contaminant levels beyond the regulations of the RWQCB, and all effluent would be required to comply with the wastewater treatment standards of the RWQCB. Therefore, the Project would not result in a cumulatively considerable impact, and impacts would be less than significant.

Threshold 4.19-1 (Stormwater Drainage). The geographic context for analysis of stormwater drainage is the includes the City's municipal stormwater system and the Newport Bay and Santa Ana watersheds. Under existing conditions, several stormwater trunkline segments in the city experience periodic ponding due to legacy capacities. The City's Storm Drain System Master Plan identifies and prioritizes capital upgrades with a Storm Drain Impact Fee Nexus Study to fund improvements proportionally through development impact fees. In combination with required construction and post-construction best management practices (discussed in further detail in Section 4.10, Hydrology and Water Quality, of this PEIR), these programs provide a pathway to address cumulative drainage such that cumulative impacts related to stormwater drainage system capacity exceedances and the need for new or relocated storm drain facilities would be less than significant. Project-facilitated development would be required to: (1) implement low impact development/treatment and source-control best management practices to manage peak flows and water quality; and (2) pay applicable storm-drain impact fees to fund citywide backbone upgrades identified in the Storm Drain System Master Plan. Given the predominantly built condition of the Planning Area and these mandatory controls/funding mechanisms, the Project's incremental contribution to cumulative storm drain impacts would not be cumulatively considerable, and cumulative impacts would be less than significant.

Threshold 4.19-1 (Wastewater Conveyance). Cumulative wastewater infrastructure impacts are considered on a system-wide basis and are associated with the capacity of existing and planned sewer infrastructure. Cumulative development in the wastewater service areas would include infill and redevelopment projects completed as part of the Project, as well as within portions of the service areas located outside of the Planning Area, within the city. Each of these cumulative projects could result in the need for new or upgraded sewer infrastructure. Cumulative projects to be developed within the city would also be required to undergo project-level plan checks prior to construction of any new structures, pay associated sewer fees, and prepare sewer area plans (which would include existing and proposed sewer information, construction notes, engineering stamps, and compliance with the California Plumbing Code), to identify any existing system deficiencies to ascertain if the local conveyance system could accommodate

the proposed increase in wastewater loads. As such, compliance with regulations would ensure that the Project would not result in cumulatively considerable impact regarding increased wastewater conveyance that would require the construction or relocation of which that could cause significant environmental effects and impacts would be less than significant.

Threshold 4.19-1 (Water Conveyance). Cumulative water infrastructure impacts are considered on a system-wide basis and are associated with the capacity of existing and planned infrastructure. The cumulative system evaluated includes the infrastructure systems of Mesa Water District and IRWD, which are currently serving the Planning Area communities. Cumulative development in the water service areas would include infill and redevelopment projects completed as part of the Project, as well as within portions of the service areas located outside of the Planning Area. Each of these cumulative projects could result in the need for new or upgraded water infrastructure. However, retail water purveyors charge meter connection fees for all new customers connecting to their potable water transmission and distribution facilities. Meter connection fees would fund capacity improvements (if necessary) to the potable water facilities. Impacts associated with construction of water laterals and upgraded water mains would be temporary and would be subject to all applicable regulatory requirements. Thus, the Project would not result in a cumulatively considerable impact regarding water conveyance and impacts would be less than significant.

Threshold 4.19-1 (Electric Power, Natural Gas, and Telecommunication). The geographic context for cumulative impacts related to electric power, natural gas, and telecommunication is southern California, as these utilities are regionally distributed. Completion of Project-related infill development/redevelopment may require installation of new electric power, natural gas, and telecommunication infrastructure in roadways, rights-of-way, and on individual lots. Similarly, cumulative project development would occur incrementally on a project-by-project basis. Standard BMPs and pollutant control measures would be employed during construction to minimize pollutants, including erosion-induced siltation of downstream drainages and incidental spills of petroleum products from construction equipment. Individual projects would be required to provide for specific project needs. As a result, Project-related development/redevelopment would not result in cumulatively considerable impact related to electricity, natural gas, and telecommunication and cumulative impacts would be less than significant.

Threshold 4.19-2. The geographic context for cumulative impacts related to water supply is the service areas of Mesa Water District and IRWD as well as the local groundwater basins. As detailed in Section 4.10, Hydrology and Water Quality, OCWD's long-term planning documents project sufficient groundwater availability to reliably meet demands during normal and drought years, supported by recharge from stormwater, Santa Ana River base flows, incidental rainfall recharge, and Groundwater Replenishment System (OCWD 2025). Based on 2020 UWMPs completed by the retail water purveyors in the Planning Area, adequate water supplies are available to serve the anticipated Project related increases in population, during normal, single dry, and multiple dry year scenarios. Given that Project related water demand is within the water supply projections of the responsible water agencies (see Table 4.19-4), future UWMP updates are required to incorporate and plan for the Project's full buildout, both Mesa Water District and IRWD have demonstrated the availability of sufficient supplies in normal, dry, and multiple dry years, and cumulative development would be supported by robust regional supply portfolios, including groundwater banking and imported water reliability programs, the Project's contribution to cumulative water supply impacts would not be cumulatively considerable. Therefore, cumulative impacts related to water supply availability would be less than significant.

Threshold 4.19-3. See the cumulative analysis provided above under Threshold 4.19-1 (Wastewater Treatment). Because the collective Project-related increase in sewage generation would constitute less than 2 percent of the combined treatment capacity, it is anticipated that adequate treatment capacity will be available to accommodate the increased sewage loads within the Planning Area at full plan buildout. With the available, unused 472.62 mgd

treatment capacity remaining at the Resource Recovery Plants No. 1 and 2 following Project implementation to service cumulative projects, it is anticipated that adequate treatment capacity will be available to accommodate the increased sewage loads associated with cumulative development. As such, Project impacts related to wastewater treatment capacity would not be cumulatively considerable.

Threshold 4.19-4. The geographic context for cumulative impacts related to solid waste is Orange County, as solid waste from the Project and cumulative projects would be diverted to three solid waste facilities throughout the County. The City expects that landfill space will diminish in Southern California which will require jurisdictions to continue development of waste reduction and diversion efforts to avoid shortfalls in landfill capacity (City of Costa Mesa 2016). However, as stated in the 5-Year Countywide Integrated Waste Management Plan Review Report, Orange County has overall landfill capacity of 50 years (OC Waste & Recycling 2021).

Future development under the Project would generate a net increase of approximately 45,361 tons of solid waste per year beyond existing conditions; however, according to the 2021 IWMP Annual Report, Orange County landfills currently have adequate capacity to support ongoing solid waste disposal generated from the Orange County region. Class III landfills have a remaining capacity of approximately 60.7 million tons (OC Waste & Recycling 2026a; CalRecycle 2026a; CalRecycle 2026b; CalRecycle 2026c). Moreover, future development under the Project would be required to comply with state-mandated municipal waste diversion and organic waste reduction targets. As of 2020, the County was achieving a diversion rate of 50 percent (OC Waste & Recycling 2021). Thus, the annual increase in disposed solid waste as a result of Project implementation would be reduced to 22,681 tons per year. For these reasons, the Project's contribution to cumulative impacts on the capacities of the landfill facilities would not be cumulatively considerable.

4.19.6 Mitigation Measures

No mitigation measures are required to reduce impacts to less than significant.

4.19.7 Level of Significance Conclusion

Threshold 4.19-1. The Project would result in **less than significant impacts** regarding the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunication facilities. Impacts would not be cumulatively considerable.

Threshold 4.19-2. The Project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years and impacts would be **less than significant**. Impacts would not be cumulatively considerable.

Threshold 4.19-3. The Project would not result in a determination by the wastewater treatment provider which serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments and impacts would be **less than significant**. Impacts would not be cumulatively considerable.

Threshold 4.19-4. The Project 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 and impacts would be **less than significant**. Impacts would not be cumulatively considerable.

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5 Other CEQA Considerations

This Chapter of the Draft Program Environmental Impact Report (PEIR) for the Neighborhoods Where We All Belong Zoning Updates and Housing Element Implementation (Project) has been prepared in furtherance of the content requirements set forth in the California Environmental Quality Act (CEQA) Guidelines Section 15126.2. As such, this Chapter discusses:

- Significant and Unavoidable Environmental Impacts (Section 5.1)
- Significant and Irreversible Environmental Effects (Section 5.2)
- Growth Inducement (Section 5.3)
- Potential Secondary Effects of Mitigation (Section 5.4)
- Effects Found Not to Be Significant (Section 5.5)

5.1 Significant and Unavoidable Environmental Impacts

Section 15126.2(c) of the CEQA Guidelines requires that a PEIR describes 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.

Implementation of the Project-specific mitigation measures identified in Chapter 4, Environmental Analysis, of this Draft PEIR, would reduce the environmental impacts associated with implementation of the Project. Mitigation measures set forth in this Draft PEIR would apply to those discretionary projects that would be developed under the Project. Future non-discretionary projects that would be implemented under the Project would be subject to the federal, state and local regulations; however, these non-discretionary projects would not be subject to CEQA review or mitigation measures. However, MUOD projects may be subject to technical studies, such as a requirement for all MUOD projects to prepare a Phase I Environmental Site Assessment and a requirement for applicable MUOD projects to prepare a traffic study pursuant to Article 3 (Transportation System Management) of Chapter XII of Title 13 of the Costa Mesa Municipal Code and a noise study for future development projects abutting a freeway or within the Airport Influence Area, as defined by the AELUP for John Wayne Airport. Despite this, even with implementation of existing regulations and proposed mitigation measures, not all development projects would be subject to these requirements and potential impacts for some topics would be significant and unavoidable.

The environmental impacts that would result from anticipated future development under the Project would be significant and unavoidable for the following topics: agriculture and forestry resources, air quality, cultural resources, geology and soils, greenhouse gas (GHG) emissions, hazards and hazardous materials, noise, population and housing, recreation, and tribal cultural resources. The specific significant and unavoidable impacts are detailed below.

- **Section 4.1, Aesthetics:** Under Threshold 4.1-1, even with the implementation of MM-4.1-1, the Project would result in a significant unavoidable impact related to conflicts with applicable zoning and other regulations governing scenic quality and impacts would not be cumulatively considerable.

- **Section 4.2, Agriculture and Forestry Resources:** Under Threshold 4.2-1, the Project would result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, and impacts would be significant and unavoidable and cumulatively considerable. Under Threshold 4.2-1, it was determined that mitigation would be infeasible to reduce this impact.
- **Section 4.3, Air Quality:** Under Threshold 4.3-1, even with implementation of MM-4.3-1 through MM-4.3-11, the Project would conflict with or obstruct implementation of the applicable air quality plan, and impacts would be significant and unavoidable and cumulatively considerable. Under Threshold 4.3-2, even with implementation of MM-4.3-1 through MM-4.3-11, the Project would result in a cumulatively considerable net increase of criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors), and impacts would be significant and unavoidable and cumulatively considerable. Under Threshold 4.3-3, even with implementation of MM-4.3-1 through MM-4.3-11, the Project would expose sensitive receptors to substantial pollutant concentrations, and impacts would be significant and unavoidable and cumulatively considerable.
- **Section 4.4, Biological Resources:** Under Threshold 4.4-1, even with implementation of MM-4.4-1 through MM-4.4-6, the Project would result in a significant and unavoidable impact related to substantial adverse effect on plant and wildlife species identified as a sensitive or special status species and a cumulatively considerable impact.
- **Section 4.5, Cultural Resources:** Under Threshold 4.5-1, even with implementation of MM-4.5-1, the Project would indirectly cause a substantial adverse change in the significance of an historical resource pursuant to Section 15064.5, and impacts would be significant and unavoidable and cumulatively considerable. Under Threshold 4.5-2, even with implementation of MM-4.5-2, the Project would indirectly cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5, and impacts would be significant and unavoidable and cumulatively considerable.
- **Section 4.7, Geology and Soils:** Under Threshold 4.7-1, even with implementation of MM-4.7-1, the Project would have the potential to result in the direct or indirect destruction of unique paleontological resources or sites, and impacts would be significant and unavoidable and cumulatively considerable.
- **Section 4.8, Greenhouse Gas Emissions:** Under Threshold 4.8-1, even with implementation of MM-4.8-1 through MM-4.8-5, the Project would generate GHG emissions, either directly or indirectly, that may have a significant effect on the environment, and impacts would be significant and unavoidable. Under Threshold 4.8-2, even with implementation of MM-4.8-1 through MM-4.8-5, the Project would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases, and impacts would be significant and unavoidable.
- **Section 4.9, Hazards and Hazardous Materials:** Under Threshold 4.9-1, even with implementation MM-4.9-1 and MM-4.9-2, potential impacts related to the creation of a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials would be significant and unavoidable. Under Threshold 4.9-2, even with implementation MM-4.9-1, MM-4.9-2, and MM-4.9-3, potential impacts related to the creation of a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions would be significant and unavoidable. Under Threshold 4.9-3, even with implementation MM-4.9-1 and MM-4.9-2, potential impacts related to hazardous emissions or hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school would be significant and unavoidable. Under Threshold 4.9-4, even with implementation MM-4.9-1, potential impacts related to hazards associated with contaminated sites would be significant and unavoidable.

- **Section 4.13, Noise:** Under Threshold 4.13-1, even with implementation of MM-4.13-1 through MM-4.13-2, the Project would result in a significant and unavoidable impact regarding the generation of a substantial temporary and 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. Under Threshold 4.13-2, even with implementation of MM-4.13-3, the Project would result in a significant and unavoidable impact regarding generation of excessive groundborne vibration or groundborne noise levels.
- **Section 4.14, Population and Housing:** Under Threshold 4.14-1, even with implementation of MM-4.14-1, impacts related to substantial unplanned population growth would be significant and unavoidable and cumulatively considerable.
- **Section 4.16, Recreation:** Under Threshold 4.16-1 (transferred from Section 4.15, Public Services) and Threshold 4.16-2, the Project would have the potential to result in significant and unavoidable impacts regarding the potential to create future capacity or service level problems, and result in impacts related to the increase of the use of existing neighborhood or regional parks or recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. It is unclear how many acres of public parkland will be developed within the Planning Area. No feasible mitigation measures pertaining to impacts associated with service ratios and deterioration of existing facilities are available and impacts would be significant and unavoidable and cumulatively considerable.
- **Section 4.18, Tribal Cultural Resources:** Under Threshold 4.18-1, even with implementation of MM-4.18-1 and MM-4.5-2, the Project would have the potential to result in significant and unavoidable impacts regarding the potential to 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.

5.2 Significant and Irreversible Environmental Impacts

Section 15126.2(d) of the CEQA Guidelines requires a discussion of any significant irreversible environmental changes that would be caused by the Project. Specifically, Section 15126.2(d) states:

> *Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.*

Generally, a project would result in significant irreversible environmental changes if any of the following would occur:

- Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely;
- The primary and secondary impacts of the project would generally commit future generations of people to similar uses;
- Irreversible damage from environmental accidents associated with the project;

- The proposed consumption of resources is not justified (e.g., the project results in wasteful use of energy).

Determining whether the Project could 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 Large Commitment of Non-Renewable Resources

Resources that would be consumed because of residential, commercial, and/or mixed use development indirectly facilitated as a result of the Project include electricity, natural gas, and fossil fuels; however, the amount and rate of consumption of these resources would not result in significant environmental impacts related to the unnecessary, inefficient, or wasteful use of resources (see Sections 4.6, Energy, and 4.19, Utilities and Service Systems of this Draft PEIR). With regard to building materials, future development under the Project is anticipated to be constructed with durable materials with a substantial lifespan, such as cast in place concrete and precast concrete, which would improve building longevity. As such, even though construction would result in the commitment of building materials, the materials are not expected to require replacement during the Project's estimated operational lifespan. Furthermore, per CALGreen requirements, 65 percent of all demolition and construction materials must be recycled. This regulation would ensure that portions of the existing materials on site are reused. In the event that the Project were to be demolished at a future time, this regulation would ensure that a majority of the materials are recycled. In addition, construction activities related to the reasonably expected development would result in the irretrievable commitment of nonrenewable energy resources, primarily in the form of fossil fuels (including fuel), natural gas, and gasoline for automobile and construction equipment. However, use of such resources would not be unusual as compared to other construction projects and would not substantially affect the availability of such resources.

With respect to operational activities, compliance with applicable building codes would ensure that natural resources are conserved or recycled to the maximum extent feasible. It is also likely that in response to GHG emissions reduction plans (including the 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy and the California Air Resources Board's Scoping Plan) new technologies or systems will emerge, or will become more cost-effective or user-friendly, that will further reduce the reliance of facilitated Project development upon nonrenewable natural resources (refer to Section 4.8, Greenhouse Gas Emissions, for further discussion of applicable plans and specific GHG reduction mandates). However, even with implementation of conservation measures, consumption of non-renewable resources would generally increase with implementation of the Project due to population and activity increases. Although the Project would see an increase in petroleum use during construction and operation, vehicles would use less petroleum due to advances in fuel economy and potential reduction in vehicle miles traveled (VMT) with the introduction of mixed land uses over time.

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 for non-discretionary projects that would be implemented under the Project would be increasingly sourced from renewable energy, pursuant to SB 100. SB 100, which passed in 2018, states that 44 percent 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 percent by December 31, 2027, and 60 percent by December 31, 2030. SB 100 also sets forth a state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of the retail sales of electricity to California and requires that achieving 100 percent 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 SB 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 4.6, Energy. for additional details). Furthermore, the City and state have policies in place to support decreased use of personal vehicles. As such policies are carried out, the number of vehicles traveling to and from the Planning Area sites may decrease over time. In addition, the mixed-use nature of future development projects under the Project would encourage and facilitate walking, biking, and other non-automobile trips.

In summary, implementation of the Project would involve irreversible environmental changes to existing non-renewable resources, such as the commitment of energy resources as a result of the operation and maintenance of future development. However, the Project would not involve wasteful or unjustifiable use of energy or other resources, and energy conservation efforts would occur with new construction. New development indirectly facilitated as a result of the Project would be constructed and operated in accordance with specifications contained in Title 24 of the California Code of Regulations and local green building requirements, as discussed in Section 4.6, Energy. Therefore, the use of non-renewable resources from Project implementation would occur in an efficient manner.

5.2.2 Commitment to Future Uses

The Project is intended to guide growth and development within the city, specifically within the Planning Area. While no direct development is proposed as part of the Project, the implementation of Project land use changes would accommodate future development (and redevelopment of previously developed areas). The Project would implement land use changes to accommodate the development of 21,522 additional dwelling units, 11,760 of which are required to meet the City's 6th Cycle Regional Housing Needs Assessment (RHNA) allocation. The Project's proposed land use changes would also result in approximately 10,630,361 square feet of additional commercial use and approximately 14,454 net-new employees in the Planning Area.

The Project would not facilitate new development on any existing open space parcels. Rather, the Project would redesignate predominantly commercial and industrial parcels to accommodate development of additional residential and commercial uses within parcels already designated for development. As such, the Project would not appreciably change the uses of sites such that it would commit future generations to future use. For example, the residential and mixed-use land use changes would accommodate additional dwelling units in areas that already contain developed uses. The development or redevelopment of Planning Area parcels would result in changes to the current land uses in a manner that is consistent with the City's General Plan goals and policies (see Section 4.11, Land Use and Planning, of this Draft PEIR). Such development is commonplace and encouraged in areas along commercial corridors and near transit nodes and would not result in primary and secondary impacts that would generally commit future generations of people to similar uses because it would not be creating a new use in an undeveloped area.

5.2.3 Irreversible Damage from Environmental Accidents

The land uses that would be developed under the Project include new residential and commercial uses. The development of residential and commercial land uses within infill, urban settings within the city would have low intrinsic potential for environmental accidents. The Project involves the development and operation of residential

and neighborhood-serving commercial uses, which are considered low-hazard land use types that do not typically involve industrial processes or large-scale storage of hazardous materials capable of causing irreversible damage from environmental accidents. Long-term operations of these land uses would be generally associated with sustained, expanded use of household and commercial materials (e.g., paints, solvents, cleaning supplies, refrigerants, landscaping products, and petroleum products). However, these materials would be present in small, retail-level quantities, and are not of the type or volume that could create irreversible environmental effects in the event of an accidental release. Businesses are required to strictly adhere to the federal, state, and local rules and regulations regarding the transport, use and disposal of hazardous materials, which would minimize the risk of potential damage from environmental accidents. Any future commercial tenants of future development that may handle hazardous materials above regulatory thresholds would be required to comply with the California Hazardous Materials Business Plan program, the California Fire Code, and applicable requirements administered by the local Certified Unified Program Agency (CUPA). These regulatory programs mandate appropriate storage, spill containment, emergency response procedures, and employee training, minimizing the potential for spills or uncontrolled releases. The Project does not propose manufacturing, chemical processing, petroleum storage, hazardous waste treatment, or other high risk industrial activities that could pose a substantial threat of irreversible soil, groundwater, or biological resource impacts. Therefore, the potential for a significant environmental accident is inherently low.

As discussed in Section 4.9, Hazards and Hazardous Materials, short-term construction activities associated with implementation of these land uses would temporarily increase the regional transport, use, storage, and disposal of hazardous materials and petroleum products commonly used in construction (e.g., diesel fuel, paints, lubricants, solvents, and cement products containing strong basic or acidic chemicals). Demolition and construction activities associated with future development facilitated by the Project could result in the disturbance of hazardous materials. Numerous federal, state and local regulations exist that require strict adherence to specific guidelines regarding the use, transportation, and disposal of hazardous materials. Regulations that would be required of those transporting, using or disposing of hazardous materials include the Resource Conservation and Recovery Act (RCRA), which provides the 'cradle to grave' regulation of hazardous wastes; Comprehensive Environmental Response, Compensation, and Liability Act, which regulates closed and abandoned hazardous waste sites; the Hazardous Materials Transportation Act, which governs hazardous materials transportation on U.S. roadways; International Fire Code, which creates procedures and mechanisms to ensure the safe handling and storage of hazardous materials; California Code of Regulations Title 22, which regulates the generation, transportation, treatment, storage and disposal of hazardous waste; California Code of Regulations Title 27, which regulates the treatment, storage and disposal of solid wastes; and the Orange County Health Care Agency (OCHCA), with implements and enforces all major hazardous materials regulatory programs. For development within the State of California, Government Code Section 65850.2 requires that no final certificate of occupancy or its substantial equivalent be issued unless there is verification that the owner or authorized agent has met, or is meeting, the applicable requirements of the Health and Safety Code, Division 20, Chapter 6.95, Article 2, Sections 25500 through 25520.For the reasons stated above, the Project would not result in irreversible damage from environmental accidents.

5.2.4 Consumption of Resources Justified

While the Project would increase resource consumption during construction and operation, the Project would also result in benefits related to long-term resource consumption in the region. According to SCAG's 2024–2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (also referred to as Connect SoCal), the City will continue to experience growth in population, jobs, and housing. The Project aims to build off the character and existing

assets of the City by identifying opportunities for equitable and sustainable investment while addressing issues and concerns voiced by community members. The Project would facilitate the development of future housing to be in closer proximity to existing jobs, thereby reducing distances required for commutes, and would facilitate commercial uses to be in closer proximity to existing and future housing in the Planning Area. 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. For these reasons, the Project's proposed consumption of resources is justified.

5.3 Growth-Inducing Impacts

CEQA requires a discussion of ways in which the proposed Project could be growth inducing. The CEQA Guidelines identify a project as growth inducing if it fosters economic or population growth or results in the construction of additional housing, either directly or indirectly, in the surrounding environment (14 CCR 15126.2(e)). New employees from commercial development and new population from residential development represent direct forms of growth. These direct forms of growth have a secondary effect of expanding the size of local markets and inducing additional economic activity in the area. A project could indirectly induce growth by reducing or removing barriers to growth or by creating a condition that attracts additional population or new economic activity. However, a project's potential to induce growth does not automatically result in growth. Growth can only happen through capital investment in new economic opportunities by the private or public sectors.

Direct growth-inducing impacts are commonly associated with the extension of new public services, utilities, and roads into areas that have previously been undeveloped. The extension of such infrastructure into a non-serviced area can represent the elimination of a growth-limiting factor, thereby inducing growth. Increases in the population may tax existing community service facilities, which could require construction of new facilities and which could ultimately result in an increase in the pace of development or the density of the existing surrounding development. Indirect growth-inducing impacts include an increased demand for housing, commodities, and services that new development causes or attracts by increasing the population or job growth in an area.

Through proposed land use changes and policies, the Project would guide redevelopment in the city and the Planning Area, from residential and commercial-related growth. The Project is anticipated to indirectly induce growth through the removal of obstacles to additional growth and development, such as allowing increased density to occur in industrial areas in accordance with new land use regulations. However, the Project does not propose any specific infrastructure improvements that would result in growth. The Project does not approve the construction of specific development projects and would largely accommodate growth based on market conditions. However, it would allow increased development intensity and/or a more inclusive mix of land uses compared to existing conditions. Therefore, the Project removes regulatory obstacles to growth and is thus considered to be growth-inducing.

The land use changes associated with the Project would increase the number of dwelling units that could occur under buildout conditions and accommodate a greater population than was envisioned for the General Plan. Additionally, it would increase commercial activity and create new jobs in the Planning Area through commercial development. These new jobs could potentially lead to future employees moving into the city to be proximate to

their jobs, therefore increasing the population. Therefore, the Project would have indirect growth-inducing effects, as analyzed throughout this Draft PEIR.

As discussed in Section 4.15, Public Services, as the Planning Area continues to develop, it would require further commitment of public services that could include fire protection, law enforcement, public schools, public recreation, and other services as appropriate. Future development in the city would require increased commitment to public services that would be considered a long-term commitment in order to maintain the desired level of service. This is considered a growth-inducing impact.

As the population grows and occupies new dwelling units, these residents would seek shopping, entertainment, employment, home improvement, vehicle maintenance, and other economic opportunities in the surrounding area. This would facilitate the purchase of economic goods and services and could, therefore, encourage the creation of new businesses and/or the expansion of existing businesses. This need for goods and services would partially be met by the proposed commercial/mixed-use development, but not fully. This is considered a growth-inducing impact.

Cities and counties in California periodically update their general plans pursuant to California Government Code Sections 65300 et seq. As discussed in Chapter 3, Project Description, the Project is intended to guide growth and development within the city. While no direct development is proposed as part of the Project, the Project land use changes and policies would accommodate future development (and redevelopment of previously developed areas).

Pressures to develop in the surrounding cities may derive from regional economic conditions and market demands for housing, commercial, office and industrial land uses that may be directly or indirectly influenced by the Project. Although the Project does not include approval of physical development, it creates additional development capacity in the city compared to existing conditions. Much of this development capacity is either available under existing conditions or is limited to targeted areas. Furthermore, development projects would be induced more by market demands than by new development capacity created by land use changes. However, because approval of the Project would ultimately result in subsequent projects that would have their own environmental impacts, including potentially significant impacts, the Project is a growth-inducing action.

5.4 Potential Secondary Effects of Mitigation Measures

Section 15126.4(a)(1)(D) of the CEQA Guidelines states that “if a mitigation measure would cause one or more significant effects in addition to those that would be caused by the project as proposed, the effects of the mitigation measure shall be discussed but in less detail than the significant effects of the project as proposed.” With regard to this section of the CEQA Guidelines, the potential impacts that could result with the implementation of each mitigation measure proposed for the Project were reviewed. The following provides a discussion of the potential secondary effects that could occur as a result of the implementation of the proposed mitigation measures, listed by environmental issue area.

5.4.1 Aesthetics

MM-4.1-1 (Shade and Shadow Analysis) requires, prior to issuance of a building permit for any development project pursuant to the MUOD that is located outside of a Transit Priority Area on a non-Housing Element site, the project applicant to submit a Shade/Shadow Analysis if both of the following conditions apply: (1) The proposed project is

over three stories in height, and (2) the subject property is adjacent[1] to a residential parcel zoned R1, R2, or R3. establishes a clear, objective threshold of significance for future projects shading adjacent residential parcels. Specifically, a project would result in a significant shade/shadow impact if new project-related shading would reduce direct sunlight to private or common residential outdoor living areas or other shade-sensitive features beyond defined hourly thresholds. If a significant impact is identified, the applicant must implement City-approved design modifications (such as height reductions, stepbacks, massing adjustments, or increased setback) to reduce shading effects to below the applicable significance thresholds prior to project approval.

This mitigation measure establishes objective thresholds and enforceable requirements to evaluate and, where necessary, mitigate shading effects on adjacent residential properties through design based measures such as height reductions, stepbacks, massing reconfiguration, and increased setbacks. This mitigation measure would not result in any physical changes in the environment. As such, implementation of this measure would have beneficial impacts on reducing shade and shadow impacts and would not result in significant secondary effects.

5.4.2 Air Quality

MM-4.3-1 (Construction Equipment Emissions Reductions) requires that construction contractors use California Air Resources Board-certified Tier 4 Final or better construction equipment for equipment engines greater than 25 horsepower. MM-4.3-2 (Additional Construction Equipment Emission Reductions) would require that electric or hybrid powered equipment and cleaner fuel equipment be used during construction, as commercially available. MM-4.3-3 (Limit Truck and Equipment Idling During Construction) would limit idling time of heavy-duty trucks to no more than 4 minutes. MM-4.3-4 (Use of Low-VOC Paint During Construction) would require the use of low VOC paint for all interior and exterior paint applications, while MM-4.3-5 would require development and implementation of dust control strategies are implemented to reduce project-generated dust during construction and ensure compliance with SCAQMD Rule 403. MM-4.3-6 (Notification of Construction Activities) requires that prior to the commencement of any construction activities for each future development project, a representative must provide evidence to the City that the applicant has employed a construction relations officer who will address community concerns regarding on-site construction activity.

MM-4.3-7 (Low-VOC Cleaning Supplies and Paint Educational Program) would require future development project applicants to provide evidence to the City that the applicant/phase developer has developed a green cleaning product and paint education program to be made available through property management practices prior to occupancy. MM-4.3-8 (Landscape Maintenance Equipment Emission Reduction) would implement landscape maintenance equipment emission reduction measures that promote the use of electric landscape equipment. MM-4.3-9 (Trip Reduction Program) would require future development projects with 50 employees or more to prepare a Trip Reduction Program to discourage single-occupancy vehicle trips and encourage alternative modes of transportation, such as carpooling, and shuttle/transit use, and where applicable walking, and biking, with the goal of reducing VMT. MM-4.3-10 (Enhanced End-of-Trip Bicycle Facilities) would require applicable future development projects (non-residential and multifamily residential development) to install end-of-trip bicycle facilities, such as bike parking or storage, showers, and changing facilities. MM-4.3-11 (Transit Oriented Features) would require project applicants of future projects to consult with the City to determine appropriate and reasonable contribution towards construction or implementation of transit features.

These mitigation measures require use of cleaner equipment and practices, dust suppression measures, and implementation of bicycle facilities and other vehicle trip reduction strategies to reduce harmful emissions and

[1] "Adjacent to" is defined as being within 150 feet of the subject parcel, measured from the respective parcel boundaries.

require community notification of construction activities. Most of these mitigation measures would incorporate design features into future development, such as low-VOC paint and electric-powered equipment, to reduce air quality impacts and would not result in physical changes in the environment. The increased vehicle trips from future construction of bicycle facilities are considered within the analysis of the Draft PEIR. These mitigation measures would not result in physical changes in the environment that could result in significant secondary effects. As such, implementation of these measures would have beneficial impacts on reducing air quality impacts and would not result in significant secondary effects.

5.4.3 Biological Resources

MM-4.4-1 (Habitat Assessment) would require project applicants to prepare a Habitat Assessment Report to the City's Planning Division for review and approval unless the site is fully developed with impervious surfaces and/or irrigated landscaping. MM-4.4-2 (Rare Plants) would require project applicants to conduct rare plant surveys within the appropriate blooming period for southern tarplant, decumbent goldenbush, or Coulter's goldfields if the habitat assessment determines suitable habitat for those species exists, and to flag any findings for avoidance, or if individual plants cannot be avoided, to relocate them to a conserved property or replant them on site at a CDFW-approved ratio. MM-4.4-3 (Nesting Birds) states that if suitable nesting bird habitat is present on future project sites, construction must avoid the nesting season when possible or, if work must occur then, a qualified biologist must survey for active nests, establish and monitor appropriate no disturbance buffers, and ensure construction does not resume in those areas until nests are inactive. MM-4.4-4 (Burrowing Owl) would require focused burrowing owl surveys if suitable burrowing owl habitat is found during habitat assessments for future projects and avoidance of impacts to owls and their habitat or, if avoidance is not possible, coordination with CDFW for appropriate mitigation—which may require an Incidental Take Permit and habitat conservation or relocation completed before construction. MM-4.4-5 (Western Spadefoot) would require focused presence/absence surveys conducted by a qualified biologist(s) if suitable western spadefoot habitat is found during habitat assessments for future projects to determine if western spadefoot is present, and if surveys are positive, the biologist(s) must conduct pre-construction surveys for western spadefoot and relocate spadefoot individuals of all life stages to suitable habitat outside of the project work area. MM-4.4-6 (Crotch's Bumble Bee) would require that if suitable habitat for Crotch's bumble bee is present, a qualified biologist must conduct pre-construction surveys during the active season and establish no-work buffers around any detected nests; or, if avoidance is not possible, this mitigation measure would require consult with CDFW for permitting and compensatory mitigation such as habitat replacement or conservation.

Overall, these mitigation measures require impact-preventative surveys and avoidance measures for biological resources that would not result in physical changes in the environment that could result in significant secondary impacts. The increased vehicle trips from monitoring and surveying of the above-mentioned mitigation measures are temporary and are considered within the analysis of the Draft PEIR. As such, implementation of these mitigation measures would not result in any significant secondary effects.

5.4.4 Cultural Resources

MM-4.5-1 (Historic Architectural Resources) requires the applicant to evaluate potential historic architectural resources and, when warranted, shall engage a qualified architectural historian to submit a Phase I and/or Phase II Historic Resources Assessment and the incorporation of appropriate avoidance, minimization, or documentation measures, such as compliance with the Secretary of the Interior's Standards or archival Historic American Building Survey, Historic American Engineering Record, or Historic American Landscape Survey recordation, to reduce

significant impacts to historic resources. MM-4.5-2 (Archaeological Resources) requires the City to review the archaeological sensitivity of the Planning Area as identified in Appendix F-3, Archaeological Resources Sensitivity Map of the Final EIR to determine whether the property is located in an area with moderate or high sensitivity and, if the qualified archaeologist determines there is moderate or high sensitivity, the applicant shall submit a Phase I Archaeological Resources Inventory Report to identify and evaluate archaeological resources that may be impacted by the subject project and to incorporate appropriate measures to avoid or minimize impacts to archaeological resources as part of an Archaeological Resources Work Plan (ARWP).

These mitigation measures require impact-preventative cultural resource studies and avoidance measures for cultural resources that would not result in physical changes in the environment that could result in significant secondary impacts. The increased vehicle trips from surveying of the above-mentioned mitigation measures are temporary and are considered within the analysis of the Draft PEIR. As such, implementation of these mitigation measures would not result in any significant secondary effects.

5.4.5 Geology and Soils

MM-4.7-1 (Mitigation Protocols for Paleontological Resources) would require project applicants to retain qualified paleontologists, implement appropriate monitoring based on site sensitivity, and to halt work to evaluate, recover, and curate any fossils discovered during construction. This mitigation measure requires impact-preventative paleontological monitoring and avoidance measures for paleontological resources and projects in high-sensitivity areas that would not result in physical changes in the environment that could result in significant secondary impacts. The increased vehicle trips from monitoring and pre-construction meetings from the above-mentioned mitigation measure are temporary and are considered within the analysis of the Draft PEIR. As such, implementation of this mitigation measure would not result in any significant secondary effects.

5.4.6 Greenhouse Gas Emissions

MM-4.8-1 (Electrify Temporary and Portable Sources) requires applicants of future projects to include grid power connections for construction trailers and lighting when grid power is on site. MM-4.8-2 (Energy Conservation) would require applicants of future projects to ensure new buildings are designed to include various energy conservation measures. MM-4.8-3 (Electric Vehicle Ready New Construction) would require applicants of future projects to install electric vehicle charging infrastructure that meets or exceeds the voluntary standard in the California Green Building Standards Code into the development and that adequate charging equipment, capacity, and design features are provided to support effective long-term operation. MM-4.8-4 (On-site Solar) would require applicants of future projects to provide evidence to the City that building designs include rooftop photovoltaic systems that meet or exceed the current mandatory photovoltaic requirements of the California Green Building Standards Code. MM-4.8-5 (Water Conservation) would require applicants of future projects, through construction contractor's contract specifications, to include water conservation measures that meet or exceed requirements of the California Green Building Standards Code.

These mitigation measures require use of cleaner equipment and practices, such as electrical and solar equipment and energy conservation measures, to reduce GHG emissions. These mitigation measures would not result in any physical changes in the environment and would instead mandate energy, water, and solid waste design features into future project development to reduce GHG emissions. As such, implementation of these measures would have beneficial impacts on reducing GHG impacts and would not result in significant secondary effects.

5.4.7 Hazards and Hazardous Materials

MM-4.9-1 (Pre-Construction Due Diligence) would require thorough environmental due diligence, including Phase I and II Environmental Site Assessments (ESAs), regulatory agency coordination and oversight, avoidance of contaminated areas, and development of contamination management, remediation, and protective measures, to ensure any contamination is identified, addressed, and safely managed before and during site redevelopment. MM-4.9-2 (Hazardous Materials Building Survey and Abatement) requires a certified hazardous building materials survey and the proper abatement and regulatory compliant removal of any asbestos, lead, or universal wastes before any demolition or renovation occurs. MM-4.9-3 (Methane Mitigation) requires surveying proposed development sites for methane sources, conducting soil gas investigations when warranted, and implementing appropriate engineering controls or mitigation systems, such as venting, gas barriers, detection systems, or source removal, to ensure safe building development in areas with potential methane hazards.

These mitigation measures require thorough environmental due diligence studies, avoidance measures, contamination management, remediation, protective measures, and methane mitigation, to reduce potential impacts from hazards and hazardous materials. These mitigation measures would not result in any physical changes in the environment and would instead mandate hazards studies, identification of risks, and implementation of design features for future project development, where appropriate, to reduce potential hazards and hazardous materials impacts. As such, implementation of these measures would have beneficial impacts on reducing hazards and hazardous materials impacts and would not result in significant secondary effects.

5.4.8 Noise

MM-4.13-1 (Construction Noise Management Plan and Best Management Practices) would require project applicant to prepare a Construction Noise Management Plan and implement best management practices for construction equipment. The mitigation measure would require all construction to follow permitted City construction hours and mandates advance written notification to nearby residents, along with coordination for any high noise activities to minimize disruption; would require applicants of future development including stationary mechanical equipment to demonstrate that the equipment will comply with the City's adopted residential exterior and interior noise standards at the nearest affected sensitive receptor locations; and incorporate a site design and operational plan that minimizes noise exposure to adjacent sensitive receptors.

MM-4.13-2 (Operational Noise Design, Performance, and Management) would require applicant to demonstrate through project design, acoustical analysis, and operational planning that operational noise sources associated with the project will comply with the City noise standards and will minimize noise exposure to nearby sensitive receptors. For example, applicants or property managers of mixed-use projects that include commercial tenants, outdoor seating, or other activity likely to generate evening/nighttime noise would be required to implement a complaint response protocol that identifies a responsible contact, provide a means for residents to report persistent operational noise concerns, and document corrective actions.

MM-4.13-3 (Construction Vibration) would require projects using vibration intensive construction equipment near sensitive receptors to prepare a vibration impact evaluation and implement any necessary mitigation to meet FTA vibration thresholds, while also providing advance written notice to nearby properties if thresholds may be exceeded.

These mitigation measures require noise impact studies and the use of noise mitigation equipment, materials, and practices during construction and operations, including but not limited to, noise barriers, mufflers, engine enclosures, enhanced building sound insulation, and limiting construction to hours allowed by the Costa Mesa Municipal Code. Although noise barriers would potentially be installed in the future, noise barriers and other equipment/conditions during construction would be temporary and located within the individual project sites (i.e., not blocking traffic or resulting in significant aesthetic impacts) and would thus not result in significant environmental impacts. These mitigation measures would not result in any physical changes in the environment that could result in significant secondary effects. As such, implementation of these measures would have beneficial impacts on reducing noise impacts and would not result in significant secondary effects.

5.4.9 Population and Housing

MM-4.14-1 (SCAG Coordination and Inclusion in Regional Planning) would require the City to submit this Project's Final PEIR to SCAG for inclusion in regional planning documents, including the RTP/SCS and the RHNA, to ensure that the population, housing and employment growth facilitated by the Project is recognized and incorporated into regional forecasts to allow SCAG and local jurisdictions to better align transportation, housing, and infrastructure planning with the long-term impacts of the Project. This mitigation measure requires communication and coordination with SCAG and other local jurisdictions and would not result in physical changes in the environment that could result in significant secondary impacts. As such, implementation of this mitigation measure would not result in any significant secondary effects.

5.4.10 Tribal Cultural Resources

MM-4.18-1 (Tribal Cultural Resources) requires the City to conduct Tribal consultation under AB 52, review NAHC Sacred Land Files, and implement appropriate avoidance, monitoring, and mitigation measures developed in coordination with traditionally affiliated Tribes whenever a project may affect tribal cultural resources or Native American archaeological materials to minimize impacts to tribal cultural resources. This mitigation measure would require evaluation of potential impacts to tribal cultural resources and implementation of avoidance measures, such as tribal monitoring. The increased vehicle trips from tribal monitoring would be temporary and are considered within the analysis of the Draft PEIR. As such, implementation of this mitigation measure would not result in any significant secondary effects.

5.5 Effects Found Not to Be Significant

State CEQA Guidelines Section 15128 requires that an EIR contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the Draft PEIR. Based on the analysis contained in the Draft PEIR and as listed in Table ES-1 in the Executive Summary of this Draft PEIR, the following environmental effects were found to be less than significant without requiring mitigation: aesthetics, energy, hydrology and water quality, land use and planning, mineral resources, public services, transportation, utilities and service systems, and wildfire.

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6 Alternatives to the Project

6.1 Introduction

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 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" (CEQA Guidelines Section 15126.6[a]). As required by CEQA, this chapter of the Draft PEIR evaluates alternatives to the project and compares the potential impacts of each alternative with the project's potential impacts. As presented in prior sections of this Draft PEIR, the Project would result in significant and unavoidable impacts in the following categories: air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, noise, population and housing, and tribal cultural resources.

Pursuant to Section 15126.6(b) of the CEQA Guidelines, project alternatives should be selected based primarily on the ability of the alternatives to avoid or substantially lessen any significant impacts of the Project, "even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." Additionally, the PEIR need not consider every conceivable alternative to a project, but rather the range of alternatives should be governed by a "rule of reason," such that only those alternatives necessary to permit a reasoned choice are analyzed (CEQA Guidelines Section 15126.69(f)).

In selecting project alternatives for analysis, the potential alternatives should be feasible. CEQA Guidelines Section 15126.6(f)(1) states:

> Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries..., and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site...

CEQA Guidelines require the analysis of a "No Project" Alternative and an evaluation of alternative location(s) for the project, if feasible. Of the alternatives analyzed in the EIR, an environmentally superior alternative is to be designated. If the environmentally superior alternative is the No Project Alternative, then the EIR shall identify an environmentally superior alternative among the other alternatives (CEQA Guidelines Section 15126.6(e)(2).

As such, this Draft PEIR includes the analysis of the following five alternatives to the Project:

- Alternative A – No Project/Buildout According to Adopted Plans
- Alternative B – Housing Element Sites Only
- Alternative C – Reduced Density of Non-Housing Element Sites
- Alternative D – No Rezone on Non-Housing Element Industrial Sites and Safety Zone 3

6.2 Project Objectives

CEQA Guidelines Section 15124(b) requires an EIR to include a statement of objectives sought by the Project, including the underlying purpose of the Project. As described in Chapter 3, Project Description, of this Draft PEIR, the following Project Objectives have been established and will aid decision-makers in their review of the Project, the Project alternatives, and associated environmental impacts.

1. Implement many of the required programs of the City's 2021-2029 Housing Element and accommodate the City's Regional Housing Needs Allocation (RHNA), as required by State law.
2. Achieve Housing Element certification, as required by the State.
3. Implement the rezoning of Measure K sites, as allowed by Measure K (2022), including the rezoning of Housing Element sites, as required by State law.
4. Support City Council's goal to diversify, stabilize, and increase housing to reflect community needs.
5. Amend the Zoning Code to be consistent with allowed densities, taking into account State and Federal law and to better facilitate the development of housing.
6. Prepare objective design standards consistent with the community's vision for citywide multifamily and mixed-use projects.
7. Prioritize new housing near jobs and amenities, while reducing potential impacts to existing residential neighborhoods, in order to revitalize existing commercial and industrial areas with the introduction of new housing and mixed-use developments.

6.3 Summary of Environmental Impacts

As presented in prior chapters of this Draft PEIR, the Project would result in significant and unavoidable impacts after implementation of all mitigation measures, as summarized in Table 6-1 below.

Table 6-1. Summary of Environmental Impacts

Environmental Topic	Threshold	Mitigation Measures	Significance Determination
4.1. Aesthetics	4.1-1	MM-4.1-1	**Significant and Unavoidable**
4.2. Agriculture and Forestry	4.2-1	No Feasible MM	**Significant and Unavoidable**
	4.2-2	N/A	Less Than Significant
	4.2-3	N/A	No Impact
4.3. Air Quality	4.3-1	MM-4.3-1 and MM-4.3-11	**Significant and Unavoidable**
	4.3-2	MM-4.3-1 and MM-4.3-11	**Significant and Unavoidable**
	4.3-3	MM-4.3-1 and MM-4.3-11	**Significant and Unavoidable**
	4.3-4	N/A	Less Than Significant
4.4. Biological Resources	4.4-1	MM-4.4-1 through MM-4.4-6	**Significant and Unavoidable**
	4.4-2	N/A	Less Than Significant
	4.4-3	N/A	No Impact
4.5. Cultural Resources	4.5-1	MM-4.5-1	**Significant and Unavoidable**
	4.5-2	MM-4.5-2	**Significant and Unavoidable**
	4.5-3	N/A	Less Than Significant

Table 6-1. Summary of Environmental Impacts

Environmental Topic	Threshold	Mitigation Measures	Significance Determination
4.6. Energy	4.6-1	N/A	Less Than Significant
4.7. Geology and Soils	4.7-1	MM-4.7-1	**Significant and Unavoidable**
4.8. Greenhouse Gas Emissions	4.8-1	MM-4.8-1 through MM-4.8-5	**Significant and Unavoidable**
	4.8-2	MM-4.8-1 through MM-4.8-5	**Significant and Unavoidable**
4.9. Hazards and Hazardous Materials	4.9-1	MM-4.9-1 through MM-4.9-3	**Significant and Unavoidable**
	4.9-2	N/A	**Significant and Unavoidable**
	4.9-3	N/A	**Significant and Unavoidable**
	4.9-4	MM-4.9-1	**Significant and Unavoidable**
	4.9-5	N/A	Less Than Significant
	4.9-6	N/A	Less Than Significant
4.10. Hydrology and Water Quality	4.10-1	N/A	Less Than Significant
	4.10-2	N/A	Less Than Significant
	4.10-3	N/A	Less Than Significant
	4.10-4	N/A	Less Than Significant
	4.10-5	N/A	Less Than Significant
4.11. Land Use and Planning	4.11-1	N/A	Less Than Significant
4.12. Mineral Resources	4.12-1	N/A	Less Than Significant
	4.12-2	N/A	No Impact
4.13. Noise	4.13-1	MM-4.13-1 through MM-4.13-4	**Significant and Unavoidable**
	4.13-2	MM-4.13-1 through MM-4.13-4	**Significant and Unavoidable**
	4.13-3	N/A	Less Than Significant
4.14. Population and Housing	4.14-1	MM-4.14-1	**Significant and Unavoidable**
	4.14-2	N/A	Less Than Significant
4.15. Public Services	4.15-1(Fire, Police, Schools, and Libraries)	N/A	Less Than Significant
4.16. Recreation	4.16-1	No Feasible MM	**Significant and Unavoidable**
	4.16-2	No Feasible MM	**Significant and Unavoidable**
4.17. Transportation	4.17-1	N/A	Less Than Significant
	4.17-2	N/A	Less Than Significant
4.18. Tribal Cultural Resources	4.18-1	MM-4.18-1 and MM 4.5-2	**Significant and Unavoidable**
4.19. Utilities and Service Systems	4.19-1	N/A	Less Than Significant
	4.19-2	N/A	Less Than Significant
	4.19-3	N/A	Less Than Significant
	4.19-4	N/A	Less Than Significant

Notes: All "Significant and Unavoidable" impact determinations would also cumulatively considerable, while all "No Impact" or "Less Than Significant" impact determinations would not be cumulatively considerable, unless otherwise noted.

Consistent with CEQA, the analysis presented in this chapter considers a reasonable range of alternatives to the Project and evaluates their comparative environmental impacts. The selection of alternatives and their discussion must "foster

informed decision making and public participation" (CEQA Guidelines Section 15126.6(a)). Therefore, this chapter identifies potential alternatives to the Project and evaluates them, as required by CEQA.

The inclusion of an alternative in an EIR does not constitute definitive evidence that the alternative is in fact "feasible." The final decision regarding the feasibility of alternatives lies with the decision maker(s) for a given project, who must make the necessary findings addressing the potential feasibility of an alternative, including whether it meets most of the basic project objectives (provided in Section 6.2, Project Objectives) or reduces the severity of significant environmental effects pursuant to CEQA (California Public Resources Code, Section 21081; see also CEQA Guidelines Section 15091).

6.4 Alternatives Considered and Eliminated During the Project Planning Process

CEQA Guidelines Section 15126.6(c) recommends that an EIR identify any alternatives that were considered by the lead agency but were rejected as infeasible and briefly explain the reasons for their rejection. 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 a project, infeasibility, or inability to avoid significant environmental impacts.

With respect to the feasibility of potential alternatives to a project, CEQA Guidelines Section 15126.6(f)(1) states the following:

> Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries… and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent).

In determining an appropriate range of Project alternatives to be evaluated in this EIR, one alternative for the Project was considered but ultimately rejected from further analysis in the Draft EIR, consistent with Section 15126.6(c) of the CEQA Guidelines. A description of the potential alternatives considered, but not carried forward, and the rationale for rejection is provided below.

6.4.1 Removal of Prime Farmland and Farmland of Statewide Importance Sites

In accordance with CEQA Guidelines Section 15126.6(c), the following provides a brief description of an alternative Project considered and rejected as infeasible, along with the reasons underlying the lead agency's determination.

Under this potential alternative, two parcels designated as Prime Farmland and Farmland of Statewide Importance by the California Department of Conservation Farmland Mapping and Monitoring Program would be removed from the Planning Area. The reduction in the Planning Area would eliminate the significant and unavoidable impacts associated with the Project's conversion of these farmlands to non-agricultural uses. As described in Section 4.2, Agriculture and Forestry Resources, of this Draft PEIR, the Project would result in a significant impact with no feasible mitigation measures to reduce the direct loss of Prime Farmland and Farmland of Statewide Importance within the city. Requirements to partially mitigate for the loss of farmland are typically achieved through in lieu fees

or direct purchases of conservation easements on similar land. However, the City and Orange County do not currently have an agricultural mitigation program to mitigate impacts to agricultural lands. Thus, the City and Orange County do not have mechanisms currently available to mitigate the loss of Important Farmland. Therefore, the City considered removing these parcels from the Planning Area and the proposed MUOD would not apply to these sites such that the agricultural uses can continue operations. All other impacts would be similar to the Project with the proposed MUOD rezoning applied to the rest of the Planning Area.

However, these two parcels are Housing Element sites identified in the sites inventory (i.e., Housing Sites 138 and 142) at the time of the release of the NOP.[1] As described in Chapter 3, Project Description, of this Draft PEIR, in order to accommodate the City's mandated fair share of housing needs (i.e., RHNA) and a buffer, the Housing Element identifies Housing Element sites at specific densities (ranging between 40-90 dwelling units per acre [du/ac]) and capacities and requires that they be rezoned to allow for the development of housing. Furthermore, in the determining the buildout of the Project, Housing Element sites are required under California Government Code Section 65583.2(h) to provide a minimum amount of residential floor area and achieve a minimum residential density, such that projects consisting of 100 percent of residential uses would be permitted. Note that such requirements do not preclude the possibility of a mixed-use project on a Housing Element site, as long as it is compliant with State law, including the requirement to provide at least 50 percent of the total floor area as residential uses at a minimum density of 20 du/ac. Given these site restrictions as Housing Element sites, the two parcels would be required to be redeveloped in accordance with State Housing Law.

These parcels cannot be removed from the proposed Project unless they are both removed from the Housing Element sites inventory and Measure K. These are key parcels in the sites inventory to achieve higher-density housing. Removal of these properties or any substantial changes to the sites inventory would require a significant identification of new sites for RHNA and further delay the City's ability to meet State-mandated deadlines for compliance with State law.

According to CEQA Guidelines Section 15126.6(b), the purpose of considering alternatives to the Project is to identify alternatives that are capable of avoiding or substantially lessening any significant effects of the Project. Due to its inability to feasibly reduce impacts to agriculture and forestry resources, even if such reductions would reduce or eliminate significant impacts, this alternative was rejected and not further analyzed in this Draft PEIR.

6.5 Alternatives Selected for Further Analysis

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 include the following:

- Alternative A – No Project/Buildout According to Adopted Plans
- Alternative B – Housing Element Sites Only
- Alternative C – Reduced Density of Non-Housing Element Sites
- Alternative D – Rezone on Non-Housing Element Industrial Sites and Safety Zone 3

Pursuant to Section 15126.6(d) of the CEQA Guidelines, each alternative is evaluated in sufficient detail to determine whether the overall environmental impacts would be less than, similar to, or greater than the

[1] As of March 17, 2026, one of the two parcels designated as Prime Farmland and Farmland of Statewide Importance was removed from the Housing Element sites inventory. The other designated parcel remains within the Planning Area.

corresponding impacts of the Project. Each alternative is also evaluated to determine whether the Project objectives would be substantially attained.

6.5.1 Alternative A – No Project/Buildout According to Adopted Plans

6.5.1.1 Description of the Alternative

Section 15126.6(e) of the CEQA Guidelines requires that an EIR evaluate the specific alternative of "no project" along with its impact. As stated in this section of the CEQA Guidelines, the purpose of describing and analyzing a "no project" alternative (Alternative A) is to allow decision makers to compare the impacts of approving a project with the impacts of not approving a project. As specified in CEQA Guidelines Section 15126.6(e)(3)(A), when a project is the revision of an existing land use or regulatory plan or policy or an ongoing operation, the no project alternative will be the continuation of the plan, policy, or operation into the future. Therefore, Alternative A, as required by the CEQA Guidelines, would analyze the effects of development consistent with implementation of the General Plan and existing land use/zoning.

Under Alternative A, the Planning Area would continue to develop in accordance with the City's General Plan existing land use designations and zoning, as well as in accordance with General Plan Amendments and Specific Plans that have occurred since the adoption of the General Plan. The Planning Area is comprised of 1,079 parcels across the city. Under existing conditions, these parcels contain existing General Plan land use designations and zoning designations with maximum allowable densities and intensities, as summarized in Table 6-2, Maximum Development Intensity According to Adopted Plans, and further detailed in Appendix B, Buildout Methodology. Table 6-2 is provided to illustrate the land use designations and zoning that currently allow for residential development. As shown, the majority of the parcels in the Planning Area are not currently intended for residential development.

Table 6-2. Maximum Development Intensity According to Adopted Plans

Land Use Designation	Maximum Allowable Density (units per acre)	Maximum Allowable Intensity (Floor to Area Ratio [FAR])
General Plan Land Use Designation		
Commercial Center (CC)	—	0.25 to 0.75
Commercial-Residential (CR)	12 to 17.4	0.20 to 0.40
Cultural Arts Center (CAC)	— [a]	1.77
General Commercial (GC)	—	0.20 to 0.75
High-Density Residential (HDR)	20	—
Industrial Park (IP)	—	0.20 to 0.75
Light Industrial (LI)	—	0.15 to 0.75
Medium-Density Residential (MDR)	12	—
Neighborhood Commercial (NC)	—	0.15 to 0.75
Regional Commercial (RC)	—	0.652 to 0.89
Urban Center Commercial (UCC)	20 or 80 [a]	0.48 to 0.79
Zoning Designation		
Administrative and Professional District (AP)	—	— [b]
Commercial Limited District (CL)	—	— [b]
General Business District (C2)	—	— [b]
General Industrial (MG)	—	— [b]
Industrial Park (MP)	—	— [b]
Institutional and Recreational District (I&R)	—	— [b]
Local Business District (C1)	—	— [b]
Multiple-Family Residential District, High Density (R2-HD)	14.52	—
Multiple-Family Residential District, Medium Density (R2-MD)	12	—
Planned Development Commercial (PDC)	—	— [b]
Planned Development Industrial (PDI)	—	— [b]
Planned Development Residential—High Density (PDR-HD)	Up to 20	—
Planned Development Residential—Medium Density (PDR-MD)	Up to 12	—
Shopping Center District (C1-S)	—	— [b]
Town Center District (TC)	—	— [b]

Sources: Appendix B, Buildout Methodology. City of Costa Mesa 2025a; City of Costa Mesa 2025b.
Note: FAR = Floor Area Ratio; -- = Not Applicable.
[a] Refer to the North Costa Mesa Specific Plan for detailed density for specific sites.
[b] Refer to the General Plan for the applicable land use designation as shown in Table 13-69 of the Zoning Code unless a deviation is allowed by the General Plan.

In order to compare the buildout of Alternative A to the Project, the existing maximums under General Plan land use designations and zoning residential and non-residential square footage (for both Alternative A and the Project) are considered in combination with the "realistic capacity" methodology used under the proposed Project (see Appendix B, Buildout Methodology, for more discussion). As a result, the Alternative A would allow for up to 1,138 units and 19,663,251 square feet of non-residential uses, as shown in Table 6-3, below.

Table 6-3. Comparison of Planning Area Buildout Projections and Alternative A Buildout Projections

Category	Project Buildout Projections	Alternative A Buildout Projections	Difference in Buildout *(Alternative A – Project)*
Population[1]	52,872	2,912	**- 49,960**
Housing (DU)	22,030	1,138	**- 20,892**
Non-Residential Square Feet	17,306,003	19,663,251	**+2,357,248**

Sources: Appendix B, Buildout Methodology. See Table 4.14-5, within Section 4.14, Population and Housing, of this Draft PEIR.
Notes: Negative number is represented by parenthesis "(number)."
[1] Baseline population for the Planning Area reflects population estimate (2.56 persons per household) for the City as recorded by the U.S. Census Bureau's 2020-2024 American Community Survey (U.S. Census 2026).

As shown in Table 6-3, under Alternative A, there would be approximately 49,960 fewer residents, 20,892 fewer dwelling units, and 2,357,248 more non-residential square feet within the Planning Area when compared to Project buildout conditions.

6.5.1.2 Ability to Meet Project Objectives

Alternative A would not meet or would have a substantially reduced ability to meet all Project Objectives. In order to accommodate the City's mandated fair share of housing needs (i.e., RHNA) and a buffer, the Housing Element identifies sites with specific densities and requires that they be rezoned to allow for the development of housing. The Project would rezone all Measure K sites, implementing Housing Element Programs 3C, 3D, and 3N; apply the amended MUOD, implementing Housing Element Program 3G; and amend the City's Zoning Code, implementing Housing Element Programs 2B, 2E, 2F, 2H, 2I, 2J, 2K, 2M, 2N, 2O, 2P, 3C, 3D, 3E, 3F, 3H, 3I, 3J, 3K, 3S, 4E, and 4G (see Chapter 3, Project Description, for further detail). Although some additional housing development would occur from the buildout of the City's General Plan, Alternative A would not implement the identified Housing Element programs designed to accommodate the City's RHNA with required residential capacity needed, and would have a substantially reduced ability to meet Objective 1.

To obtain and maintain Housing Element certification, the Housing Element identifies sections of the City's Zoning Code that require amendments to comply with State law requirements, remove regulatory impediments or barriers to housing development, and streamline the housing development process. Under Alternative A, the City would not implement the rezoning of Housing Element sites. As such, the City would not meet Objective 2.

Similarly, Alternative A would not implement the rezoning of Measure K sites with the applied MUOD, implement proposed amendments to the Zoning Code to be consistent with allowed densities, or adopt the proposed Objective Design Standards for multifamily and mixed-use projects. As a result, Alternative A would not meet Objectives 3, 5, and 6.

Alternative A would continue buildout projections under the City's existing General Plan land use and zoning, which would include additional housing development. However, Alternative A would not incorporate the proposed rezoning recommendations or implement the required programs identified in the City's Housing Element to diversify, stabilize, and increase housing, nor would it prioritize new housing near jobs and amenities. Thus, Alternative A would have a substantially reduced ability to meet Objective 4 and Objective 7.

6.5.1.3 Comparison of the Effects of Alternative A to the Project

Alternative A would eliminate all Project-related environmental impacts associated with the buildout of the Project. Therefore, all mitigation measures associated with the Project, as set forth in this Draft PEIR, would no longer be required or applicable.

Aesthetics

Under Alternative A, development would occur pursuant to the existing General Plan land use designations and zoning code. The Project would amend the MUOD, establish Citywide Multifamily Residential and Mixed-Use Objective Design Standards, and amend the Zoning Code consistent with the Housing Element, and impacts to aesthetics would be less than significant. The amended MUOD would improve predictability and consistency in visual outcomes along major corridors in the city for future residential and mixed-use projects. Alternative A would not incorporate the benefits of the amended MUOD and Zoning Code and proposed Objective Design Standards. As detailed in Table 6-3, Alternative A would result in substantially less housing when compared to the Project, and approximately 2.3 million more non-residential square footage compared to the Project. Overall, Alternative A would result in a net reduction in development potential. Furthermore, this alternative would not change the existing maximum allowable building heights. Although taller buildings (i.e., buildings over 30 feet) with the potential to result in shade/shade impacts on adjacent residential uses may be developed in the future under existing land use and zoning conditions, building heights in general throughout the Planning Area would likely remain lower, particularly in areas outside of specific and urban plan areas, where the maximum allowable building heights are generally around 30 feet. This would be in keeping with the generally low-profile nature of existing development throughout the City (particularly in areas south of I-405). Given this and the city's location within an urbanized area, Alternative A would not conflict with applicable zoning and other regulations governing scenic quality as the alternative would facilitate the growth potential under existing land use designations and zoning. Due to the reduced scope of development, Alternative A would **eliminate the Project's significant and unavoidable** impact related to conflicts with existing regulations governing scenic quality. Thus, the aesthetic impact under Alternative A would be **less than** the Project.

Agriculture and Forestry Resources

Neither Alternative A nor the Project would conflict with existing zoning for agricultural use, or with a Williamson Act contract; or involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. As such, these impacts under Alternative A would be **similar to** the Project.

As discussed in Section 4.2, Agriculture and Forestry Resources, of this Draft PEIR, the Project would result in significant unavoidable impacts related to the conversion and/or loss of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Buildout under the Project is anticipated to result in the conversion of the City's last agricultural land consisting of Prime Farmland and Farmland of Statewide Importance. Under Alternative A, these agricultural parcels within the Planning Area would not be rezoned to non-agricultural use and would not result in the redevelopment of agricultural parcels. Therefore, under Alternative A, impacts related to agriculture and forestry resources would **eliminate the Project's significant and unavoidable** impact and would be **less than** the Project.

Air Quality

As discussed in Section 4.3, Air Quality, of this Draft PEIR, the Project would result in significant unavoidable impacts related to the potential to conflict with or obstruct implementation of the applicable air quality plan; increases of criteria air pollutants from construction and operation of future development facilitated by the Project; and exposure of sensitive receptors to substantial pollution concentrations. The Project would result in less than significant impacts related to other emissions.

With regard to operational impacts associated with nonattainment pollutants, in general, continuance of the adopted plans under Alternative A is accounted for in the attainment demonstration contained within the state implementation plan and would therefore not cause a cumulatively significant impact on the ambient air quality. Alternative A would result in the continued buildout of the General Plan. Given that the existing General Plan was considered in the preparation of the latest Air Quality Management Plan (AQMP), Alternative A would not conflict with or obstruct implementation of the applicable air quality plan; thus, implementation of Alternative A would **eliminate the significant and unavoidable** impacts associated with consistency with the applicable AQMP.

Similarly, increases of criteria air pollutants from construction and operation of future development, exposure of sensitive receptors to substantial pollution concentrations, and other emissions would be reduced due to the overall reduction in population and housing under this alternative (see Table 6-3). Although this alternative would result in additional non-residential square feet, the difference would represent an 13 percent increase when compared to the Project.[2] This is not a substantial increase when compared to the residential (and associated population) buildout reduction of 94 percent.[3] Moreover, as with the amended MUOD, the existing land use regulations would allow parcels to develop land uses as currently permitted by the underlying base zone. In summary, Alternative A would result in less development potential than anticipated under the Project, resulting in less pollutants associated with construction activities and less operational emissions. Due to the reduced scope of development under Alternative A, impacts would remain significant and unavoidable related to cumulatively considerable net increase of criteria pollutants, exposure to sensitive receptors, and be **less than** the Project.

Biological Resources

As discussed in Section 4.4, Biological Resources, of this Draft PEIR, the Project would result in significant unavoidable impacts related to substantial adverse effect on plant and wildlife species identified as a sensitive or special status species. The Project would have less than significant impacts on sensitive natural communities and would have no impact related to substantial interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors.

Future development under the Project may result in adverse effects on plant and wildlife species that are identified as sensitive or special status species. Even with implementation of mitigation measures MM-4.4-1 through MM-4.4-6, the Project would have significant and unavoidable impacts related to special status plant and wildlife species known to occur within Planning Area. As described above, Alternative A would result in an overall reduction in development potential as compared to the Project. Although development and redevelopment activities would still occur under Alternative A, the Project would facilitate an increase in development activity in areas where special status species are known to occur. Thus, impacts under Alternative A relative to biological resources would be **less than** the Project.

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2 (19,663,251 - 17,306,003)/ 17,306,003 = 0.136 or 13 percent
3 (1,138 - 22,030)/ 22,030 = -0.948 or -94 percent

Under the Project, impacts are less than significant with regards to sensitive natural communities and the movement of any native resident or migratory fish or wildlife species. Alternative A would result in similar impacts given the buildout nature of the city and lack of impacts to natural open space areas. However, the reduced scope and scale of redevelopment under Alternative A would avoid potential impacts compared to the Project, and impacts would be **less than** the Project.

Cultural Resources

As described in Section 4.5, Cultural Resources, the Project would result in significant and unavoidable impacts to historical and archaeological resources, even with the implementation of existing regulations and MM-4.5-1 and MM-4.5-2. The Project would result in less than significant impacts related to human remains. Similar to the Project, Alternative A would result in development that could have the potential to result in significant impacts to cultural resources. The Project would facilitate the redevelopment of parcels that would not occur under Alternative A. The Project may increase the intensity of development/redevelopment activity in the Planning Area, resulting in a higher potential to damage or destroy a historical or archaeological resource. Under Alternative A, the scope of the development would be reduced when compared to the Project, which would result in reduced potential to impact cultural resources. As such, impacts to cultural resources under Alternative A would be **less than** the Project.

Energy

As described in Section 4.6, Energy, of this Draft PEIR, the Project would result in less-than-significant impacts related to wasteful, inefficient, or unnecessary consumption energy resources. Similar to the Project, implementation of Alternative A would increase the demand for electricity, natural gas, gasoline, and diesel consumption during construction and operation of future development in accordance with approved plans. Under Alternative A, the scope of planned development would be less than the Project, resulting in reduced consumption of energy resources under Alternative A. Thus, impacts under Alternative A related to wasteful, inefficient, or unnecessary consumption of energy resources during construction or operation would be **less than** those anticipated under the Project.

Geology and Soils

As described in Section 4.7, Geology and Soils, of the Draft PEIR, even with implementation of mitigation measure MM-4.7-1, the Project would result significant and unavoidable impacts related to the destruction of a unique paleontological resource or site or unique geologic feature. Alternative A would result in future development associated with the buildout of the City's General Plan and other adopted plans. Any new development under Alternative A would be site-specific and would be exposed to existing geologic and soil conditions, including paleontological resources, that would be unique to that property. However, because development/redevelopment activity would be reduced under Alternative A, potential impacts would be **less than** those anticipated under the Project.

Greenhouse Gas Emissions

As described in Section 4.8, Greenhouse Gas Emissions, of the Draft PEIR, even with implementation of mitigation measures MM-4.8-1 through MM-4.8-5, the Project would result significant and unavoidable impacts related to the generation of GHGs. Similar to the Project, Alternative A would generate GHG emissions with the buildout of future development, and these impacts would be significant and unavoidable. Under Alternative A, the scope of planned development would be less than the Project, resulting in the generation of less GHG emissions than the Project. Therefore, impacts under Alternative A related to the generation of GHGs would be **less than** the Project. The Project

would also conflict with applicable plans, policies, or regulations adopted for the purposes of reducing GHG emissions, and impacts would be significant and unavoidable. Under Alternative A, no change to existing regulations would occur under the implementation of the City's existing General Plan. Thus, impacts associated with Alternative A related to consistency with the adopted plans would be **less than** the Project.

Hazards and Hazardous Materials

As described in Section 4.9, Hazards and Hazardous Materials, even with implementation of mitigation measures MM-4.9-1 through MM-4.9-3, the Project would result in significant and unavoidable impacts related to the routine transport, use, or disposal of hazardous materials; the creation of a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions; hazardous emissions or handling of hazardous materials within one-quarter mile of existing or proposed schools; and sites included on a list of sites with hazardous materials compiled pursuant to Government Code Section 65962.5. All other potential impacts related to hazards and hazardous materials would be less than significant under the Project.

As discussed in the Section 4.9.1.2, Existing Environmental Conditions, of this Draft PEIR, there are multiple sites within the Planning Area that have been identified as contaminated sites. In addition, there are multiple sites identified in the Planning Area that contain or are near oil and gas wells. Given that Alternative A would continue the implementation of the existing General Plan and other approved planning documents, there is still a potential for future development/redevelopment to occur on contaminated sites or on parcels that contain or are near oil and gas wells. Furthermore, Alternative A would not implement land use changes to allow for future residential and mixed-use development on existing industrial parcels where hazardous materials associated with existing/former industrial uses may be present. Therefore, under Alternative A, impacts related to hazards and hazardous materials would be **less than** the Project.

Hydrology and Water Quality

As discussed in Section 4.10, Hydrology and Water Quality, of this Draft PEIR, the Project would result in less than significant impacts related to water quality standards, groundwater supplies, existing drainage patterns, the risk of pollutant release due to inundation, and consistency with a water quality control plan. Under Alternative A, less buildout potential would occur due to the reduced residential and mixed-use development/redevelopment when compared to the Project. As such, impacts under Alternative A would be **less than** those anticipated under the Project.

Land Use and Planning

As discussed in Section 4.11, Land Use and Planning, of this Draft PEIR, the Project would result in less than significant impacts associated with the potential to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Alternative A would implement the existing General Plan and would not conflict with any land use plan, policy, or regulation. However, without the implementation of the Housing Element, Alternative A would conflict with State Housing Law and the City would not accommodate its RHNA) goals required for the 6th Cycle. Therefore, impacts associated with conflicts with adopted plan under Alternative A would be **greater than** the Project.

Mineral Resources

As discussed in Section 4.12, Mineral Resources of this Draft PEIR, the Project would result in less than significant impacts related to the loss of availability of known mineral resource that would be of value to the region and the

residents of the state or and no impact related to the loss of a locally important mineral resource recovery site. Under Alternative A, potential future development would occur in accordance with the General Plan and other approved planning documents, similar to Project conditions. Thus, impacts to mineral resources under Alternative A, would be **similar** to the Project.

Noise

As discussed in Section 4.13, Noise, of this Draft PEIR, the Project would result in significant and unavoidable impacts related to temporary construction noise, permanent traffic noise, and proximity of construction vibration to sensitive uses. Impacts related to operational noise would be less than significant with mitigation. Impacts related to excessive noise within the Airport Environs Land Use Plan (AELUP) for John Wayne Airport would be less than significant. Alternative A would involve construction and operational noise impacts; however, the scope of development potential under Alternative A would be less than the Project. Therefore, Alternative A would result in a reduced amount of noise impacts. As such, impacts related to noise and vibration under Alternative A would **eliminate the Project's significant and unavoidable** impact and would be **less than** the Project.

Population and Housing

As discussed in Section 4.14, Population and Housing, of this Draft PEIR, the Project would result in significant and unavoidable impacts associated with exceedance in population growth from future development facilitated by the Project that was not anticipated in adopted plans even with the implementation of mitigation measure MM-4.14-1. Impacts related to the displacement of housing and people would be less than significant under the Project. Under Alternative A, the Planning Area would continue to be built out under the existing zoning and General Plan land use designations, as set forth under the adopted plans. Thus, when compared to the Project, Alternative A would **eliminate the Project's significant and unavoidable** impact related to substantial unplanned population growth. As such, impacts under Alternative A related to substantial unplanned population growth would be **less than** the Project.

Public Services

As discussed in Section 4.15, Public Services of this Draft PEIR, the Project would result in less than significant impacts for fire protection services, police protection services, school services, and library services. Given the reduced scope of development potential and corresponding reduction in population when compared to the Project, impacts for fire protection services, police protection services, school services, and library services under Alternative A would be **less than** the Project.

Recreation

As discussed in Section 4.16, Recreation of this Draft PEIR, the Project would 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. Further, the Project would create future capacity or service level problems, and result in substantial adverse physical impacts associated with the provision of 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 parks. Given the reduced scope of development potential under Alternative A when compared to the Project and corresponding reduction in population and housing, impacts under Alternative A related to park services and physical deterioration of facilities

would remain significant and unavoidable. The potential recreation impacts under Alternative A would be **less than** the Project.

Transportation

As discussed in Section 4.17, Transportation, of this Draft PEIR, Project-related impacts related the potential to conflict with CEQA Guidelines Section 15064.3(b) and potential conflicts with an applicable plan, ordinance, or policy addressing circulation, transit, roadways, bicycles, and pedestrian activities would be less than significant. Under the proposed Project, the vehicle miles traveled (VMT) per service population would be reduced due to the increased density of buildout and the mix of uses, which would bring people closer to jobs. As Alternative A would result in 20,892 fewer dwelling units compared to the Project, Alternative A would not be as effective at reducing VMT per service population. Therefore, given the reduction of residential development when compared to the Project, impacts related to VMT under Alternative A would be **more than** the Project.

Tribal Cultural Resources

As described in Section 4.18, Tribal Cultural Resources, of this Draft PEIR, potential impacts to tribal cultural resources were found to be significant and unavoidable. Under the Project, the anticipated future development and redevelopment activity would likely result in an increase in potential ground disturbing activities in the Planning Area (i.e., site preparation, grading, trenching for utilities, etc.). Ground-disturbing activities associated with the buildout of existing planning documents would still occur under Alternative A and could still result in significant impacts to tribal cultural resources. Therefore, impacts resulting in a substantial adverse change in the significance of a tribal cultural resource under this alternative would be **similar** the Project.

Utilities and Service Systems

As discussed in Section 4.19, Utilities and Service Systems, of this Draft PEIR, the Project would result in less than significant impacts related to relocation or construction of new or expanded facilities, water supply, capacity of wastewater treatment services, and the generation of solid waste. Alternative A would require less potable water, generate less wastewater, and generate less solid waste when compared to the Project due to the reduced potential for residential and mixed-use development/redevelopment (and reduced population). As such, impacts under Alternative A would be **less than** the Project.

6.5.2 Alternative B – Housing Element Sites Only

6.5.2.1 Description of the Alternative

Under Alternative B, the anticipated residential and mixed-use development buildout associated with implementation of the MUOD would only occur for Housing Element sites. Other Measure K sites (non-Housing Element sites) would remain as-is and would retain underlying land use and zoning. Therefore, Alternative B would reduce the Planning Area from 1,079 parcels to 94 parcels and no rezoning or additional growth potential would be assumed on the non-Housing Element sites.[4]

[4] Housing Element sites reflect the Sites Inventory at the time of the Notice of Preparation publication (November 2025) and is subject to change. Following City Council action on March 17, 2026 and April 7, 2026, to remove 18 Housing Element sites and add 2 sites, the City of Costa Mesa has made "no net loss" findings and is in the process of identifying sites to be added to the Housing Element with sufficient capacity to meet the City's RHNA. All properties being considered are Measure K sites, within the Planning Area, and are already being studied (see Chapter 3, Project Description, of this PEIR).

Table 6-4. Comparison of Project Planning Area Buildout Projections and Alternative B Buildout Projections

Category	Project Buildout Projections	Alternative B Buildout Projections	Difference in Buildout *(Alternative B – Project)*
Population[1]	52,872	15,071	**-37,801**
Housing (DU)	22,030	5,887	**-16,143**
Non-Residential Square Feet	17,306,003	3,663,476	**-13,642,527**

Sources: Appendix B, Buildout Methodology. See Table 4.14-5, within Section 4.14, Population and Housing, of this Draft PEIR.
Notes: Negative number is represented by parenthesis "(number)."
1 Baseline population for the Planning Area reflects population estimate (2.56 persons per household) for the City as recorded by the U.S. Census Bureau's 2020-2024 American Community Survey (U.S. Census 2026).

As shown above in Table 6-4, Alternative B would result in 5,887 units and 3,663,476 non-residential square feet. Under this alternative, there would be 16,143 fewer units (including 37,801 fewer residents) and 13,642,527 fewer non-residential square feet when compared to the Project buildout conditions.

6.5.3.2 Ability to Meet Project Objectives

Alternative B would have a reduced ability or substantially reduced ability to meet some of the Project Objectives. Although new residential and mixed-use development would be facilitated under Alternative B, this alternative would only rezone Housing Element sites. Therefore, Alternative B would have a reduced ability to implement the required programs identified in the City's Housing Element. As shown in Table 6-4, Alternative B would result in substantially less housing as a result the proposed rezoning of Housing Element sites. Alternative B would result in 5,887 units, which is well below the RHNA and any identified buffer capacity. This is due to the fact that the buildout methodology used for the proposed MUOD assumed different calculations for specified sites including a realistic capacity (see Appendix B to this Draft PEIR). Although this alternative would facilitate more housing to achieve the City's regional housing goals, Alternative B would have a substantially reduced ability to meet Objective 1.

The Project would rezone all Measure K sites, implement Housing Element Programs 3C, 3D, and 3N; apply the amended MUOD, implementing Housing Element Program 3G; and amend the City's Zoning Code, implementing Housing Element Programs 2B, 2E, 2F, 2H, 2I, 2J, 2K, 2M, 2N, 2O, 2P, 3C, 3D, 3E, 3F, 3H, 3I, 3J, 3K, 3S, 4E, and 4G (see Chapter 3, Project Description, for further detail). Similar to the discussion above, whereas Alternative B would only rezone Housing Element sites, the implementation of the full scope of Housing Element programs (Objectives 2, 4, and 7) would be substantially reduced to 94 parcels as compared to 1,079 parcels within the Project's Planning Area. Moreover, Alternative B would not implement the rezoning of all Measure K sites with the applied MUOD, and therefore, would not be meet Objective 3.

Two objectives (Objectives 5 and 6) would be met by Alternative B. Under this alternative, implementation of proposed amendments to the Zoning Code to be consistent with allowed densities in the Housing Element and the implementation of Objective Design Standards for multifamily and mixed-use projects would not be impeded by the limited scope of this alternative.

6.5.3.3 Comparison of the Effects of Alternative B to the Project

Alternative B would eliminate the environmental impacts associated with proposed rezoning of non-Housing Element sites and would result in a reduced buildout compared to the Project. However, the mitigation measures set forth in this Draft PEIR would still be applicable to potential mixed-use development under Alternative B.

Therefore, as noted below, although Alternative B could reduce potential environmental impacts to select environmental topics, all of the mitigation measures set forth in this Draft PEIR would continue to be required and relevant for the implementation of Alternative B.

Aesthetics

The Project would amend the MUOD, establish Citywide Multifamily Residential and Mixed-Use Objective Design Standards, and amend the Zoning Code consistent with the Housing Element, and impacts to aesthetics would be less than significant. The amended MUOD would improve predictability and consistency in visual outcomes along major corridors in the city for future residential and mixed-use projects. Similar to the Project, Alternative B would achieve these components of the project description, albeit to a lesser extent. Moreover, proposed rezoning would occur only on Housing Element sites within the Planning Area, which would represent a substantial reduction in the scope and scale of potential redevelopment when compared to the Project. However, buildout of taller buildings on Housing Element sites still has the potential to result in significant shade/shade impacts to surrounding residential uses, particularly on several Housing Element sites north of I-405 (such as APNs 412-482-01 and 412-481-07 on the north side of South Coast Drive, which are adjacent to single-family residences to the north) and south of I-405 in several areas along Harbor and Newport Boulevards adjacent to single-family and lower-profile multifamily residences. Therefore, Alternative B still has the potential to conflict with regulations governing scenic quality due to significant shade/shadow impacts. MM-4.1-1 would not be feasible for Housing Element sites, as potential design changes to reduce shade/shadow impacts (e.g., increased setbacks, stepbacks, and building height reductions) may not be enforceable, as they may result in a reduced total unit count for Housing Element projects, in conflict with state law. Thus, Alternative B would not eliminate the Project's significant and unavoidable impact related to conflicts with existing regulations governing scenic quality; however, due to the reduced scope of development under Alternative B, impacts related to aesthetics would be **less than** the Project.

Agriculture and Forestry Resources

Neither Alternative B nor the Project would conflict with existing zoning for agricultural use, or with a Williamson Act contract; or involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. As such, these impacts under Alternative B would be **similar to** the Project.

As discussed in Section 4.2, Agriculture and Forestry Resources, of this Draft PEIR, the Project would result in significant unavoidable impacts related to the conversion and/or loss of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Buildout under the Project is anticipated to result in the conversion of the City's last agricultural land consisting of Prime Farmland and Farmland of Statewide Importance. As with the Project, Alternative B would result in significant unavoidable impacts given that the parcels designated as Prime Farmland and Farmland of Statewide Importance are identified as Housing Element sites.[5] Therefore, under Alternative B, impacts related to agriculture and forestry resources would be **the same as** the Project.

Air Quality

As discussed in Section 4.3, Air Quality, of this Draft PEIR, the Project would result in significant unavoidable impacts related to the potential to conflict with or obstruct implementation of the applicable air quality plan; increases of criteria air pollutants from construction and operation of future development facilitated by the Project; and exposure

[5] These Housing Element sites reflect the Sites Inventory at the time of the Notice of Preparation publication (November 2025).

of sensitive receptors to substantial pollution concentrations. The Project would result in less than significant impacts related to other emissions.

As shown in Table 6-4, under Alternative B, housing and population would be substantially reduced compared to the Project. As such, air quality impacts under Alternative B would be **less than** the Project. Specifically, Alternative B would result in less than significant impacts related to the potential to conflict with or obstruct implementation of the applicable air quality plan given that the buildout under the alternative would not exceed growth projections (see discussion under Population and Housing, below). As such, the growth anticipated under Alternative B would be within the projections considered in the preparation of the AQMP. Therefore, implementation of Alternative B would **eliminate the significant and unavoidable** impacts under the Project related to consistency with the applicable AQMP.

Similarly, increases of criteria air pollutants from construction and operation of future development, exposure of sensitive receptors to substantial pollution concentrations, and other emissions would be reduced due to the overall reduction in residential and mixed-use development under this alternative (see Table 6-4). In summary, Alternative B would result in less development potential than those anticipated under the Project, resulting in less pollutants associated with construction activities and less operational emissions. As with the Project, Alternative B would incorporate MM-4.3-1 through MM-4.3-11; however, due to the nature of the proposed MUOD rezoning, future non-discretionary projects would be facilitated under Housing Element sites, and these measures would not ensure that all impacts would be mitigated to a level of less than significant. As such, impacts under Alternative B would remain significant and unavoidable. However, due to the reduced scope of development under Alternative B, impacts would be **less than** the Project.

Biological Resources

As with the Project, Alternative B would result in significant unavoidable impacts related to substantial adverse effect on plant and wildlife species identified as a sensitive or special status species. Future development under the Project may result in adverse effects on plant and wildlife species that are identified as sensitive or special status species. Even with implementation mitigation measures MM-4.4-1 through MM-4.4-6, the Project would have significant and unavoidable impacts.

Residential and mixed-use development would still occur in the Planning Area under Alternative B, which could result in significant and unavoidable impacts to special status plant and wildlife species (even with implementation of mitigation). Impacts under Alternative B relative to special status plant and wildlife species would remain significant and unavoidable but would be **less than** the Project.

Under the Project, impacts are less than significant with regards to sensitive natural communities and the movement of any native resident or migratory fish or wildlife species. Alternative B would result in similar impacts given the urban/developed nature of the city and lack of impacts to natural open space areas. However, the reduced scope and scale permitted under Alternative B would reduce potential impacts compared to the Project, and impacts would be **less than** the Project.

Cultural Resources

As described in Section 4.5, Cultural Resources, the Project would result in significant and unavoidable impacts to historical and archaeological resources. Even with the implementation of existing regulations and MM-4.5-1 and MM-4.5-2, potential impacts relative to historical and archaeological resources would be significant and

unavoidable because it is not possible to ensure the successful preservation of all historical and archaeological resources where new development may occur. The Project would result in less than significant impacts related to human remains given that all future development projects would be subject to state and local regulations related to the discovery of human remains during ground-disturbance activities.

Similar to the Project, Alternative B would result in the development/redevelopment of properties on sites with the potential occurrence of significant historical resources, archaeological resources, and/or human remains. The increased allowable density under Alternative B and the Project would facilitate redevelopment in locations that may not otherwise be disturbed in the Planning Area, thereby resulting in increased potential to inadvertently encounter, damage, or destroy extent cultural resources. Under Alternative B, the scope of the development to occur would be reduced when compared to the Project, which would result in reduced potential to impact cultural resources. Therefore, cultural resources impacts under Alternative B would **less than** the Project but would still be significant and unavoidable.

Energy

Similar to the Project, implementation of Alternative B would increase the demand for electricity, natural gas, gasoline, and diesel consumption in the Planning Area during construction and operation of future development. However, similar to the Project, Alternative B would not result in wasteful, inefficient, or unnecessary consumption of energy resources, including electricity, natural gas, or petroleum during implementation. Neither the Project nor Alternative B would conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Additionally, under Alternative B, all applicable rules and regulations presented in Section 4.6 of this Draft PEIR would reduce energy demand and increase energy efficiency related to future residential development, similar to the Project. However, under Alternative B, the scope of the development to occur would be reduced, as illustrated in Table 6-4. Thus, impacts under Alternative B would be **less than** those anticipated under the Project.

Geology and Soils

As described in Section 4.7, Geology and Soils, of the Draft PEIR, even with implementation of mitigation measure MM-4.7-1, the Project would result significant and unavoidable impacts related to the destruction of a unique paleontological resource or site or unique geologic feature. The underlying geologic conditions in the Planning Area would not change under Alternative B. Any new development under Alternative B would be site-specific and would be exposed to existing geologic and soil conditions and hazards that would be unique to that property. Under Alternative B, geologic conditions would be similar to the Project due to the Planning Area's existing conditions. However, as development/redevelopment activity would be reduced under Alternative B due to reduction in scope to only Housing Element sites, impacts would be **less than** those anticipated under the Project but would still be significant and unavoidable.

Greenhouse Gas Emissions

Alternative B would generate additional GHG emissions due to the increased residential and mixed-use development, but the reduction in the scope and scale of the alternative to eliminate non-Housing Element Measure K sites would result in a reduction of emissions. Under the Project, significant and unavoidable impacts would occur related to the generation of GHG emissions even with the incorporation of mitigation measures MM-4.8-1 through MM-4.8-5. Although Alternative B would reduce the buildout potential when compared to the Project, Alternative B would result in residential/mixed-use development, resulting in an additional 5,887 dwelling units and an additional 3,663,476 square feet of non-residential uses. As such, GHG emissions under Alternative B would likely remain

significant and unavoidable. Alternative B would result in growth on Housing Element sites along transportation corridors, which could encourage use of alternative transportation methods such as transit, walking, or biking, and could result in shorter vehicle trips. Alternative B, similar to the Project, would also promote diverse housing options. However, even with elimination of non-Housing Element Measure K sites, Alternative B would still result in significant GHG emissions due to future projects on Housing Element sites and would not ensure all future projects utilize fully electric appliances (as opposed to reliance on natural gas). As such, the analysis provided in Section 4.8, Greenhouse Gas Emissions, of this Draft PEIR would also be generally applicable to Alternative B. Thus, Alternative B would have the potential to conflict with applicable plans, policies, or regulations adopted for the purposes of reducing GHG emissions, and impacts would remain significant and unavoidable, even after implementation of MM-4.8-1 through MM-4.8-5. Therefore, impacts related to a potential conflict with existing regulations and potential GHG emissions under this alternative would remain significant and unavoidable but would be **less than** the Project due to the reduced buildout potential for residential and non-residential uses.

Hazards and Hazardous Materials

Alternative B would result in less development potential than what is proposed under the Project due to the reduction in the scope and scale of proposed rezoning to only Housing Element sites. As described in Section 4.9, Hazards and Hazardous Materials, of this Draft PEIR, even with implementation of mitigation measures MM-4.9-1 through MM-4.9-3, the Project would result in significant and unavoidable impacts related to the routine transport, use, or disposal of hazardous materials; the creation of a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions; hazardous emissions or handling of hazardous materials within one-quarter mile of existing or proposed schools; and sites included on a list of sites with hazardous materials compiled pursuant to Government Code Section 65962.5. All other potential impacts related to hazards and hazardous materials would be less than significant under the Project.

Impacts related to hazards and hazardous materials under Alternative B would be less than the Project given the scope of the development/redevelopment activity anticipated to occur would be reduced when compared to the Project. As described in Section 4.9 of this Draft PEIR, there are 256 Cortese List sites that are identified on or within 0.25 miles of the Planning Area (see Figure 4.9-1, Cortese List Sites), including Housing Element sites (as shown Figure 2-2, Planning Area). As such, Alternative B would still have the potential to facilitate additional residential and mixed-use development on contaminated sites or on parcels that contain or are near oil and gas wells. Construction and operational activities as a result of development/redevelopment would be site-specific and Alternative B would be required to implement MM-4.9-1 through MM-4.9-3 to reduce potentially significant impacts. However, Alternative B would not eliminate the Project's the significant and unavoidable impacts.

Additionally, both the Project and Alternative B include parcels within an airport land use plan. As detailed in Section 4.9 of the Draft PEIR, Project implementation via the amended MUOD would require noise and safety requirements, including height and land use restrictions, to be consistent with the AELUP for John Wayne Airport. As a result, future development projects would be required to modify the density through a reduction of units and occupancy terms and/or reduce the intensity of land uses. Furthermore, the Orange County Airport Land Use Commission (ALUC) would review future development projects within the vicinity of John Wayne Airport for the potential to impact airport operations related to noise and safety. With review by the ALUC through standard permitting processes, future development projects within the Planning Area would be required to meet requirements for noise and safety within airport influence areas, consistent with the MUOD amendments. Implementation of these requirements would ensure that impacts would be less than significant. Under Alternative B, there are no Housing Element sites located within the Safety Zone 3, as shown in Figure 4.9-5, Airport Hazards. Therefore, impacts under Alternative B would be less than the Project.

Given the above, under Alternative B, impacts would be **less than** the Project but impacts under Alternative B would remain significant and unavoidable even with the incorporation of mitigation measures.

Hydrology and Water Quality

As discussed in Section 4.10 of this Draft PEIR, the Project would result in less than significant impacts or no impact related to water quality standards, groundwater supplies, existing drainage patterns, the risk of pollutant release due to inundation, and consistency with a water quality control plan. Under this alternative, buildout associated with the rezoning of only Housing Element sites would still be required to comply with existing regulatory requirements and policies that would reduce impacts from adverse effects related to hydrology and water quality, similar to the Project. However, the scope of the development/redevelopment activity anticipated to occur would be reduced when compared to the Project, which would result in reduced potential for impacts associated with hydrology and water quality. Therefore, impacts under Alternative B would be **less than** those anticipated under the Project.

Land Use and Planning

Under Alternative B, implementation of proposed rezoning on Housing Element sites would still occur. As such, this alternative would be consistent with the adopted Housing Element. Furthermore, the implementation of the residential and mixed-use development proposed under the Housing Element rezoning would facilitate infill development and would not conflict with the General Plan goals and policies or other applicable planning documents. Thus, impacts related to the consistency with applicable land use plans, policies, and regulations would be similar to the Project. Therefore, impacts associated with Alternative B would be **similar to** the Project.

Mineral Resources

As discussed in Section 4.12 of this Draft PEIR, the Project would result in less than significant impacts related to the loss of availability of known mineral resource that would be of value to the region and the residents of the state or and no impact related to the loss of a locally important mineral resource recovery site. Under Alternative B, the proposed rezoning would only occur on Housing Element sites. Alternative B would continue to facilitate additional housing and mixed-use development on these parcels. Alternative B components would not result in changes to existing regulatory conditions pertaining to available mineral resources or mineral resource extraction in the Planning Area (i.e., oil, gas, and aggregate). Thus, and impacts under Alternative B would be **similar to** the Project.

Noise

Alternative B would reduce the scope and scale of the proposed rezoning to only Housing Element sites. As such, overall construction of future development associated with the implementation of Alternative B would be less than the Project. Under the Project, potential construction noise and vibration impacts from reasonably foreseeable project construction activities, as well as operational noise due to operation of residential and mixed-use development would be significant and unavoidable after application of mitigation measures MM-4.13-1 through MM-4.13-4. Although Alternative B would reduce impacts associated with a reduced development potential, noise impacts would likely remain significant and unavoidable due to construction and operation of mixed-use development under Alternative B. As further described in Section 4.13 of this Draft PEIR, applicable land use and noise policies, compliance with consistency requirements via the amended MUOD, and appropriate review by the Orange County Airport Land Use Commission would help ensure consistency with the adopted AELUP for John Wayne Airport. Furthermore, Project implementation via the amended MUOD would require a noise study

for future development projects abutting a freeway or within the Airport Influence Area, as defined by the AELUP for John Wayne Airport, and impacts under the Project would be less than significant. Under Alternative B, impacts related to consistency with the adopted AELUP for John Wayne Airport would be reduced given that fewer parcels are located within the noise contours of John Wayne Airport. For these reasons, overall noise impacts under Alternative B would be **less than** the Project.

Population and Housing

As discussed in Section 4.14, Population and Housing, of this Draft PEIR, the Project would result in significant and unavoidable impacts associated with exceedance in population growth from future development facilitated by the Project that was not anticipated in adopted plans. Specifically, the Project would exceed the General Plan/AQMP's and SCAG Connect SoCal's growth projections for the City. Even with the implementation of mitigation measure MM-4.14-1, impacts would be significant and unavoidable. Under Alternative B, there would be 16,143 fewer units and 37,801 fewer residents (see Table 6-4 above). Section 4.14 of the Draft PEIR determined the Project would exceed the General Plan's projections by 3,788 units and exceed Connect SoCal's projections by 6,424 units. Given that the buildout anticipated under Alternative B would be substantially reduced in comparison to the Project by 16,143 fewer units, implementation of Alternative B would not exceed regional growth projections and would not represent substantial unplanned population growth. Therefore, the proposed rezoning of only Housing Element sites would **eliminate the Project's significant and unavoidable** impact and impacts under Alternative B would be **less than** the Project.

Impacts related to the displacement of housing and people would be less than significant under the Project; however, under Alternative B, no impact would occur given that none of the Housing Element sites have existing residential uses (see Appendix B). As such, impacts related to displacement under Alternative B would be **less than** the Project.

Public Services

As discussed in Section 4.15, Public Services of this Draft PEIR, the Project would result in less than significant impacts for fire protection services, police protection services, school services, and library services. As shown above in Table 6-4, Alternative B would result in 16,143 fewer units (including 37,801 fewer residents) and 13,642,527 fewer non-residential square feet when compared to the Project buildout conditions. Given the reduced buildout potential under Alternative B, impacts would be **less than** the Project.

Recreation

As discussed in Section 4.16, Recreation of this Draft PEIR, the Project would 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. Further, implementation of the Project would create future capacity or service level problems given the City would be required to provide an additional 106.59 acres of parkland to meet the City's goal of 4.26 acres of parkland for every 1,000 residents, and result in substantial adverse physical impacts associated with the provision of 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 parks. Similar to the Project, Alternative B would result in new residential and mixed-use development projects, resulting in an increased residential population that would utilize existing neighborhood and regional parks or other recreational facilities. Under existing conditions, the City maintains 5.28 acres per 1,000

residents.[6] With the addition of Alternative B, the City's population would increase to 124,202 residents, and thus, the parkland ratio would be 4.64 acres of parkland for every 1,000 residents.[7] The increase in residential population and employment within the Planning Area would exceed the City's General Plan parkland goal. Additionally, future development projects under Alternative B would be required to comply with applicable regulations (e.g., Quimby Act). The City also requires the payment of parks and recreation impact fees for new multifamily residential units and ADUs in the city to reduce the potential impacts of proposed developments to parks and recreation services and facilities, pursuant to Costa Mesa Municipal Code Section 13-276. Furthermore, under the Project and Alternative B, the MUOD would require residential and mixed-use residential development on Housing Element sites to dedicate 30 percent of the lot for open space. However, neither the Project nor Alternative B includes new neighborhood or regional parks. Given this, impacts under Alternative B would remain significant and unavoidable. However, as Alternative B would result in a lower development potential, impacts related to parks and recreation would be **less than** the Project.

Transportation

As discussed in Section 4.17, Transportation, of this Draft PEIR, Project-related impacts related the potential to conflict with CEQA Guidelines Section 15064.3(b) and potential conflicts with an applicable plan, ordinance, or policy addressing circulation, transit, roadways, bicycles, and pedestrian activities would be less than significant.

Implementation of Alternative B would not conflict with an applicable plan, ordinance, or policy addressing the circulation system, **similar** to the Project. The Project would result in a less than significant VMT impact because the Project's daily VMT per service population would be 16.7, which is below than the City's threshold of 25.4 daily VMT per service population. Compared to the Project, Alternative B would facilitate 16,143 fewer dwelling units (or 37,801 fewer residents) and 13,642,527 fewer non-residential square feet with fewer associated employees. The impact of adding residents to the Planning Area would have a greater effect in reducing VMT per service population because there is a need for housing near jobs (i.e., the jobs-to-housing ratio would improve) in the Planning Area. The number of employees would also be fewer, however VMT generated by retail employees is generally less than employees from other sectors. In addition, Alternative B would reduce the scope and scale of the proposed rezoning to only Housing Element sites. Therefore, by reducing the number of dwelling units and the Planning Area, the daily VMT per service population under Alternative B would increase when compared to Project due to reduced housing opportunities across the city. Therefore, impacts related to the consistency with CEQA Guidelines section 15064.3, subdivision (b) would be **more than** the Project.

Tribal Cultural Resources

As described in Section 4.18, Tribal Cultural Resources, of this Draft PEIR, potential impacts were found to be significant and unavoidable. The development/redevelopment under Alternative B would be limited to only Housing Element sites. Therefore, the likely intensity of development under Alternative B would be reduced, which would reduce potential ground-disturbing activities associated with the construction and would result in a reduced potential for impacts to tribal resources. As Alternative B would result in a reduced development potential and less associated ground disturbing activity when compared to the Project, potential impacts resulting in a substantial adverse change in the significance of a tribal cultural resource under this alternative would be **less than** the Project.

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6 576 acres of parkland / (109,131 residents / 1,000) = 5.28 acres of parkland per 1,000 residents
7 576 acres of parkland / (124,202 residents / 1,000) = 4.64 acres of parkland per 1,000 residents

Utilities and Service Systems

As discussed in Section 4.19 of this Draft PEIR, the Project would result in less than significant impacts related to relocation or construction of new or expanded facilities, water supply, capacity of wastewater treatment services, and the generation of solid waste. Under Alternative B, future development would be reduced in scope to only Housing Element sites, which would result in decreased service area demands for utilities and service systems. As such, impacts under Alternative B would be **less than** the Project.

6.5.3 Alternative C – Reduced Density of Non-Housing Element Sites

6.5.3.1 Description of the Alternative

Under Alternative C, the residential and mixed-use development buildout associated with implementation of the MUOD would still apply to the entire Planning Area. However, under Alternative C, a maximum of 30 du/ac would be applied to all non-Housing Element sites, which would still be consistent with Government Code Section 65583.2(c)(3)(B).[8] The Project currently proposes that non-Housing Element sites in North Costa Mesa (north of the Interstate 405 [I-405] freeway) be assigned a maximum density of 60 dwelling units per acre given the prevalence of larger sites (i.e., >5 acres) that are able to accommodate greater densities. As such, Alternative C serves as a 'reduced residential development' scenario that would not alter the number and location of parcels included in the MUOD, but would reduce the allowable density on non-Housing Element sites north of I-405 in order to reduce the Project's residential buildout.

Table 6-5. Comparison of Residential Densities and Buildout for Alternative C

Category	Project Maximum Density	Project Residential Buildout	Alternative C Maximum Density	Alternative C Residential Buildout
Housing Element Sites	40-90 du/ac[1]	5,887	40-90 du/ac[1]	5,887
Non-Housing Element Sites	30 du/ac[2]	16,143	30 du/ac	12,254
	60 du/ac[3]			
	Project Total	**22,030**	**Alternative C Total**	**18,141**

Sources: Appendix B; City of Costa Mesa 2023.
Notes: Estimates are rounded to the nearest whole number. Du/ac = dwelling unit per acre.
1 Maximum density assumed in the Housing Element was used (City of Costa Mesa 2023).
2 For non-Housing Element sites, parcels elsewhere in the city (i.e., south of the I-405 freeway) were assigned a maximum density of 30 dwelling units per acre, given the prevalence of smaller sites (i.e., <5 sites) not able to accommodate greater densities.
3 For non-Housing Element sites, parcels in North Costa Mesa (north of the Interstate 405 [I-405] freeway) were assigned a maximum density of 60 dwelling units per acre given the prevalence of larger sites (i.e., >5 acres) able to accommodate greater densities.

As shown in Table 6-5 above, Alternative C would result in 18,141 units as a result of the reduced density maximums for the non-Housing Element sites. The following table compares the buildout of the Project with Alternative C.

8 Government Code Section 65583.2(c)(3)(B) states, "[t]he following densities shall be deemed appropriate to accommodate housing for lower income households… (iv) For a jurisdiction in a metropolitan county: sites allowing at least 30 units per acre." The City of Costa Mesa is located within a jurisdiction in a metropolitan county (Orange County).

Table 6-6. Comparison of Project Planning Area Buildout Projections and Alternative C Buildout Projections

Category	Project Buildout Projections	Alternative C Buildout Projections	Difference in Buildout *(Project – Alternative C)*
Population[1]	52,872	46,442	**-6,430**
Housing (DU)	22,030	18,141	**-3,889**
Non-Residential Square Feet	17,306,003	17,306,003	**0**

Sources: Appendix B, Buildout Methodology. See Table 4.14-5, within Section 4.14, Population and Housing, of this Draft PEIR.
Notes: Negative number is represented by parenthesis "(number)."
[1] Baseline population for the Planning Area reflects population estimate (2.56 persons per household) for the City as recorded by the U.S. Census Bureau's 2020-2024 American Community Survey (U.S. Census 2026).

As shown above in Table 6-6, there would be 6,430 fewer residents, 3,889 fewer dwelling units, and same amount of non-residential square feet when compared to Project buildout conditions.

6.5.3.2 Ability to Meet Project Objectives

Alternative C would meet all the Project Objectives. Although the buildout potential under this alternative would be slightly reduced in comparison to the Project, Alternative C would result in 18,141 additional units (see Table 6-5 above). This residential buildout would meet the City's RHNA goals and the buffer. As such, Alternative C would meet Objective 1.

To maintain Housing Element certification, the Housing Element identifies sections of the City's Zoning Code that require amendments in order to comply with State law requirements, remove regulatory impediments or barriers to housing development, and streamline the housing development process. As such, Alternative C would meet Objective 2.

Under Alternative C, only the residential density for non-Housing Element sites would be reduced, and all other components of the Project would be implemented. Specifically, Alternative C would implement the rezoning of Measure K sites with the applied MUOD, implement proposed amendments to the Zoning Code to be consistent with allowed densities, or adopt the proposed Objective Design Standards for multifamily and mixed-use projects. As a result, Alternative C would implement the required programs identified in the City's Housing Element to diversify, stabilize, and increase housing, and the alternative would prioritize new housing near jobs and amenities. As such, Alternative C would meet Objectives 3, 4, 5, 6, and 7.

6.5.3.3 Comparison of the Effects of Alternative C to the Project

Alternative C would reduce the Project's proposed rezoning of non-Housing Element sites to 30 du/ac, resulting in a reduced development scenario compared to the Project. The mitigation measures set forth in this Draft PEIR would still be applicable to potential residential and mixed-use development under Alternative C. Therefore, as noted below, although Alternative C could reduce potential environmental impacts to select environmental topics, all of the mitigation measures set forth in this Draft PEIR would continue to be required and relevant for the potential development under the implementation of Alternative C.

Aesthetics

Similar to the Project, Alternative C would amend the MUOD, establish Citywide Multifamily Residential and Mixed-Use Objective Design Standards, and amend the Zoning Code consistent with the Housing Element. As a result, the amended MUOD would improve predictability and consistency in visual outcomes along major corridors in the city for future residential and mixed-use projects. Similar to the Project, Alternative C would achieve these components of the project description. Moreover, under this alternative, proposed rezoning would only differ in density for non-Housing Element sites within the Planning Area north of I-405, which would represent a slight reduction in the residential buildout potential when compared to the Project. However, even with the reduced density for non-Housing Element sites north of I-405 (which would correspondingly reduce the maximum allowable building height for these parcels from 72 feet to 60 feet), Alternative C would still increase the maximum allowable building heights throughout the Planning Area, resulting in potentially significant shade/shade impacts, even after implementation of MM-4.1-1 (which, for the reasons discussed in further detail in Section 4.1, Aesthetics of this PEIR, would not be feasible to implement for all future projects, including non-discretionary projects, Housing Element projects, and projects that qualify for a Density Bonus under state law). As a result, Alternative C would still conflict with regulations governing scenic quality, and impacts would remain significant and unavoidable. However, due to the reduced density (and, subsequently, reduced maximum allowable building heights) for non-Housing Element parcels north of I-405, and impacts would be **less than** the Project.

Agriculture and Forestry Resources

As with the Project, Alternative C would not conflict with existing zoning for agricultural use, or with a Williamson Act contract; or involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. As such, these impacts under Alternative C would be **similar to** the Project.

The Project would result in significant unavoidable impacts related to the conversion and/or loss of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as discussed in Section 4.2 of this Draft PEIR. Similar to the Project, buildout under Alternative C is anticipated to result in the conversion of the City's last agricultural land consisting of Prime Farmland and Farmland of Statewide Importance, given that the parcels designated as Prime Farmland and Farmland of Statewide Importance are identified as Housing Element sites.[9] Therefore, under Alternative C, impacts related to agriculture and forestry resources would be **the same as** the Project.

Air Quality

As discussed in Section 4.3, Air Quality, of this Draft PEIR, the Project would result in significant unavoidable impacts related to the potential to conflict with or obstruct implementation of the applicable air quality plan; increases of criteria air pollutants from construction and operation of future development facilitated by the Project; and exposure of sensitive receptors to substantial pollution concentrations. The Project would result in less than significant impacts related to other emissions.

As shown in Table 6-6, under Alternative C, housing and population would be slightly reduced compared to the Project. However, as further described below under "Population and Housing," the alternative is anticipated to result in an exceedance in housing projections for the City in 2050. As such, Alternative C would result in significant unavoidable impacts related to the potential to conflict with or obstruct implementation of the applicable air quality

[9] These Housing Element sites reflect the Sites Inventory at the time of the Notice of Preparation publication (November 2025).

plan given that the growth anticipated under Alternative C would exceed the projections considered in the preparation of the AQMP. Therefore, Alternative C would not eliminate the Project's the significant and unavoidable impacts. Similarly, increases of criteria air pollutants from construction and operation of future development, exposure of sensitive receptors to substantial pollution concentrations, and other emissions would be slightly reduced due to the slight reduction in population and housing under this alternative (see Table 6-6). However, the alternative assumes the same amount of non-residential square feet when compared to Project buildout conditions. In summary, Alternative C would result in slightly less development potential than those anticipated under the Project, resulting in slightly less pollutants associated with construction activities and less operational emissions. As with the Project, Alternative C would incorporate MM-4.3-1 through MM-4.3-11; however, due to the nature of the proposed MUOD rezoning, future non-discretionary projects would be facilitated under this alternative, and these measures would not ensure that all impacts would be mitigated to a level of less than significant. As such, impacts under Alternative C would remain significant and unavoidable. However, due to the reduced buildout under Alternative C, impacts would be **slightly less than** the Project.

Biological Resources

As with the Project, Alternative C would result in significant unavoidable impacts related to substantial adverse effect on plant and wildlife species identified as a sensitive or special status species. Future development under both the Project and Alternative C may result in adverse effects on plant and wildlife species that are identified as sensitive or special status species. However, even with implementation mitigation measures MM-4.4-1 through MM-4.4-6, the Project and Alternative C would have significant and unavoidable impacts. Residential and mixed-use development would still occur in the Planning Area under Alternative C, which could result in significant and unavoidable impacts to special status plant and wildlife species (even with implementation of mitigation). Because Alternative C includes all identified Measure K sites as the proposed Project, impacts under Alternative C relative to special status plant and wildlife species would be **the same as** the Project and would remain significant and unavoidable.

Similar to the Project, impacts under Alternative C would be less than significant with regards to sensitive natural communities and the movement of any native resident or migratory fish or wildlife species. Alternative C would result in similar impacts to most of these resources given the urban/developed nature of the City and lack of impacts to natural open space areas and because Alternative C includes all identified Measure K sites as the proposed Project, the impacts would be **the same as** the Project.

Cultural Resources

As with the Project, Alternative C would result in significant and unavoidable impacts to historical and archaeological resources. Even with the implementation of existing regulations and MM-4.5-1 and MM-4.5-2, potential impacts relative to historical and archaeological resources would be significant and unavoidable because it is not possible to ensure the successful preservation of all historical and archaeological resources where new development may occur. Similar to the Project, Alternative C would result in the development/redevelopment of properties on sites with the potential occurrence of significant historical resources, archaeological resources, and/or human remains. The increased allowable density under Alternative C and the Project would facilitate redevelopment in locations that may not otherwise be disturbed in the Planning Area, thereby resulting in potential to inadvertently encounter, damage, or destroy extent cultural resources. However, under Alternative C, the scope of development potential would not alter the number and location of parcels included in the Planning Area. Therefore, impacts to cultural resources under Alternative C would **the same as** the Project and impacts would remain significant and unavoidable.

Energy

Similar to the Project, implementation of Alternative C would increase the demand for electricity, natural gas, gasoline, and diesel consumption in the Planning Area during construction and operation of future development. However, similar to the Project, Alternative C would not result in wasteful, inefficient, or unnecessary consumption of energy resources, including electricity, natural gas, or petroleum during implementation. Neither the Project nor Alternative C would conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Additionally, under Alternative C, all applicable rules and regulations presented in Section 4.6 of this Draft PEIR would reduce energy demand and increase energy efficiency related to future residential development, similar to the Project. However, under Alternative C, the residential buildout would slightly reduce, as illustrated in Table 6-6. Rezoning of non-Housing Element sites at 30 du/ac would result in reduced construction-related and operational energy consumption. Thus, impacts under Alternative C would be **slightly less than** those anticipated under the Project.

Geology and Soils

As with the Project, Alternative C, even with implementation of mitigation measure MM-4.7-1, would result significant and unavoidable impacts related to the destruction of a unique paleontological resource or site or unique geologic feature. The underlying geologic conditions in the Planning Area would not change under Alternative C. Any new development under Alternative C would be site-specific and would be exposed to existing geologic and soil conditions and hazards that would be unique to that property. Under Alternative C, geologic conditions would be similar to the Project due to the Planning Area's existing conditions. However, under Alternative C, the scope of development potential would not alter the number and location of parcels included in the Planning Area. Therefore, impacts would be **the same as** those anticipated under the Project and would remain significant and unavoidable.

Greenhouse Gas Emissions

As with the Project, Alternative C would generate additional GHG emissions due to the increased residential and mixed-use development in the Planning Area. However, the reduction in residential density for non-Housing Element sites would result in a reduction of slight emissions. As shown in Table 6-6, the population and housing buildout under Alternative C would be slightly reduced in comparison to the Project. However, the alternative assumes the same amount of non-residential square feet when compared to Project buildout conditions. Given this, GHG emissions under Alternative C would likely remain significant and unavoidable even with the incorporation of mitigation measures MM-4.8-1 through MM-4.8-5. Additionally, as with the Project, Alternative C would result in growth within the Planning Area along transportation corridors, which could encourage use of alternative transportation methods such as transit, walking, or biking, and could result in shorter vehicle trips. Alternative C would also promote diverse housing options, similar to the Project. However, even with reduced density on non-Housing Element parcels, Alternative C would still result in significant GHG emissions due to future residential and mixed-use development and would not ensure all future projects utilize fully electric appliances (as opposed to reliance on natural gas). As such, the analysis provided in Section 4.8 would be generally applicable to Alternative C. Alternative C would have the potential to conflict with applicable plans, policies, or regulations adopted for the purposes of reducing GHG emissions, and impacts would remain significant and unavoidable, even after implementation of MM-4.8-1 through MM-4.8-5. Therefore, impacts related to a potential conflict with existing regulations and potential GHG emission under this alternative would remain significant and unavoidable but would be **slightly less than** the Project due to the reduced buildout potential for population and housing.

Hazards and Hazardous Materials

Alternative C would result in slightly less development potential than what is proposed under the Project due to the reduction in density for non-Housing Element sites. As described in Section 4.9, even with implementation of mitigation measures MM-4.9-1 through MM-4.9-3, the Project would result in significant and unavoidable impacts related to the routine transport, use, or disposal of hazardous materials; the creation of a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions; hazardous emissions or handling of hazardous materials within one-quarter mile of existing or proposed schools; and sites included on a list of sites with hazardous materials compiled pursuant to Government Code Section 65962.5. All other potential impacts related to hazards and hazardous materials would be less than significant under the Project.

Alternative C would still have the potential to facilitate additional residential and mixed-use development on contaminated sites or on parcels that contain or are near oil and gas wells. As such, construction and operational activities as a result of development/redevelopment would be required to implement MM-4.9-1 through MM-4.9-3 to reduce potentially significant impacts. However, Alternative C would not eliminate the Project's the significant and unavoidable impacts even with the incorporation of mitigation measures given that the scope of development potential would not alter the number and location of parcels included in the Planning Area. Therefore, under Alternative C, impacts would be **the same as** the Project.

Hydrology and Water Quality

As discussed in Section 4.10 of this Draft PEIR, the Project would result in less than significant impacts or no impact related to water quality standards, groundwater supplies, existing drainage patterns, the risk of pollutant release due to inundation, and consistency with a water quality control plan. Under Alternative C, buildout would still be required to comply with existing regulatory requirements and policies that would reduce impacts from adverse effects related to hydrology and water quality, similar to the Project. In addition, the development/redevelopment activity anticipated to occur would be the same when compared to the Project because Alternative C includes all identified Measure K sites as the Project. Therefore, impacts under Alternative C would be **the same as** those anticipated under the Project.

Land Use and Planning

Under Alternative C, implementation of proposed rezoning on Housing Element sites and non-Housing Element sites would still occur. As such, this alternative would be consistent with the adopted Housing Element and its required implementation programs. Furthermore, the implementation of the residential and mixed-use development proposed under the rezoning would facilitate infill development (although at a reduced density for non-Housing Element sites under this alternative) and would not conflict with the General Plan goals and policies or other applicable planning documents. Thus, impacts related to the consistency with applicable land use plans, policies, and regulations would be similar to the Project. Therefore, impacts associated with Alternative C would be **similar to** the Project.

Mineral Resources

As discussed in Section 4.12 of this Draft PEIR, the Project would result in less than significant impacts related to the loss of availability of known mineral resource that would be of value to the region and the residents of the state or and no impact related to the loss of a locally important mineral resource recovery site. Under Alternative C, the proposed rezoning would occur within the same Planning Area as the Project at a reduced density for non-Housing Element sites. As such, Alternative C would continue to facilitate additional housing and mixed-use development on

these parcels. Furthermore, Alternative C components would not result in changes to existing regulatory conditions pertaining to available mineral resources or mineral resource extraction in the Planning Area (i.e., oil, gas, and aggregate). Thus, and impacts under Alternative C would be **the same as** the Project.

Noise

Under the Project, potential construction noise and vibration impacts from reasonably foreseeable Project-related construction activities, as well as operational noise due to operation of residential and mixed-use development would be significant and unavoidable after application of mitigation measures MM-4.13-1 through MM-4.13-4. Although Alternative C would slightly reduce impacts associated with a reduced residential development potential, noise impacts would likely remain significant and unavoidable due to construction and operation of mixed-use development under Alternative C. As further described in Section 4.13 of this Draft PEIR, applicable land use and noise policies, compliance with consistency requirements via the amended MUOD, and appropriate review by the Orange County Airport Land Use Commission, would help ensure consistency with the adopted AELUP for John Wayne Airport. Furthermore, Project implementation via the amended MUOD would require a noise study for future development projects abutting a freeway or within the Airport Influence Area, as defined by the AELUP for John Wayne Airport, and impacts under the Project would be less than significant. Similarly, Alternative C would not result in changes to existing regulatory conditions pertaining to noise contours and land use compatibility. For these reasons, overall noise impacts under Alternative C would be slightly **less than** the Project.

Population and Housing

As discussed in Section 4.14, Population and Housing, of this Draft PEIR, the Project would result in significant and unavoidable impacts associated with exceedance in population growth from future development facilitated by the Project that was not anticipated in adopted plans. Specifically, the Project would exceed the SCAG Connect SoCal's growth projections for the City. Even with the implementation of mitigation measure MM-4.14-1, impacts would be significant and unavoidable. Given that the buildout anticipated the Project would exceed SCAG's 2050 housing projections for the City by approximately 6,424 units (see Table 4.14-7 within Section 4.14, Population and Housing), the reduction of 3,889 units under Alternative C (see Table 6-6 above) would still result in an exceedance of projections. As such, it is anticipated that Alternative C would still represent substantial unplanned population growth. Therefore, the alternative would not eliminate the Project's significant and unavoidable impact. However, impacts under Alternative C would be **less than** the Project. Moreover, impacts related to the displacement of housing and people would be less than significant under the Project. Similar to the Project, impacts related to displacement under Alternative C would be **similar to** the Project.

Public Services

As discussed in Section 4.15 of this Draft PEIR, the Project would result in less than significant impacts for fire protection services, police protection services, school services, and library services. As shown above in Table 6-6, Alternative C would result in 3,889 fewer units (including 6,430 fewer residents) and the same amount of non-residential square feet when compared to the Project buildout conditions. Given the reduced buildout potential for population and housing under Alternative C, impacts would be **less than** the Project.

Recreation

As discussed in Section 4.16 of this Draft PEIR, the Project would 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. Further, implementation of the Project would create future capacity or service level problems given the City would be required to provide an additional 106.59 acres of parkland to meet the City's goal of 4.26 acres of parkland for every 1,000 residents, and result in substantial adverse physical impacts associated with the provision of 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 parks. Similar to the Project, Alternative C would result in new residential and mixed-use development projects, resulting in an increased residential population that would utilize existing neighborhood and regional parks or other recreational facilities. Under existing conditions, the City maintains 5.28 acres per 1,000 residents. With the addition of Alternative C, the City's population would increase to 155,573 residents, and thus, the parkland ratio would be 3.7 acres of parkland for every 1,000 residents.[10] Under the proposed Project, the City's parkland/resident ratio would be 3.58 acres of parkland per 1,000 residents. As such, Alternative C would result in slightly more parkland per resident when compared to the Project, and thus, impacts under Alternative C would be reduced in comparison to the Project. Additionally, future development projects under Alternative C would be required to comply with applicable regulations (e.g., Quimby Act). The City also requires the payment of parks and recreation impact fees for new multifamily residential units and ADUs in the city to reduce the potential impacts of proposed developments to parks and recreation services and facilities, pursuant to Costa Mesa Municipal Code Section 13-276. Furthermore, under the Project and Alternative C, the MUOD would require residential and mixed-use residential development on Housing Element sites to dedicate 30 percent of the lot for open space. However, neither the Project nor Alternative C includes new neighborhood or regional parks. Given this, impacts under Alternative C would remain significant and unavoidable. However, as Alternative C would result in a slightly lower development potential, impacts related to parks and recreation would be **less than** the Project.

Transportation

As discussed in Section 4.17, Transportation, of this Draft PEIR, Project-related impacts related the potential to conflict with CEQA Guidelines Section 15064.3(b) and potential conflicts with an applicable plan, ordinance, or policy addressing circulation, transit, roadways, bicycles, and pedestrian activities would be less than significant.

Implementation of Alternative C would not conflict with an applicable plan, ordinance, or policy addressing the circulation system, **similar** to the Project. The Project would result in a less than significant VMT impact because the Project's daily VMT per service population would be 16.7, which is below than the City's threshold of 25.4 daily VMT per service population. Compared to the Project, Alternative C would facilitate 3,889 fewer dwelling units (or 6,430 fewer residents) and the same number of employees. The impact of adding residents to the Planning Area would have a greater effect in reducing VMT per service population because there is a need for housing near jobs (i.e., the jobs-to-housing ratio would improve) in the Planning Area. The buildout anticipated under Alternative C would be slightly reduced with the change in density to 30 du/ac for non-Housing Element sites. Therefore, by reducing the number of dwelling units and the Planning Area, the daily VMT per service population under Alternative C would increase when compared to Project due to reduced housing opportunities across the city. Therefore, impacts related to the consistency with CEQA Guidelines section 15064.3, subdivision (b) would be **more than** the Project.

Tribal Cultural Resources

As described in Section 4.18 of this Draft PEIR, potential impacts were found to be significant and unavoidable. The development/redevelopment under Alternative C would be slightly reduced due compared to the Project. Therefore, the likely intensity of development under Alternative C would be slightly reduced, which would reduce potential

[10] 576 acres of parkland / (155,573 residents / 1,000) = 3.70 acres of parkland per 1,000 residents

ground-disturbing activities associated with the construction and would result in a reduced potential for impacts to tribal resources. As Alternative C would result in a slightly reduced development potential and less associated ground disturbing activity when compared to the Project, potential impacts resulting in a substantial adverse change in the significance of a tribal cultural resource under this alternative would be **less than** the Project.

Utilities and Service Systems

As discussed in Section 4.19 of this Draft PEIR, the Project would result in less than significant impacts related to relocation or construction of new or expanded facilities, water supply, capacity of wastewater treatment services, and the generation of solid waste. Under Alternative C, future development would be slightly reduced due to the reduction in density for non-Housing Element sites, which would result in decreased service area demands for utilities and service systems. As such, impacts under Alternative C would be **less than** the Project.

6.5.4 Alternative D – No Rezone on Non-Housing Element Industrial Sites and Safety Zone 3

6.5.4.1 Description of the Alternative

As described in Appendix B, existing land uses was determined based on data from SCAG, in which the Planning Area contains approximately 5,025,450 square feet of mixed industrial uses (i.e., SCAG code 1300) and 197,806 square feet of wholesale industrial uses (i.e., SCAG code 1311). Under the Project, parcels in the Planning Area that are also Housing Element sites would not be able to redevelop with industrial or warehouse uses, but the amended MUOD would allow non-Housing Element sites to develop commercial or industrial uses as currently permitted by the underlying base zone. For the purpose of this Draft PEIR, it was assumed that all redevelopment of non-residential square footage would result in commercial uses, even though redevelopment of industrial could occur on non-Housing Element sites.

Under Alternative D, no rezoning would occur on non-Housing Element sites with underlying industrial land uses. However, the amended MUOD would still apply to Housing Element sites with underlying industrial land uses, and future residential/mixed-use development projects under Alternative D could be developed on existing industrial uses. Approximately 283 of 1,079 parcels within the Planning Area are coded by SCAG as having an existing industrial use and are identified as non-Housing Element sites (Appendix B). These parcels would be removed from the Planning Area under Alternative D.

In addition, Alternative D would remove 9 parcels from the Planning Area that are within John Wayne Airport Safety Zone 3, as shown in Figure 4.9-5, Airport Hazards, of this Draft PEIR. As detailed in Section 4.9 of the Draft PEIR, the ALUC would review future development projects within the vicinity of John Wayne Airport for the potential to impact airport operations related to noise and safety. However, as detailed in the adopted AELUP for John Wayne Airport, Safety Zone 3 (referred to as the "Inner Turning Zone") limits residential uses to "very low densities (if not deemed unacceptable because of noise)" (ALUC 2008). Under the Project, these parcels are all proposed with a future maximum residential density of 30 du/ac. Given that the lowest maximum residential density in the city is 8 du/ac for Low-Density Residential (City of Costa Mesa 2025b), this alternative would eliminate the potential incompatibility for future development projects.

As a result, Alternative D would remove 292 parcels from the Planning Area. Table 6-7 reflects the buildout of population, housing, and non-residential square footage for Alternative D.

Table 6-7. Comparison of Project Planning Area Buildout Projections and Alternative D Buildout Projections

Category	Project Buildout Projections	Alternative D Buildout Projections	Difference in Buildout *(Project – Alternative D)*
Population[1]	52,872	40,706	**-12,166**
Housing (DU)	22,030	15,901	**-6,129**
Non-Residential Square Feet	17,306,003	12,715,260	**-4,590,743**

Sources: Appendix B, Buildout Methodology. See Table 4.14-5, within Section 4.14, Population and Housing, of this Draft PEIR.
Notes: Negative number is represented by parenthesis "(number)."
[1] Baseline population for the Planning Area reflects population estimate (2.56 persons per household) for the City as recorded by the U.S. Census Bureau's 2020-2024 American Community Survey (U.S. Census 2026).

As shown above in Table 6-7, there would be 12,166 fewer residents, 6,129 fewer dwelling units, and 4.5 million fewer square feet of non-residential uses when compared to Project buildout conditions.

6.5.4.2 Ability to Meet Project Objectives

Alternative D would meet all the Project Objectives with the exception of Objectives 1, 2, and 7. Given that this alternative would not result in rezoning of existing non-Housing Element industrial parcels, Alternative D would have a reduced ability to meet Objective 7. However, Alternative D would still prioritize new housing near jobs and amenities while also revitalizing existing commercial areas within the Planning Area. Similarly, although the buildout potential under this alternative would be reduced in comparison to the Project, Alternative D would result in 15,901 additional units (see Table 6-7 above). This residential buildout would meet the City's RHNA goals of 11,760 units, but buildout of Alternative D would not accommodate required buffer capacity that would need to be accommodated, totaling 17,042 units within the 6th Cycle (see Chapter 3, Project Description, for more discussion). Given this, Alternative D would have a reduced ability to meet Objectives 1 and 2.

To maintain Housing Element certification, the Housing Element identifies sections of the City's Zoning Code that require amendments in order to comply with State law requirements, remove regulatory impediments or barriers to housing development, and streamline the housing development process. Alternative D would implement all other components of the Project. Specifically, Alternative D would implement the rezoning of Measure K sites with the applied MUOD, implement proposed amendments to the Zoning Code to be consistent with allowed densities, or adopt the proposed Objective Design Standards for multifamily and mixed-use projects. As a result, Alternative D would implement the required programs identified in the City's Housing Element to diversify, stabilize, and increase housing. As such, Alternative D would meet Objectives 3, 4, 5, and 6.

6.5.4.3 Comparison of the Effects of Alternative D to the Project

Under Alternative D, no rezoning would occur on non-Housing Element sites with underlying industrial land uses. The amended MUOD would still apply to Housing Element sites with underlying industrial land uses. As such, future residential/mixed-use development projects under this alternative could be developed on existing industrial uses. As a result, Alternative D would have a buildout of 12,166 fewer residents, 6,129 fewer dwelling units, and 4.5 million fewer square feet of non-residential uses when compared to Project buildout conditions. Moreover, the mitigation measures set forth in this Draft PEIR would still be applicable under Alternative D. Therefore, as noted below, although Alternative D could reduce potential environmental impacts to select

environmental topics, all of the mitigation measures set forth in this Draft PEIR would continue to be required and relevant for the potential development under the implementation of Alternative D.

Aesthetics

The Project would amend the MUOD, establish Citywide Multifamily Residential and Mixed-Use Objective Design Standards, and amend the Zoning Code consistent with the Housing Element, and impacts to aesthetics would be less than significant. The amended MUOD would improve predictability and consistency in visual outcomes along major corridors in the city for future residential and mixed-use projects. Similar to the Project, Alternative D would continue to achieve these components of the project description, albeit to a lesser extent. Moreover, proposed rezoning would not occur on existing industrial non-Housing Element sites within the Planning Area, which reduce potential conflicts of new residential and mixed-use development within industrial areas and the potential for significant shade/shadow impacts on adjacent parcels due to taller maximum allowable building heights. However, under this alternative, the amended MUOD would still apply to Housing Element sites with underlying industrial land uses. Additionally, under this alternative, parcels within Safety Zone 3 would be removed from the Planning Area. As such, the scope of the alternative's reduction would only affect approximately 292 parcels within the Planning Area. Table 6-7 illustrates a reduction of potential redevelopment when compared to the Project. Regardless, Alternative D would still conflict with applicable zoning and other regulations governing scenic quality due to the potential development of taller buildings throughout the Planning Area, and impacts would remain significant and unavoidable, even after implementation of MM-4.1-1. However, due to the reduced scope of development under Alternative D, impacts related to aesthetics would be **less than** the Project.

Agriculture and Forestry Resources

Neither Alternative D nor the Project would conflict with existing zoning for agricultural use, or with a Williamson Act contract; or involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. As such, these impacts under Alternative D would be **similar to** the Project.

As discussed in Section 4.2 of this Draft PEIR, the Project would result in significant unavoidable impacts related to the conversion and/or loss of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Buildout under the Project is anticipated to result in the conversion of the City's last agricultural land consisting of Prime Farmland and Farmland of Statewide Importance. As with the Project, Alternative D would result in significant unavoidable impacts given that the parcels designated as Prime Farmland and Farmland of Statewide Importance are identified as Housing Element sites. Therefore, under Alternative D, impacts related to agriculture and forestry resources would be **the same as** the Project.

Air Quality

As discussed in Section 4.3 of this Draft PEIR, the Project would result in significant unavoidable impacts related to the potential to conflict with or obstruct implementation of the applicable air quality plan; increases of criteria air pollutants from construction and operation of future development facilitated by the Project; and exposure of sensitive receptors to substantial pollution concentrations. The Project would result in less than significant impacts related to other emissions.

As shown in Table 6-7, under Alternative D, residential and non-residential buildout conditions would be reduced compared to the Project. However, as further described below under "Population and Housing," the alternative is

anticipated to result in an exceedance in housing projections for the City in 2050. As such, Alternative D would result in significant unavoidable impacts related to the potential to conflict with or obstruct implementation of the applicable air quality plan given that the growth anticipated under Alternative D would still exceed the projections considered in the preparation of the AQMP. Therefore, implementation of Alternative D would not the Project's eliminate the significant and unavoidable impacts related to consistency with the applicable AQMP.

Similarly, increases of criteria air pollutants from construction and operation of future development, exposure of sensitive receptors to substantial pollution concentrations, and other emissions would be reduced due to the reduction in residential and mixed-use development under this alternative (see Table 6-7). In summary, Alternative D would result in less development potential than those anticipated under the Project, resulting in less pollutants associated with construction activities and less operational emissions.

As with the Project, Alternative D would incorporate MM-4.3-1 through MM-4.3-11; however, due to the nature of the proposed MUOD rezoning, future non-discretionary projects would be facilitated under this alternative, and these measures would not ensure that all impacts would be mitigated to a level of less than significant. As such, impacts under Alternative D would remain significant and unavoidable. However, due to the reduced buildout under Alternative D, impacts would be **less than** the Project.

Biological Resources

As with the Project, Alternative D would result in significant unavoidable impacts related to substantial adverse effect on plant and wildlife species identified as a sensitive or special status species. Future development under the Project may result in adverse effects on plant and wildlife species that are identified as sensitive or special status species. Even with implementation mitigation measures MM-4.4-1 through MM-4.4-6, the Project would have significant and unavoidable impacts.

Residential and mixed-use development would still occur in the Planning Area under Alternative D, which could result in significant and unavoidable impacts to special status plant and wildlife species (even with implementation of mitigation). Impacts under Alternative D relative to special status plant and wildlife species would remain significant and unavoidable but would be **less than** the Project.

Under the Project, impacts are less than significant with regards to sensitive natural communities and the movement of any native resident or migratory fish or wildlife species. Alternative D would result in similar impacts given the urban/developed nature of the city and lack of impacts to natural open space areas. However, the reduced buildout under Alternative D would reduce potential impacts compared to the Project, and impacts would be **less than** the Project.

Cultural Resources

As described in Section 4.5, the Project would result in significant and unavoidable impacts to historical and archaeological resources. Even with the implementation of existing regulations and MM-4.5-1 and MM-4.5-2, potential impacts relative to historical and archaeological resources would be significant and unavoidable because it is not possible to ensure the successful preservation of all historical and archaeological resources where new development may occur. The Project would result in less than significant impacts related to human remains.

Similar to the Project, Alternative D would result in the development/redevelopment of properties on sites with the potential occurrence of significant historical resources, archaeological resources, and/or human remains. The

increased allowable density under Alternative D and the Project would facilitate redevelopment in locations that may not otherwise be disturbed in the Planning Area, thereby resulting in increased potential to inadvertently encounter, damage, or destroy extent cultural resources. Under Alternative D, existing industrial non-Housing Element sites and parcels within Safety Zone 3 would be removed from proposed rezoning when compared to the Project, which would result in reduced potential to impact cultural resources. Therefore, cultural resources impacts under Alternative D would **less than** the Project but would still be significant and unavoidable.

Energy

Similar to the Project, implementation of Alternative D would increase the demand for electricity, natural gas, gasoline, and diesel consumption in the Planning Area during construction and operation of future development. However, similar to the Project, Alternative D would not result in wasteful, inefficient, or unnecessary consumption of energy resources, including electricity, natural gas, or petroleum during implementation. Neither the Project nor Alternative D would conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Additionally, under Alternative D, all applicable rules and regulations presented in Section 4.6 would reduce energy demand and increase energy efficiency related to future residential development, similar to the Project. However, under Alternative D, the buildout potential would be reduced, as illustrated in Table 6-7. Thus, impacts under Alternative D would be **less than** those anticipated under the Project.

Geology and Soils

As described in Section 4.7 of the Draft PEIR, even with implementation of mitigation measure MM-4.7-1, the Project would result significant and unavoidable impacts related to the destruction of a unique paleontological resource or site or unique geologic feature. The underlying geologic conditions in the Planning Area would not change under Alternative D. Any new development under Alternative D would be site-specific and would be exposed to existing geologic and soil conditions and hazards that would be unique to that property. Under Alternative D, geologic conditions would be similar to the Project due to the Planning Area's existing conditions. However, as development/redevelopment activity would be reduced under Alternative D due to removal of existing industrial non-Housing Element sites and parcels within Safety Zone 3 from proposed rezoning, impacts would be **less than** those anticipated under the Project but would still be significant and unavoidable.

Greenhouse Gas Emissions

Alternative D would generate additional GHG emissions due to the increased residential and mixed-use development. However, the alternative would result in a reduction of emissions due to removal of existing industrial non-Housing Element sites and parcels within Safety Zone 3 from proposed rezoning. Under the Project, significant and unavoidable impacts would occur related to the generation of GHG emissions even with the incorporation of mitigation measures MM-4.8-1 through MM-4.8-5. Although Alternative D would reduce the buildout potential when compared to the Project, Alternative D would result in residential/mixed-use development, resulting in an additional 15,901 dwelling units and an additional 12,715,260 square feet of non-residential uses. As such, GHG emissions under Alternative D would likely remain significant and unavoidable. Alternative D would result in growth within the Planning Area along transportation corridors, which could encourage use of alternative transportation methods such as transit, walking, or biking, and could result in shorter vehicle trips. Alternative D, similar to the Project, would also promote diverse housing options. However, even with elimination of existing industrial non-Housing Element sites and parcels within Safety Zone 3 from proposed rezoning, Alternative D would still result in significant GHG emissions due to future residential and mixed-use development and would not ensure all future projects utilize fully electric appliances. As such, the analysis provided in Section 4.8 of this Draft PEIR would also be generally

applicable to Alternative D. Alternative D would have the potential to conflict with applicable plans, policies, or regulations adopted for the purposes of reducing GHG emissions, and impacts would remain significant and unavoidable, even after implementation of MM-4.8-1 through MM-4.8-5. Therefore, impacts related to a potential conflict with existing regulations and potential GHG emissions under this alternative would remain significant and unavoidable but would be **less than** the Project due to the reduced buildout potential for residential and non-residential uses.

Hazards and Hazardous Materials

Alternative D would result in less development potential than what is proposed under the Project due to the removal of existing industrial non-Housing Element sites and parcels within Safety Zone 3 from proposed rezoning. As described in Section 4.9 of this Draft PEIR, even with implementation of mitigation measures MM-4.9-1 through MM-4.9-3, the Project would result in significant and unavoidable impacts related to the routine transport, use, or disposal of hazardous materials; the creation of a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions; hazardous emissions or handling of hazardous materials within one-quarter mile of existing or proposed schools; and sites included on a list of sites with hazardous materials compiled pursuant to Government Code Section 65962.5. All other potential impacts related to hazards and hazardous materials would be less than significant under the Project.

Given that existing industrial Housing Element sites are considered within the Planning Area under Alternative D, buildout of this alternative would still have the potential to facilitate additional residential and mixed-use development on contaminated sites or on parcels that contain or are near oil and gas wells. Construction and operational activities as a result of development/redevelopment would be site-specific and Alternative D would be required to implement MM-4.9-1 through MM-4.9-3 to reduce potentially significant impacts. However, the reduced scope of development potential under Alternative D would not eliminate the Project's the significant and unavoidable impacts.

Additionally, the Project includes parcels within an airport land use plan, including parcels within the Safety Zone 3 (see Figure 4.9-5, Airport Hazards). As detailed in Section 4.9 of the Draft PEIR, Project implementation via the amended MUOD would require noise and safety requirements, including height and land use restrictions, to be consistent with the AELUP for John Wayne Airport. As a result, future development projects would be required to modify the density through a reduction of units and occupancy terms and/or reduce the intensity of land uses. Furthermore, the ALUC would review future development projects within the vicinity of John Wayne Airport for the potential to impact airport operations related to noise and safety. Under Alternative D, parcels within Safety Zone 3 have been removed from the Planning Area. As a result, future development projects within the larger Airport Influence Area would be required to comply with the consistency requirements via the amended MUOD and undergo ALUC review. As with the Project, with review by the ALUC through standard permitting processes, future development projects under Alternative D would be required to meet requirements for noise and safety within airport influence areas, consistent with the MUOD amendments, and impacts would be less than significant. Moreover, removal of the 9 additional parcels that are within John Wayne Airport Safety Zone 3, as shown in Figure 4.9-5 of this Draft PEIR would eliminate the potential incompatibility for future development projects.

Given the above, under Alternative D, impacts would be **less than** the Project but impacts under Alternative D would remain significant and unavoidable even with the incorporation of mitigation measures.

Hydrology and Water Quality

As discussed in Section 4.10 of this Draft PEIR, the Project would result in less than significant impacts or no impact related to water quality standards, groundwater supplies, existing drainage patterns, the risk of pollutant release due to inundation, and consistency with a water quality control plan. Under this alternative, buildout would still be required to comply with existing regulatory requirements and policies that would reduce impacts from adverse effects related to hydrology and water quality, similar to the Project. However, the scope of the development/redevelopment activity anticipated to occur would be reduced when compared to the Project, which would result in reduced potential for impacts associated with hydrology and water quality. Therefore, impacts under Alternative D would be **less than** those anticipated under the Project.

Land Use and Planning

Under Alternative D, implementation of proposed rezoning would still occur within the Planning Area with the exception of existing industrial non-Housing Element sites and parcels within Safety Zone 3. As such, this alternative would be consistent with the adopted Housing Element and its required implementation programs. Furthermore, the implementation of the residential and mixed-use development proposed under the rezoning would facilitate infill development (although at a reduced buildout under this alternative) and would not conflict with the General Plan goals and policies or other applicable planning documents. Additionally, future development projects under this alternative would have a reduced potential for ALUC incompatibility given that Safety Zone 3 recommends limited residential uses to "very low densities." Under the Project, these parcels are proposed with a future maximum residential density of 30 du/ac. Given that the lowest maximum residential density in the city is 8 du/ac for Low-Density Residential (City of Costa Mesa 2025b), the proposed density under the Project would not be considered very low density. As such, the removal of these parcels under this alternative would eliminate the potential incompatibility for future development projects when undergoing ALUC review. Thus, impacts related to the consistency with applicable land use plans, policies, and regulations under Alternative D would be **less than** to the Project.

Mineral Resources

As discussed in Section 4.12 of this Draft PEIR, the Project would result in less than significant impacts related to the loss of availability of known mineral resource that would be of value to the region and the residents of the state or and no impact related to the loss of a locally important mineral resource recovery site. Under Alternative D, the proposed rezoning would not occur on existing industrial non-Housing Element sites and parcels within Safety Zone 3. However, Alternative D would continue to facilitate additional housing and mixed-use development on existing industrial Housing Element sites. Moreover, Alternative D would not result in changes to existing regulatory conditions pertaining to available mineral resources or mineral resource extraction in the Planning Area (i.e., oil, gas, and aggregate). Thus, and impacts under Alternative B would be **similar** to the Project.

Noise

Under the Project, potential construction noise and vibration impacts from reasonably foreseeable project construction activities, as well as operational noise due to operation of residential and mixed-use development would be significant and unavoidable after application of mitigation measures MM-4.13-1 through MM-4.13-4. Although Alternative D would reduce impacts associated with a reduced development potential, noise impacts would likely remain significant and unavoidable due to construction and operation of mixed-use development under this alternative. As further described in Section 4.13 of this Draft PEIR, applicable land use and noise

policies, compliance with consistency requirements via the amended MUOD, and appropriate review by the ALUC, would help ensure consistency with the adopted AELUP for John Wayne Airport. Furthermore, Project implementation via the amended MUOD would require a noise study for future development projects abutting a freeway or within the Airport Influence Area, as defined by the AELUP for John Wayne Airport, and impacts under the Project would be less than significant. Similarly, Alternative D would not result in changes to existing regulatory conditions pertaining to noise contours and land use compatibility. For these reasons, overall noise impacts under Alternative D would be **less than** the Project.

Population and Housing

As discussed in Section 4.14 of this Draft PEIR, the Project would result in significant and unavoidable impacts associated with exceedance in population growth from future development facilitated by the Project that was not anticipated in adopted plans. Specifically, the Project would exceed the General Plan/AQMP's and SCAG Connect SoCal's growth projections for the City. Even with the implementation of mitigation measure MM-4.14-1, impacts would be significant and unavoidable. The buildout anticipated under Alternative D when compared to the Project would be reduced by 6,129 fewer dwelling units (see Table 6-7 above) due to no rezoning for existing industrial non-Housing Element sites and parcels within Safety Zone 3. Section 4.14 of the Draft PEIR determined the Project would exceed the General Plan's projections by 3,788 units. As such, the reduction in units would be within planned projections for the General Plan. The Project's buildout was anticipated to exceed SCAG's 2050 housing projections for the City by approximately 6,424 units (see Table 4.14-7 within Section 4.14). The reduction of 6,129 units under Alternative D would still result in an exceedance of Connect SoCal's projections. As such, it is anticipated that Alternative D would still represent unplanned population growth. Therefore, the alternative would not eliminate the Project's significant and unavoidable impact. However, impacts under Alternative D would be **less than** the Project. Moreover, impacts related to the displacement of housing and people would be less than significant under the Project. Similar to the Project, impacts related to displacement under Alternative D would be **similar to** the Project.

Public Services

As discussed in Section 4.15 of this Draft PEIR, the Project would result in less than significant impacts for fire protection services, police protection services, school services, and library services. As shown above in Table 6-7, Alternative D would result in 12,166 fewer residents, 6,129 fewer dwelling units, and 4.5 million fewer square feet of non-residential uses when compared to Project buildout conditions. Given the reduced buildout potential under Alternative D, impacts would be **less than** the Project.

Recreation

As discussed in Section 4.16 of this Draft PEIR, the Project would 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. Further, implementation of the Project would create future capacity or service level problems given the City would be required to provide an additional 106.59 acres of parkland to meet the City's goal of 4.26 acres of parkland for every 1,000 residents, and result in substantial adverse physical impacts associated with the provision of 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 parks. Similar to the Project, Alternative D would result in new residential and mixed-use development projects, resulting in an increased residential population that would utilize existing neighborhood and regional parks or other recreational facilities. Under existing conditions, the City maintains 5.28 acres per 1,000 residents. With the addition of Alternative D, the City's population would increase to 149,837 residents, and thus, the parkland

ratio would be reduced to 3.84 acres of parkland for every 1,000 residents.[11] Under the proposed Project, the City's parkland/resident ratio would fall below the General Plan goal to 4.26 acres of parkland per 1,000 residents. As such, Alternative D would result in slightly more parkland per resident when compared to the Project, and thus, impacts under Alternative D would be reduced in comparison to the Project. Additionally, future development projects under Alternative D would be required to comply with applicable regulations (e.g., Quimby Act). The City also requires the payment of parks and recreation impact fees for new multifamily residential units and ADUs in the city to reduce the potential impacts of proposed developments to parks and recreation services and facilities, pursuant to Costa Mesa Municipal Code Section 13-276. Furthermore, under the Project and Alternative D, the MUOD would require residential and mixed-use residential development on Housing Element sites to dedicate 30 percent of the lot for open space. However, neither the Project nor Alternative D includes new neighborhood or regional parks. Given this, impacts under Alternative D would remain significant and unavoidable. However, as Alternative D would result in a lower development potential, impacts related to parks and recreation would be **less than** the Project.

Transportation

As discussed in Section 4.17, Transportation, of this Draft PEIR, Project-related impacts related the potential to conflict with CEQA Guidelines Section 15064.3(b) and potential conflicts with an applicable plan, ordinance, or policy addressing circulation, transit, roadways, bicycles, and pedestrian activities would be less than significant.

Implementation of Alternative D would not conflict with an applicable plan, ordinance, or policy addressing the circulation system, **similar** to the Project. The Project would result in a less than significant VMT impact because the Project's daily VMT per service population would be 16.7, which is below than the City's threshold of 25.4 daily VMT per service population. The buildout anticipated under Alternative D would be reduced with the change no rezoning for existing industrial non-Housing Element sites and parcels within Safety Zone 3. Compared to the Project, Alternative D would facilitate 6,129 fewer dwelling units (or 12,166 fewer residents) and 4,590,743 fewer non-residential square feet with fewer associated employees. The impact of adding residents to the Planning Area would have a greater effect in reducing VMT per service population because there is a need for housing near jobs (i.e., the jobs-to-housing ratio would improve) in the Planning Area. Therefore, by reducing the number of dwelling units and the Planning Area, the daily VMT per service population under Alternative D would increase when compared to Project due to reduced housing opportunities across the city. Therefore, impacts related to the consistency with CEQA Guidelines section 15064.3, subdivision (b) would be **more than** the Project.

Tribal Cultural Resources

As described in Section 4.18 of this Draft PEIR, potential impacts were found to be significant and unavoidable. The development/redevelopment under Alternative D would not occur on existing industrial non-Housing Element sites and parcels within Safety Zone 3. Therefore, the likely intensity of development under Alternative D would be reduced, which would reduce potential ground-disturbing activities associated with the construction and would result in a reduced potential for impacts to tribal resources. As Alternative D would result in a reduced development potential and less associated ground disturbing activity when compared to the Project, potential impacts resulting in a substantial adverse change in the significance of a tribal cultural resource under this alternative would be **less than** the Project.

[11] 576 acres of parkland / (149,837 residents / 1,000) = 3.84 acres of parkland per 1,000 residents

Utilities and Service Systems

As discussed in Section 4.19 of this Draft PEIR, the Project would result in less than significant impacts related to relocation or construction of new or expanded facilities, water supply, capacity of wastewater treatment services, and the generation of solid waste. Under Alternative D, future development would not occur on existing industrial non-Housing Element sites and parcels within Safety Zone 3, which would result in decreased service area demands for utilities and service systems. As such, impacts under Alternative D would be **less than** the Project.

6.6 Summary of Alternatives to the Project

To summarize these Project alternatives, as suggested in CEQA Section 15126.6(d), a matrix was prepared to summarize and compare the impacts of each Project alternative where significant and unavoidable impacts would occur (see Table 6-8). In addition, Table 6-9 compares the alternatives in terms of whether they meet the Project objectives.

Table 6-8. Comparison of Project and Alternatives Impacts

Environmental Issue Area	Project	Alternative A	Alternative B	Alternative C	Alternative D
4.1 Aesthetics	SU	▼ (Eliminate)	▼	▼	▼
4.2 Agriculture and Forestry Resources	SU	▼ (Eliminate)	=	=	=
4.3 Air Quality	SU	▼ (Eliminate)	▼ (Eliminate)	▼	▼
4.4 Biological Resources	SU	▼	▼	=	▼
4.5 Cultural Resources	SU	▼	▼	=	▼
4.6 Energy	LTS	▼	▼	▼	▼
4.7 Geology and Soils	SU	▼	▼	=	▼
4.8 Greenhouse Gas Emissions	SU	▼	▼	▼	▼
4.9 Hazards and Hazardous Materials	SU	=	▼	=	▼
4.10 Hydrology and Water Quality	LTS	▼	▼	=	▼
4.11 Land Use and Planning	LTS	▲	=	=	▼
4.12 Mineral Resources	LTS	=	=	=	=
4.13 Noise	SU	▼ (Eliminate)	▼	▼	▼
4.14 Population and Housing	SU	▼ (Eliminate)	▼ (Eliminate)	▼	▼
4.15 Public Services	LTS	▼	▼	▼	▼
4.16 Recreation	SU	▼	▼	▼	▼
4.17 Transportation	LTS	▲	▲	▲	▲
4.18 Tribal Cultural Resources	SU	=	▼	▼	▼
4.19 Utilities and Service Systems	LTS	▼	▼	▼	▼

Notes:

= Alternative is likely to result in similar impacts when compared to Project.
▼ Alternative is likely to result in reduced impacts when compared to Project.
▲ Alternative is likely to result in greater impacts when compared to Project.
LTS = less than significant impact; SU = significant unavoidable impact; Eliminate = Alternative would eliminate a SU impact

Table 6-9. Alternatives Comparison for Project Objectives

Objective	Project	Alternative A	Alternative B	Alternative C	Alternative D
1. Implement many of the required programs of the City's 2021-2029 Housing Element and accommodate the City's Regional Housing Needs Allocation (RHNA), as required by State law.	Meets Objective	Substantially Reduced Ability to Meet Objective	Substantially Reduced Ability to Meet Objective	Meets Objective	Reduced Ability to Meets Objective
2. Achieve Housing Element certification, as required by the State.	Meets Objective	Does Not Meet Objective	Substantially Reduced Ability to Meet Objective	Meets Objective	Reduced Ability to Meets Objective
3. Implement the rezoning of Measure K sites, as allowed by Measure K (2022), including the rezoning of Housing Element sites, as allowed by State law.	Meets Objective	Does Not Meet Objective	Does Not Meets Objective	Meets Objective	Meets Objective
4. Support City Council's goal to diversify, stabilize, and increase housing to reflect community needs.	Meets Objective	Substantially Reduced Ability to Meet Objective	Substantially Reduced Ability to Meet Objective	Meets Objective	Meets Objective
5. Amend the Zoning Code to be consistent with allowed densities, taking into account State and Federal law and to better facilitate the development of housing.	Meets Objective	Does Not Meet Objective	Meets Objective	Meets Objective	Meets Objective
6. Prepare objective design standards consistent with the community's vision for citywide multi-family and mixed-use projects.	Meets Objective	Does Not Meet Objective	Meets Objective	Meets Objective	Meets Objective
7. Prioritize new housing near jobs and amenities, while reducing potential impacts to existing residential neighborhoods, in order to revitalize existing commercial and industrial areas with the introduction of new housing and mixed-use developments.	Meets Objective	Substantially Reduced Ability to Meet Objective	Reduced Ability to Meets Objective	Meets Objective	Reduced Ability to Meet Objective

6.7 Environmentally Superior Alternative

An EIR must identify an "environmentally superior" alternative; and, where the no project alternative is environmentally superior, the EIR is then required to identify an alternative from among the others evaluated as environmentally superior (CEQA Guidelines Section 15126.6(e)(2)).

As shown in Table 6-8, Alternative A would result in reduced environmental impacts to more environmental topics as compared to Alternatives B, C, and D, including reduced impacts to aesthetics, agriculture and forestry resources, air quality, biological resources, cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, population and housing, public services, recreation, and utilities and system services. Alternative A, which would continue implementation of the City's General Plan and other approved planning documents, would result in reduced environmental impacts due elimination of the population and housing growth associated with the proposed MUOD rezoning to facilitate new residential and mixed-use development. Without the implementation of the Housing Element, Alternative A would result in greater land-use/planning impacts as compared to the Project due to inconsistency with State Housing Element Law, and greater impacts related to VMT due to reduced infill housing development. Nevertheless, the reduction in housing production and non-residential development/redevelopment under Alternative A would result in a more environmentally superior alternative when compared to the Project and when compared to Alternatives B, C, and D, due to the elimination of significant and unavoidable impacts (related to aesthetics, agriculture and forestry resources, population and housing, and recreation) and other reduced environmental impacts.

As required under CEQA Guidelines Section 15126.6(e)(2), if the environmentally superior alternative is the "no project" alternative, the EIR must also identify an environmentally superior alternative among the other alternatives. Alternatives B, C and D would reduce impacts to many of the same topic areas and would all result in greater impacts to transportation (as shown in Table 6-8). Under Alternative B, significant and unavoidable impacts would be eliminated when compared to the Project for the following topic areas: air quality and population and housing. Moreover, under Alternative B, there would be 16,143 fewer units (including 37,801 fewer residents) and 13,642,527 fewer non-residential square feet when compared to the Project buildout conditions. This represents the largest reduction in buildout projections in comparison to all other Alternatives (with the exception of Alternative A). Therefore, when compared to both the Project and Alternatives C and D, Alternative B would be the environmentally superior alternative.

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