DRAFT

Modelo Project EIR

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AB	Assembly Bill
ACOE	U.S. Army Corps of Engineers
ADA	Americans with Disabilities Act
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
AF	acre-feet
AFY	acre-feet per year
APN	Assessor's Parcel Number
AQMP	Air Quality Management Plan
ATC	Applied Technology Center
BMP	Best Management Practice
BNSF	Burlington Northern Santa Fe
BTU	British thermal units
C/M1	Commercial Manufacturing
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CalARP	California Accidental Release Prevention
CalOSHA	California Occupational Safety and Health Administration
CAP	climate action plan
CARB	California Air Resources Board
CAT	Climate Action Team
CBC	California Building Code
CBMWD	Central Basin Municipal Water District
CBSC	California Building Standards Commission
CCCC	California Climate Change Center
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFD	community facilities districts
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH_4	methane
CHRIS	California Historical Resources Information System
CIWM	California Integrated Waste Management
CIWMB	California Integrated Waste Management Board
CMP	Congestion Management Program
CNEL	community noise equivalent level
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO_2	carbon dioxide
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CSE	County-Wide Siting Element

Acronym/Abbreviation	Definition
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
DOT	Federal Department of Transportation
DPM	Diesel particulate matter
DPR	Department of Parks and Recreation
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EIR	Environmental Impact Report
EO	Executive Order
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community-Right-To-Know Act
ESA	federal Endangered Species Act of 1973
FAR	Floor Area Ratio
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FR	Federal Register
FRA	Federal Railroad Administration
FTA	Federal Transit Authority
GHG	greenhouse gas
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
GWP	global warming potential
HA	Hydrologic Area
HAP	hazardous air pollutant
HARP2	Hotspots Analysis and Reporting Program Version 2
HASP	Health & Safety Plan
HBA	Highway Beautification Act
HCM	Highway Capacity Manual
HFC	hydrofluorocarbon
HRA	health risk assessment
HSA	Hydrologic Sub-Area
HSWA	Hazardous and Solid Waste Act
HU	Hydrologic Unit
HUC	hydrologic unit code
HVAC	heating, ventilation, and air conditioning
I-	Interstate
I-710	Long Beach Freeway
ICU	Intersection Capacity Utilization
IPCC	Intergovernmental Panel on Climate Change
IRWMP	integrated regional water management plan
IS/NOP	Initial Study/Notice of Preparation
JWPCP	Joint Water Pollution Control Plan
K-12	Kindergarten through 12th grade
LACFD	Los Angeles County Fire Department
LACM	Natural History Museum of Los Angeles County
LACSD	Los Angeles County Sanitation District
LARWQCB	Los Angeles Regional Water Quality Control Board

Acronym/Abbreviation	Definition
LASD	Los Angeles County Sheriff's Department
LCFS	Low Carbon Fuel Standard
LED	Light Emitting Diode
LEED	Leadership in Energy and Environmental Design
LFG	landfill gas
LID	Low Impact Development
LOS	Level of service
LST	localized significance threshold
LUST	leaking underground storage tank
MBTA	Migratory Bird Treaty Act
MCL	Maximum Contaminant Level
MLD	most likely descendant
MMRP	Mitigation Monitoring and Reporting Program
MMT	million metric tons
MPO	Metropolitan Planning Organization
MS_4	Municipal Separate Storm Sewer System
MT	metric tons
MWD	Metropolitan Water District of Southern California
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NB	northbound
NCHRP	National Cooperative Highway Research Program
NCP	National Contingency Plan
NEA	Northwest Economic Associates
NEHRP	National Earthquake Hazards Reduction Program
NEHRPA	National Earthquake Hazards Reduction Program Act
NETR	Nationwide Environmental Title Research
NF_3	nitrogen trifluoride
NHAPS	National Human Activity Pattern Survey
NHTSA	National Highway Traffic Safety Administration
NO_2	nitrogen dioxide
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NRPA	National Recreation and Parks Association
O_2	oxygen
O_3	ozone
OCP	organochlorine pesticide
OEHHA	Office of Environmental Health Hazard Assessment
OPR	Office of Planning and Research
PAH	polynuclear aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCE	passenger car equivalency
PF	Public Facility
PFC	Perfluorocarbon
PICO	Pico Rivera air monitoring station

Acronym/Abbreviation	Definition
PM_{10}	particulate matter less than or equal to 10 microns in diameter; coarse, respirable, or inhalable particulate matter
$PM_{2.5}$	particulate matter less than or equal to 2.5 microns in diameter; fine particulate matter
PPA	Park Planning Area
PPV	peak particle velocity
PRC	Public Resources Code
PRIMP	Paleontological Resources Impact Mitigation Program
RAP	Remedial Action Plan
RAQS	regional air quality strategy
RBOB	reformulated gasoline blendstock for oxygenate blending
RCNM	Roadway Construction Noise Model
RCRA	federal Resource Conservation and Recovery Act of 1976
REC	recognized environmental condition
REL	reference exposure level
RHNA	Regional Housing Needs Assessment
RMS	root mean square
RPS	Renewable Portfolio Standard
RSCC	Recommended Soil Cleanup Criteria
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Quality Control Board
SAB	State Allocation Board
SB	southbound
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SCS	Sustainable Communities Strategy
SF_6	sulfur hexafluoride
SGMA	Sustainable Groundwater Management Act
SIP	state implementation plan
SLCP	short-lived climate pollutant
SLF	Sacred Lands File
SO_2	sulfur dioxide
SPL	Sound Pressure Level
SR	State Route
SRA	Source-receptor area
SUSMP	Standard Urban Stormwater Mitigation Plans
SVOCs	Semi-volatile organic compounds
SVP	Society of Vertebrate Paleontology
SWAT	Solid Waste Air Quality Assessment Testing
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TCE	trichloroethene
TCR	tribal cultural resources
TDM	transportation demand management

Acronym/Abbreviation	Definition
TIA	Transportation Impact Analysis
TIS	Transportation Impact Study
TMDL	develop total maximum daily load
TPH	Total Petroleum Hydrocarbons
UBC	Uniform Building Code
UCSB	University of California Santa Barbara
USFWS	United States Fish and Wildlife Services
USGS	United States Geological Survey
UST	underground storage tank
UWMP	Urban Water Management Plan
V/C	volume-to-capacity
VMT	vehicle miles traveled
VOC	volatile organic compound
VPH	Vehicles per Hour
WDR	Waste Discharge Requirement
ZNE	zero net energy

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Executive Summary

ES.1 Introduction

This Environmental Impact Report (EIR) has been prepared by the City of Commerce (City) as the lead agency pursuant to the California Environmental Quality Act (CEQA) Public Resources Code 21000 et seq., and the State CEQA Guidelines (California Code of Regulations, Section 15000 et seq.). This EIR has been prepared to evaluate the environmental effects of the proposed Modelo Project (Project/proposed Project). The purpose of this EIR is to focus the discussion on the Project's potential effects on the environment, which the lead agency has determined may be significant. In addition, feasible mitigation measures are recommended, when applicable, that could reduce significant environmental impacts or avoid significant environmental impacts.

The Project site is comprised of four legal parcels, totaling approximately 17.37 acres. Under existing conditions the Project site comprises the Veterans Memorial Park and a vacant lot. The Veterans Memorial Park was constructed between 1965 and 1970; it includes a baseball diamond, two basketball courts, a community center, a parking lot, and miscellaneous outdoor recreational spaces. The Project site is underlain by a borrow-pit type of landfill created for, and during, the construction of the Interstate 5 (I-5) freeway, which is located immediately east of the Project site.

According to the City of Commerce General Plan, the Veterans Memorial Park is designated and zoned as Public Facility (PF) and the vacant lot is designated and zoned as Commercial Manufacturing (C/M1; City of Commerce 2009).

Regionally, the City is located within the south central portion of Los Angeles County (County), approximately six miles east of Downtown Los Angeles. The Project site is located in the southeastern corner of the City, near the City's boundaries with Bell Gardens, Downey, Pico Rivera, and Montebello. More specifically, the Project site is located immediately west of the I-5 freeway, south of Zindell Avenue, and east of a single-family residential neighborhood located west of Avenida Aguascalientes, and north of the Rio Hondo River and Path. The addresses associated with the Project site consist of 7316 Gage Avenue and 6364 Zindell Avenue. The Project site is composed of four Assessor's Parcel Numbers (APNs): 6357-018-005 (7.92 acres); 6357-019-900 – Parcel 1 (4.98 acres); 6357-019-904 – Parcel 2 (4.40 acres); and, 6357-019-905 (0.02 acre). The latitude and longitude of the approximate center of the Project site is 33°58'21.61″ North and 118°7′32.22″ West.

The general vicinity surrounding the Project site is developed with a mix of residential, commercial, industrial, and open space land uses. The Project site is surrounded by various commercial businesses to the east, across the I-5 freeway (within the City of Montebello); the Denny's, Best Western Plus Commerce Hotel, a warehouse (east of Zindell Avenue) and single-/multi-family dwellings (west of Zindell Avenue) to the north; a single-family residential neighborhood and neighborhood commercial center to the west; and the Rio Hondo River and Path and single-family dwellings to the south (within the City of Downey).

ES.2 EIR Document Organization

This EIR is organized as follows:

Executive Summary - Outlines the conclusions of the environmental analysis and provides a summary of the proposed Project and the Project alternatives analyzed in the EIR. This section also includes a table summarizing all environmental impacts identified in the EIR along with the associated mitigation measures proposed to reduce or avoid each impact.

Chapter 1: Introduction - Serves as a forward to the EIR, introducing the Project, the applicable environmental review procedures, and the organization of the EIR.

Chapter 2: Project Description - Provides a detailed description of the setting, objectives, characteristics, operation, and construction of the proposed Project and required discretionary approvals.

Chapter 3: Introduction to Environmental Analysis - Describes the potential environmental impacts of the proposed Project, as well as proposed mitigation measures to reduce or avoid any potentially significant impacts. The discussion in Chapter 3 is organized by 17 environmental issue areas as follows:

Section 3.1	Aesthetics	Section 3.10	Land Use and Planning
Section 3.2	Air Quality	Section 3.11	Noise
Section 3.3	Biological Resources	Section 3.12	Population and Housing
Section 3.4	Cultural Resources	Section 3.13	Public Services
Section 3.5	Energy	Section 3.14	Recreation
Section 3.6	Geology and Soils	Section 3.15	Transportation
Section 3.7	Greenhouse Gas Emissions	Section 3.16	Tribal Cultural Resources
Section 3.8	Hazards and Hazardous Materials	Section 3.17	Utilities and Service Systems
Section 3.9	Hydrology and Water Quality		

For each environmental issue area, the analysis and discussion are organized into eight subsections as described below:

- **Environmental Setting** – This subsection describes the physical environmental conditions in the vicinity of the proposed Project at the time of publication of the Initial Study/Notice of Preparation (IS/NOP). The environmental setting establishes the baseline conditions by which the County will determine whether specific Project-related impacts are significant.
- **Relevant Plans, Policies, and Ordinances** - This subsection describes the laws, regulations, ordinances, plans, and policies applicable to the environmental issue area and the proposed Project.
- **Thresholds of Significance** – This subsection identifies a set of thresholds by which the level of impact is determined.
- **Methodology** – This subsection describes how the analysis was conducted.
- **Impacts Analysis** – This subsection provides a detailed analysis regarding the environmental effects of the proposed Project, and whether the impacts of the proposed Project would meet or exceed the thresholds of significance.
- **Cumulative Impacts** – Provides an evaluation of the potential cumulative impacts of the proposed Project in combination with identified related projects.
- **Mitigation Measures** – This subsection identifies potentially feasible mitigation measures that would avoid or substantially reduce significant adverse Project impacts.
- **Level of Significance After Mitigation** – This subsection discusses whether Project-related impacts would be reduced to below a level of significance with implementation of the mitigation measures identified in the EIR. If applicable, this subsection also identifies any residual significant and unavoidable adverse impacts of the proposed Project that would result even with implementation of any feasible mitigation measures.

In addition to the eight subsections listed above, full citations for all documents referred to in each environmental issue area discussion are included at the end of each section or chapter.

Chapter 4: Alternatives - Discusses alternatives to the proposed Project, including a No Project Alternative. This chapter describes the rationale for selecting the range of alternatives discussed in the EIR and identifies the alternatives considered by the City that were rejected from further discussion as infeasible during the scoping process. Lastly, Chapter 4 includes a discussion of the environmental impacts of the alternatives that were carried forward for analysis and identifies the environmentally superior alternative.

Chapter 5: Other CEQA Considerations – Provides a discussion of potential environmental impacts as a result of the proposed Project, including those that can be reduced to a less-than-significant level and those significant environmental effects that cannot be avoided if the Project is implemented. These include impacts that can be mitigated, but cannot be reduced to a less than significant level.

Chapter 6: List of Preparers - Gives names and contact information of those responsible for writing this EIR.

Appendices include various technical studies prepared for the proposed Project, as listed in the Table of Contents.

ES.3 Project Description

E.S.3.1 Project overview

The Project involves the demolition of the existing Veterans Memorial Park (which is currently in an advanced state of disrepair) and the adjacent vacant parcel and the redevelopment of the Project site to accommodate a mixed-use development. The proposed Project would include 850 residential units, 165,000 square feet of commercial uses, a 77,050-square-foot community center, a 5,000-square-foot museum, and approximately 4.75 acres of parks and open space, the details of which are as follows:

Veterans Memorial Park

The new structures proposed as part of the new Veterans Memorial Park would include a four-story, 77,050-square-foot community center. The community center would include indoor sports facilities and offices, a library, and a ballroom/event space as well as supporting amenities (e.g. offices, restrooms, lobbies etc.).The community center would be approximately 120 feet in height and located on the southeastern portion of the Project site along the I-5 freeway. A Sports Complex comprising youth-sized soccer and baseball fields (to accommodate local and regional league and tournament matches), a playground, and public open space would be located immediately adjacent to the community center. The green space would lead towards the grass-stepped amphitheater, which includes concrete bench steps and would essentially separate the residential development on the west of the Project site and commercial development to the east. The Project also proposes an art component, including a 5,000-square-foot Latino Museum, and murals.

Residential

The Project would include the construction of 850 new residential units, comprised of a mixture of 25-50 townhomes for sale, and the rest for-rent apartment and townhouse style units. The 850 residential apartment units would be split into several Type 5a, 5b and 3b construction structures of varying heights on the western

portion of the Project site.[1] For-sale townhomes would be constructed as Type 5a or 5b, and would be two stories in height, with a maximum height of 30 feet to the roof parapet. A private pool for townhome owners would be located in close proximity to the proposed townhomes. Parking is proposed as a combination of in-unit grade-level garage and subterranean parking accessible from the structure beneath the for-rent apartment units.

The apartment and townhouse for-rent units would vary from 35 feet to 75 feet (3 to 7 stories) in height, with a maximum height of 85 feet including roof pitches and architectural elements. Private access pools would be allocated to every two residential structures. Each structure would include its own event spaces, amenity rooms, package rooms, and bicycle storage areas. Direct, private access from subterranean parking to each residential building would be provided.

Entertainment Retail

As shown in Table 2-1, a portion of the 165,000 square feet of commercial land uses would be developed with entertainment retail contained within a three-story building located along the northeast edge of the site. The uses proposed within the entertainment retail structures would include:

- A 55,000-square-foot movie theater
- 16,000 square feet for various restaurant uses
- A 15,000-square-foot fitness center
- A 20,000-square-foot entertainment/arcade/bowling alley
- A 25,000-square-foot grocery store/food hall
- 28,000 square feet for general retail uses
- A 6,000-square-foot pharmacy.

In addition to the above-mentioned uses, the proposed commercial building would include an approximately 250-foot (15-story) high tower on the northeastern corner of the site. The proposed tower would be 220 feet high to the top floor and 250 feet high at its highest point (i.e. including the architectural screen) and would provide an additional 65,000 square feet of residential uses. The proposed Project's commercial and entertainment land uses would operate within different business hours depending on the use (for example, bars and restaurants would operate during different hours of the day than retail stores); however, the proposed Project would generally operate daily from 6:00 a.m. through 2:00 a.m.

Parking and Site Access

The Project would provide 1.5 parking spaces per unit, resulting in a total of 1,273 spaces, including 50 above-grade parking spaces and 75 loading-zone spaces. The Project would provide approximately 525 spaces for the proposed commercial uses. The subterranean parking structure would be constructed beneath the retail, community center, and residential living areas. Public access would be provided for the community center and retail visitors. Private access would be provided for residential uses. Passenger vehicle access to the Project site would occur from either the Gage Avenue driveway on the eastern parcel, or from the end of Zindell Avenue into the western parcel. Vehicular traffic from retail and park services would be routed through the Gage Avenue driveway,

[1] "Type 5a, 5b and 3b construction structures" refers to the standard fire resistance ratings as defined in the California Building Code.

and directed away from residential uses. Bicycle path traffic from the Rio Hondo Bike Path would be encouraged to utilize the Project's internal circulation to access Project amenities and Bicycle parking for visitors and residents would be provided throughout the Project site.

Transportation and Transit

The Project proposes to add a Commerce Bus Line stop at Veterans Park, near the Community Center and retail uses, on the eastern portion of the Project site. Additionally, a connection from the Commerce Bus Line to the proposed Washington Boulevard Metro Gold Line Extension, at Washington Boulevard and Rosemead Boulevard in the City of Pico Rivera, would provide access to the Project site. The Project proposes to enhance the existing bus stops at Slauson Avenue and Gage Avenue through additional shade, seating, and signage.

Bicycle parking for visitors and residents would be provided throughout the Project site. Bicycle path traffic from the Rio Hondo Bike Path would be encouraged to use the new Veterans Park amenities, as well as the proposed entertainment retail uses.

E.S.3.2 Project Objectives

The primary objectives of the Project include the following:

- Create a welcoming pedestrian-friendly contemporary village that will complement and enhance the City and the surrounding community.
- Provide an attractive lifestyle for residents, as well as draw visitors from all over Southern California to utilize the public spaces, youth sports complex, all-inclusive playground, and entertainment options.
- Provide a revitalized Veterans Memorial Park with new structures, an all-inclusive playground, a contemporary soccer and baseball youth sports complex, a contemporary library, and ample outdoor green space to maximize opportunities for community events and services.
- Create open and green public spaces that will integrate the Project's community space with the mixed-use entertainment/retail and residential structures.
- Enhance transit connections between the City of Commerce and surrounding municipalities by creating a transit oriented Project that takes advantage of both the existing Metro bus service and the future Metro Gold Line extension planned for Washington Boulevard in Pico Rivera.
- Create a progressive, forward-looking and vibrant community that is a desirable place for people to live, work, and play, all while offering robust community services for all.
- Provide connections to the Rio Hondo River and Path, as well as the surrounding neighborhood.
- Transform a deteriorating public park and vacant industrial lot into a 21st-Century mixed-use development that integrates vitally important public community uses with robust private development.
- Remediate the former on-site landfill to provide a safer environment for future park visitors, as well as residents living in the City.
- Provide new residential units comprised of a mixture of townhomes for sale and for-rent apartment and townhouse style units.
- Provide leading-edge environmentally friendly features in an effort to reduce the use of non-sustainable energy, reduce the Project's overall carbon footprint, encourage an outdoor and pedestrian lifestyle, and limit the visitors' and residents' exposure to harmful pollution.

E.S.3.3 Project Design Features

The City has incorporated project design features (PDFs) into the Project to reduce the potential for environmental effects. The following PDFs are incorporated into the analysis in applicable subsections throughout Chapter 3.0, Environmental Impact Analysis.

Air Quality

PDF-AQ/GHG-1: The Project would include energy-saving and sustainability goals to optimize building performance and enhance interior environments to promote health and well-being, and would be designed to achieve Leadership in Energy and Environmental Design (LEED) Gold or Platinum certification. To reduce construction and operational emissions to the extent feasible, the Project would incorporate the following project design features (PDFs) into the new facility (PDF-AQ/GHG-1):

- UVA and UVB-resistant windows and glass/glazing throughout the project
- Maximally-filtered mechanical ventilation systems in all structures
- Connection to City of Commerce's Community Choice Provider Energy Purchasing Program
- Solar-path driven design of pool and window locations to reduce need for cooling and heating
- Low-vapor flooring, wall-coating, and paint materials throughout the project
- Light Emitting Diode (LED) and low-energy light fixtures and bulbs throughout the project
- Low petroleum-content paving throughout the project
- Energy provided by Photo-voltaic cells, where possible.
- Managed cooling systems provided by ventilation, where and when seasonally possible.
- Highly insulated roof membranes and structures
- Electric car chargers
- Maximum shade for residential windows and retail spaces, provided by trees, awnings, and louvers, to reduce energy usage (designed according to solar patterns)
- Reclaimed water usage in landscaping and outdoor space irrigation
- Low-water usage and native planting throughout the landscaping
- Turf versus living grass in high foot-traffic areas of youth sports complex and Veterans Park

PDF-AQ-1: The Project would include various construction dust control strategies as a PDF. Compliance with these dust control measures would be identified on grading plan approvals. The following dust control strategies are proposed:

a) During clearing, grading, earthmoving, excavation, or transportation of cut or fill materials, water trucks or sprinkler systems shall be used to prevent dust from leaving the site and to create a crust after each day's activities cease.

b) During construction, water trucks or sprinkler systems shall be used to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this would include wetting down such areas later in the morning, after work is completed for the day, and whenever winds exceed 15 miles per hour during active operations. Watering of active disturbance areas,

including active grading areas and unpaved roads, would occur approximately every two hours of active operations, approximately three times per work day (at a minimum).

c) Speeds on unpaved roads shall be reduced to less than 15 miles per hour.

d) All grading and excavation operations shall be halted when wind speeds exceed 25 miles per hour.

e) Dirt and debris spilled onto paved surfaces at the project site and on the adjacent roadways shall be swept, vacuumed, and/or washed at the end of each workday.

f) All trucks hauling dirt, sand, soil, or other loose material to and from the construction site shall be covered and/or a minimum 2 feet of freeboard shall be maintained.

The following PDFs were included to reduce the impact of emissions from the nearby I-5 freeway on future residents of the Project.

PDF-HR-1 The applicant or its successor shall install high-efficiency return air filters on all heating, ventilation, and air conditioning (HVAC) systems serving the project. The air filtration system shall reduce at least 90% of particulate matter emissions, such as can be achieved with a Minimum Efficiency Reporting Value 13 (MERV 13) air filtration system installed on return vents in residential units. The property management for the project shall maintain the air filtration system on any HVAC system installed for the specified residential units in accordance with the manufacturer's recommendations for the life of the project.

PDF-HR-2 The applicant or its successor shall locate air intake vents on the residential buildings such that they do not face the I-5 freeway and are as far from I-5 freeway as practicable.

PDF-HR-3 A City-approved, ASHRAE certified specialist shall verify the implementation of the installation of high-efficiency air filtration systems on return vents to reduce ambient particulate matter concentrations prior to occupancy of the residential units. On-going maintenance of the installed filtration systems shall be the responsibility of the applicant or its successor. The City may enforce that the systems are in accordance with the manufacturer's recommendations for the life of the project.

Energy

See PDF-AQ/GHG-1 above.

Greenhouse Gas Emissions

See PDF-AQ/GHG-1 above.

E.S.4 Areas of Known Controversy

The IS/NOP for the EIR was distributed to the State Clearinghouse, interested agencies, groups, and individuals on August 19, 2019. Pursuant to Section 15082 of the CEQA Guidelines, recipients of the IS/NOP were requested to provide responses within 30 days after their receipt of the IS/NOP. The 30-day IS/NOP public review period ended September 17, 2019. During the 30-day public review period of the IS/NOP, the City held a Scoping Meeting within the City Council Chambers at 11 a.m. on August 24, 2019, to gather additional public input on the Project. The scoping meeting comments and comment letters expressed recommendations for the Project design, as well as

concerns relating to the Project's construction and operational impacts to transportation and traffic (including parking), public services (specifically the increased need for police protection services), air quality (specifically, pollution), population and housing (specifically, population increases in the area and the correlated socioeconomic repercussions, such as homelessness, security issues etc.), and cultural resources. These comments were considered during preparation of the EIR.

E.S.5 Required Permits and/or Approvals

Implementation of the Project may require permits or other forms of approval from public agencies or other entities prior to construction of the Project. They include, but are not limited, to the following:

City of Commerce

The City of Commerce will consider the following actions:

- A Development Agreement and Cost Reimbursement Agreement
- A General Plan Amendment to reflect the new land uses permitted on the Project site. The Project site would be re-designated from Public Facility (PF) and Commercial Manufacturing (C/M1) to Public Open Space, Commercial Retail, and Residential
- An associated Zone Amendment in the official City of Commerce Zoning Map and other exhibits to reflect the new zoning for the Project site.
- Approval of the Specific Plan for the Project Site
- Approval of the Project Master Signage Plan
- Certification of the EIR and consequently, approval of the proposed Project
- Construction, Building, Grading, and Occupancy Permits

Regional Water Quality Control Board, Los Angeles Region

National Pollutant Discharge Elimination System (NPDES) Construction General Permits are required for grading activities of 1 acre or larger. Since the Project would disturb more than 1 acre of soil, the Applicant must file a Notice of Intent (NOI) with the Los Angeles Regional Water Quality Control Board (LARWQCB) and obtain a General Construction Activity Stormwater Permit, pursuant to the NPDES regulations established under the Clean Water Act. This permit requires preparation and implementation of a stormwater pollution prevention plan (SWPPP), which is intended to prevent degradation of surface and groundwater during the grading and construction process. A report of waste discharge shall be submitted to the LARWQCB to obtain either a waste discharge requirement or a waiver for any impacts to waters of the state.

South Coast Air Quality Management District

A fugitive dust control plan submitted to the South Coast Air Quality Management District (SCAQMD) for approval will be required prior to issuance of grading permits (SCAQMD Rule 403). Permits for any planned stationary sources (e.g., emergency generators), will be required prior to Project approval.

E.S.6 Impacts Determined to be Significant

The Project's potential environmental impacts are summarized in Table ES-1, pursuant to State CEQA Guidelines Section 15123(b)(1). For a more detailed discussion, please see Chapter 3 of this document. Table ES-1 contains a summary of the impacts described in this EIR, as well as the impacts that were addressed in the Initial Study and determined to require no further detailed analysis in the EIR. Table ES-1 also includes a list of the proposed mitigation measures that are recommended in response to the Project's potentially significant impacts, as well as a determination of the level of significance of the impacts after implementation of the recommended mitigation measures. Impacts associated with air quality, noise, and transportation were identified as being significant and unavoidable.

E.S.7 Impacts not found to be Significant

As stated in Chapter 5 of the EIR, the Effects Found Not to be Significant subsection concluded that the Project would not result in significant impacts to agriculture and forestry resources, mineral resources, and wildfire; therefore, these topics are not addressed in the EIR as a separate environmental impact analysis section and not summarized in Table ES-1. Similarly, while the remaining seventeen issue areas are analyzed in this EIR, the analysis in the IS found that the proposed Project would result in no impacts, less than significant impacts, or less than significant impacts after mitigation for certain thresholds within some of the remaining seventeen issue areas. These thresholds have not been further analyzed in this EIR and not summarized in Table ES-1. Although aesthetics, energy, greenhouse gas emissions, hydrology and water quality, land use and planning, population and housing, public services, recreation and utilities and service systems were found to be less than significant with no mitigation required, each is addressed in Chapter 3 as stand-alone sections due to their lengthy discussions.

Several environmental topics were not found to be significant with mitigation incorporated as described in this EIR, including: biological resources, cultural resources, geology and soils, hazards and hazardous materials, noise, transportation, and tribal cultural resources.

E.S.8 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 more detailed discussion, please see Chapter 3 of this Draft EIR. 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

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Aesthetics			
In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Less Than Significant Impact	No mitigation measures are required.	Not Applicable
Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Less Than Significant Impact	No mitigation measures are required.	Not Applicable
Would the project have a cumulative effect on aesthetic resources?	Less Than Significant Impact	No mitigation measures are required.	Not Applicable
Air Quality			
Would the project conflict with or obstruct implementation of the applicable air quality plan?	Potentially Significant Impact	**MM-AQ-1:** Prior to SCAG's next update to the Regional Housing Needs Assessment, the City shall prepare a revised population, employment and housing forecast for SCAG that reflects anticipated growth generated from the proposed Project. The updated forecast provided to SCAG shall be used to inform the SCAQMD's update to the	Significant and Unavoidable

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		Regional Air Quality Strategy and State Implementation Plan. The County shall prepare and submit a letter notifying the SCAQMD of this revised forecast for use in the future update to the RAQS and SIP as required.	
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-AQ-2:** To reduce the potential for criteria air pollutants, specifically oxides of nitrogen (NO_x), as a result of construction of the Project, the applicant shall: Prior to the start of construction activities, the Project applicant, or its designee, shall ensure that all 75 horsepower or greater diesel-powered equipment are powered with California Air Resources Board (CARB)-certified Tier 4 Final engines, except where the Project applicant establishes to the satisfaction of the City of Murrieta that Tier 4 Final equipment is not available. An exemption from these requirements may be granted by the City in the event that the City documents that equipment with the required tier is not reasonably available and corresponding reductions in criteria air pollutant emissions are achieved from other construction equipment. Before an exemption may be considered by the City, the applicant shall be required to demonstrate that two construction fleet owners/operators in the Los Angeles County were contacted and that those owners/operators confirmed Tier 4 Final equipment could not be located within Los Angeles County.	Less Than Significant
Would the project expose sensitive receptors to substantial pollutant concentrations?	Potentially Significant Impact	**MM-AQ-2:** To reduce the potential for criteria air pollutants, specifically oxides of nitrogen (NO_x), as a result of construction of the Project, the applicant shall: Prior to the start of construction activities, the Project applicant, or its designee, shall ensure that all 75 horsepower or greater diesel-powered equipment are powered with California Air Resources Board (CARB)-certified Tier 4 Final engines, except where the Project applicant establishes to the satisfaction of the City of Murrieta that Tier 4 Final equipment is not available.	Less Than Significant

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		An exemption from these requirements may be granted by the City in the event that the City documents that equipment with the required tier is not reasonably available and corresponding reductions in criteria air pollutant emissions are achieved from other construction equipment. Before an exemption may be considered by the City, the applicant shall be required to demonstrate that two construction fleet owners/operators in the Los Angeles County were contacted and that those owners/operators confirmed Tier 4 Final equipment could not be located within Los Angeles County.	
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.	Not Applicable
Would the project have a cumulative effect on air quality resources?	Potentially Significant Impact	**MM-AQ-2:** To reduce the potential for criteria air pollutants, specifically oxides of nitrogen (NO_x), as a result of construction of the Project, the applicant shall: Prior to the start of construction activities, the Project applicant, or its designee, shall ensure that all 75 horsepower or greater diesel-powered equipment are powered with California Air Resources Board (CARB)-certified Tier 4 Final engines, except where the Project applicant establishes to the satisfaction of the City of Murrieta that Tier 4 Final equipment is not available. An exemption from these requirements may be granted by the City in the event that the City documents that equipment with the required tier is not reasonably available and corresponding reductions in criteria air pollutant emissions are achieved from other construction equipment. Before an exemption may be considered by the City, the applicant shall be required to demonstrate that two construction fleet owners/operators in the Los Angeles County were contacted and that those owners/operators confirmed Tier 4 Final equipment could not be located within Los Angeles County.	Less Than Significant

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Biological Resources			
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 Game or U.S. Fish and Wildlife Service?	Potentially Significant Impact	**MM-BIO-1:** **Rare Plant Surveys.** Prior to initiation of construction activities, focused surveys shall be conducted in suitable habitat within the proposed Project footprint. Focused surveys shall be conducted by a qualified biologist at the appropriate conditions and time of year (April to September), when blooming and fruiting has been confirmed in reference populations in the region. Focused surveys for special-status plant species shall be conducted by a qualified biologist according to: the CNPS Botanical Survey Guidelines (CNPS 2001); Protocols for Surveying and Evaluating Impacts to Special Status Native Populations and Natural Communities (CDFG 2009); and USFWS General Rare Plant Survey Guidelines (Cypher 2002).	Less Than Significant
Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Less Than Significant Impact	No mitigation measures are required.	Not Applicable
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?	Less Than Significant Impact	No mitigation measures are required.	Not Applicable

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
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?	Potentially Significant Impact	**MM-BIO-2:** **Rare Plant Habitat Compensation.** If rare plants are found and avoidance is not feasible, then one of the following options shall be implemented: **On-site Preservation.** If the Project can be modified to minimize impacts to rare plants, then the Project shall compensate the loss of the species and associated habitat through on-site restoration, creation, and preservation of a minimum of an equal amount of acreage of what is being impacted by the Project (1:1). The preserved portion of the site shall be designated as open space preserve and placed within a protective easement for conservation purposes, such as a restrictive covenant or conservation easement. Signage and fencing shall be provided at perimeter locations. Fencing design shall be developed to promote safety of life and property, prevent unauthorized access by pedestrians and vehicles into sensitive areas, and allow limited passage for wildlife species in the local area. **Offsite land Acquisition and Preservation.** If the Project cannot be modified to avoid or minimize impacts to rare plants, then the Project, then off-site land with similar habitat in the range of the species shall be identified and purchased at 2:1 of the acreage of what is being impacted by the Project. The purchase lands shall designated as an open space preserve and placed within a protective easement for conservation purposes, such as a restrictive covenant or conservation easement. Signage and fencing shall be provided at perimeter locations. Fencing design shall be developed to promote safety of life and property, prevent unauthorized access by pedestrians and vehicles into sensitive areas, and allow limited passage for wildlife species in the local area. **Prepare and Implement Plan for Salvage, Relocation, and/or Propagation of Special-Status Plant Species.** A qualified botanist will prepare a plan before the start of ground-disturbing activities to address monitoring, salvage, relocation, and propagation of special-status plant species. The relocation or propagation of plants	Less Than Significant

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		and seeds will be performed at a suitable mitigation site approved by the lead agency, and as appropriate per species. Documentation will include provisions that address the techniques, locations, and procedures required for the successful establishment of the plant populations. The plan will include provisions for performance that address survivability requirements, maintenance, monitoring, implementation, and the annual reporting requirements. MM-BIO-3: **Nesting Bird Surveys.** Ground disturbance activities and vegetation removal will be completed outside the avian breeding season (between September 1 and January 31). If ground disturbance activities (including clearing and grubbing) are scheduled to occur between February 1 and August 31, a qualified biologist will conduct a nesting bird survey within 72 hours of ground disturbance activities. The survey shall consist of full coverage of the proposed Project footprint and up to a 300-foot buffer (500-feet for suitable raptor habitat). The specific survey buffer will be determined in the field by the Project biologist and will take into account the species nesting in the area, the habitat present, and where access is permitted. If no active nests are found, no additional measures are required. If active nests are found, the nest locations shall be mapped by the qualified biologist. The nesting bird species will be documented and, to the degree feasible, the nesting stage (e.g., incubation of eggs, feeding of young, near fledging) will be determined. The biologist shall establish a no-disturbance buffer around each active nest. The buffer will be determined by the qualified biologist based on the biology of the species present and surrounding habitat (typically a starting point of 300 feet for most birds and 500 feet for raptors, but may be reduced as approved by the biologist). No construction or ground disturbance activities shall be conducted within the buffer	

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		until the biologist has determined the nest is no longer active (i.e., no eggs or young) and has informed the construction supervisor that activities may resume.	
Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Less Than Significant Impact	No mitigation measures are required.	Not Applicable
Would the project have a cumulative effect on biological resources?	Potentially Significant Impact	MM-BIO-1: **Rare Plant Surveys.** Prior to initiation of construction activities, focused surveys shall be conducted in suitable habitat within the proposed Project footprint. Focused surveys shall be conducted by a qualified biologist at the appropriate conditions and time of year (April to September), when blooming and fruiting has been confirmed in reference populations in the region. Focused surveys for special-status plant species shall be conducted by a qualified biologist according to: the CNPS Botanical Survey Guidelines (CNPS 2001); Protocols for Surveying and Evaluating Impacts to Special Status Native Populations and Natural Communities (CDFG 2009); and USFWS General Rare Plant Survey Guidelines (Cypher 2002). MM-BIO-2: **Rare Plant Habitat Compensation.** If rare plants are found and avoidance is not feasible, then one of the following options shall be implemented: **On-site Preservation.** If the Project can be modified to minimize impacts to rare plants, then the Project shall compensate the loss of the species and associated habitat through on-site restoration, creation, and preservation of a minimum of an equal amount of acreage of what is being impacted by the Project (1:1). The preserved portion of the site shall be designated as open space preserve and placed within a protective easement for conservation purposes, such as a restrictive	Less Than Significant

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		covenant or conservation easement. Signage and fencing shall be provided at perimeter locations. Fencing design shall be developed to promote safety of life and property, prevent unauthorized access by pedestrians and vehicles into sensitive areas, and allow limited passage for wildlife species in the local area. **Offsite land Acquisition and Preservation.** If the Project cannot be modified to avoid or minimize impacts to rare plants, then the Project, then off-site land with similar habitat in the range of the species shall be identified and purchased at 2:1 of the acreage of what is being impacted by the Project. The purchase lands shall designated as an open space preserve and placed within a protective easement for conservation purposes, such as a restrictive covenant or conservation easement. Signage and fencing shall be provided at perimeter locations. Fencing design shall be developed to promote safety of life and property, prevent unauthorized access by pedestrians and vehicles into sensitive areas, and allow limited passage for wildlife species in the local area. **Prepare and Implement Plan for Salvage, Relocation, and/or Propagation of Special-Status Plant Species.** A qualified botanist will prepare a plan before the start of ground-disturbing activities to address monitoring, salvage, relocation, and propagation of special-status plant species. The relocation or propagation of plants and seeds will be performed at a suitable mitigation site approved by the lead agency, and as appropriate per species. Documentation will include provisions that address the techniques, locations, and procedures required for the successful establishment of the plant populations. The plan will include provisions for performance that address survivability requirements, maintenance, monitoring, implementation, and the annual reporting requirements.	

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		MM-BIO-3: **Nesting Bird Surveys.** Ground disturbance activities and vegetation removal will be completed outside the avian breeding season (between September 1 and January 31). If ground disturbance activities (including clearing and grubbing) are scheduled to occur between February 1 and August 31, a qualified biologist will conduct a nesting bird survey within 72 hours of ground disturbance activities. The survey shall consist of full coverage of the proposed Project footprint and up to a 300-foot buffer (500-feet for suitable raptor habitat). The specific survey buffer will be determined in the field by the Project biologist and will take into account the species nesting in the area, the habitat present, and where access is permitted. If no active nests are found, no additional measures are required. If active nests are found, the nest locations shall be mapped by the qualified biologist. The nesting bird species will be documented and, to the degree feasible, the nesting stage (e.g., incubation of eggs, feeding of young, near fledging) will be determined. The biologist shall establish a no-disturbance buffer around each active nest. The buffer will be determined by the qualified biologist based on the biology of the species present and surrounding habitat (typically a starting point of 300 feet for most birds and 500 feet for raptors, but may be reduced as approved by the biologist). No construction or ground disturbance activities shall be conducted within the buffer until the biologist has determined the nest is no longer active (i.e., no eggs or young) and has informed the construction supervisor that activities may resume.	
Cultural Resources			
Would the project cause a substantial adverse change in the	Less Than Significant Impact	No mitigation measures are required.	Not Applicable

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
significance of a historical resource pursuant to §15064.5?			
Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	Potentially Significant Impact	**MM-CUL-1:** If archaeological resources (i.e., sites, features, or artifacts) are exposed during construction activities for the proposed Project, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for Archaeology, can evaluate the significance of the find and determine whether or not additional study is warranted. The archaeologist shall be empowered to temporarily stop or redirect grading activities to allow removal of abundant or large artifacts. Depending upon the significance of the find under the California Environmental Quality Act (CEQA) (14 CCR 15064.5(f); PRC, Section 21082), the archaeologist may simply record the find and allow work to continue. If the discovery proves significant under CEQA, additional work, such as preparation of an archaeological treatment plan and data recovery, may be warranted. The archaeologist shall also be required to curate specimens in a repository with permanent retrievable storage and submit a written report to the lead agency for review and approval prior to occupancy of the first building on the site. Once approved, the final report will be filed with the South Central Coastal Information Center (SCCIC). Once artifact analysis is completed, a final written report detailing the results of all research procedures and interpretation of the site shall be submitted to the lead agency for review and approval prior to occupancy of the first building on the site.	Less Than Significant
Would the project disturb any human remains, including those interred outside of dedicated cemeteries?	Potentially Significant Impact	**MM-CUL-2:** In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are found within the Project site, the county coroner shall be immediately notified of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the	Less Than Significant

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		county coroner has determined, within 2 working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the county coroner determines that the remains are, or are believed to be, Native American, he or she shall notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descendant (MLD) of the deceased Native American. The MLD shall complete his/her inspection within 48 hours of being granted access to the site. The designated MLD would then determine, in consultation with the property owner, the disposition of the human remains.	
Would the project have a cumulative effect on cultural resources?	Potentially Significant Impact	**MM-CUL-1:** If archaeological resources (i.e., sites, features, or artifacts) are exposed during construction activities for the proposed Project, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for Archaeology, can evaluate the significance of the find and determine whether or not additional study is warranted. The archaeologist shall be empowered to temporarily stop or redirect grading activities to allow removal of abundant or large artifacts. Depending upon the significance of the find under the California Environmental Quality Act (CEQA) (14 CCR 15064.5(f); PRC, Section 21082), the archaeologist may simply record the find and allow work to continue. If the discovery proves significant under CEQA, additional work, such as preparation of an archaeological treatment plan and data recovery, may be warranted. The archaeologist shall also be required to curate specimens in a repository with permanent retrievable storage and submit a written report to the lead agency for review and approval prior to occupancy of the first building on the site. Once approved, the final report will be filed with the South Central Coastal Information Center (SCCIC).	Less Than Significant

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		Once artifact analysis is completed, a final written report detailing the results of all research procedures and interpretation of the site shall be submitted to the lead agency for review and approval prior to occupancy of the first building on the site. MM-CUL-2: In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are found within the Project site, the county coroner shall be immediately notified of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the county coroner has determined, within 2 working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the county coroner determines that the remains are, or are believed to be, Native American, he or she shall notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descendant (MLD) of the deceased Native American. The MLD shall complete his/her inspection within 48 hours of being granted access to the site. The designated MLD would then determine, in consultation with the property owner, the disposition of the human remains.	
Energy			
Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Less Than Significant Impact	No mitigation measures are required.	Not Applicable

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Less Than Significant Impact	No mitigation measures are required.	Not Applicable
Would the project have a cumulative effect on energy resources?	Less Than Significant Impact	No mitigation measures are required.	Not Applicable
Geology and Soils			
Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:			
a. Rupture of a known earthquake fault, as delineated on the most recent Alquist-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?	No Impact	No mitigation measures are required.	Not applicable.
b. Strong seismic ground shaking?	Less Than Significant Impact	No mitigation measures are required.	Not Applicable

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
c. Seismic related ground failure including liquefaction?	Less Than Significant Impact	No mitigation measures are required.	Not Applicable
Would the project result in substantial soil erosion or the loss of topsoil?	Less Than Significant Impact	No mitigation measures are required.	Not Applicable
Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	Less Than Significant Impact	No mitigation measures are required.	Not Applicable
Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	Less Than Significant Impact	No mitigation measures are required.	Not Applicable
Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Potentially Significant Impact	**MM-GEO-1:** Prior to issuance of a grading permit within areas identified with a high paleontological sensitivity (older Quaternary alluvial deposits), a qualified paleontologist shall be retained per the Society of Vertebrate Paleontology (SVP) (2010) guidelines. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the Project. The PRIMP shall be consistent with the SVP (2010) guidelines and shall outline requirements for preconstruction meeting attendance and worker environmental awareness training, where monitoring	Less Than Significant

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		is required within the Project area 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 paleontological monitor shall be on-site during rough grading and other ground-disturbing activities in previously undisturbed, fine-grained older Quaternary alluvial deposits. These deposits may be encountered at shallow depths below the surface. Within developed areas of the proposed Project, this depth is assumed to be at least twenty-five feet below the ground surface in the eastern portion of the Project. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor shall temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery shall be roped off with a 50-foot-radius buffer. Once documentation and collection of the find is completed pursuant to the PRIMP and the Society of Vertebrate Paleontology (SVP) (2010) guidelines, the monitor shall allow grading to recommence in the area of the find. Curation and storage of salvaged specimens in an approved repository institution shall be completed for all significant resources discovered and collected.	
Would the project have a cumulative effect on geology and soils resources?	Potentially Significant Impact	**MM-GEO-1:** Prior to issuance of a grading permit within areas identified with a high paleontological sensitivity (older Quaternary alluvial deposits), a qualified paleontologist shall be retained per the Society of Vertebrate Paleontology (SVP) (2010) guidelines. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the Project. The PRIMP shall be consistent with the SVP (2010) guidelines and shall outline requirements for preconstruction meeting attendance and worker environmental awareness training, where monitoring is required within the Project area based on construction plans and/or geotechnical	Less Than Significant

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		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 paleontological monitor shall be on-site during rough grading and other ground-disturbing activities in previously undisturbed, fine-grained older Quaternary alluvial deposits. These deposits may be encountered at shallow depths below the surface. Within developed areas of the proposed Project, this depth is assumed to be at least twenty-five feet below the ground surface in the eastern portion of the Project. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor shall temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery shall be roped off with a 50-foot-radius buffer. Once documentation and collection of the find is completed pursuant to the PRIMP and the Society of Vertebrate Paleontology (SVP) (2010) guidelines, the monitor shall allow grading to recommence in the area of the find. Curation and storage of salvaged specimens in an approved repository institution shall be completed for all significant resources discovered and collected.	
Greenhouse Gas Emissions			
Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less Than Significant Impact	No mitigation measures are required.	Not Applicable
Would the project conflict with an applicable plan, policy or regulation	Less Than Significant Impact	No mitigation measures are required.	Not Applicable

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
adopted for the purpose of reducing the emissions of greenhouse gases?			
Would the project have a cumulative effect on greenhouse gas emissions?	Less Than Significant Impact	No mitigation measures are required.	Not Applicable
Hazards and Hazardous Materials			
Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Potentially Significant Impact	MM-HAZ-1: **Remedial Action Plan.** Prior to the start of construction for the proposed Project, soils underlying the entirety of the Project site must be excavated and removed in accordance with the Remedial Action Plan, as well as, architectural and engineering plans. Implementation of the proposed Project shall require the excavation, stockpiling, profiling, and appropriate disposal of all former landfill materials encountered during remediation activities. Once the Regional Water Quality Control Board has deemed remediation to be complete, construction of the Project shall proceed.	Less Than Significant
Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Potentially Significant Impact	MM-HAZ-1: **Remedial Action Plan.** Prior to the start of construction for the proposed Project, soils underlying the entirety of the Project site must be excavated and removed in accordance with the Remedial Action Plan, as well as, architectural and engineering plans. Implementation of the proposed Project shall require the excavation, stockpiling, profiling, and appropriate disposal of all former landfill materials encountered during remediation activities. Once the Regional Water Quality Control Board has deemed remediation to be complete, construction of the Project shall proceed.	Less Than Significant
Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials,	Less Than Significant Impact	No mitigation measures are required.	Not Applicable

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
substances, or waste within one-quarter mile of an existing or proposed school?			
Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Potentially Significant Impact	**MM-HAZ-1:** **Remedial Action Plan.** Prior to the start of construction for the proposed Project, soils underlying the entirety of the Project site must be excavated and removed in accordance with the Remedial Action Plan, as well as, architectural and engineering plans. Implementation of the proposed Project shall require the excavation, stockpiling, profiling, and appropriate disposal of all former landfill materials encountered during remediation activities. Once the Regional Water Quality Control Board has deemed remediation to be complete, construction of the Project shall proceed.	Less Than Significant
Would the project have a cumulative effect on hazards or hazardous materials?	Potentially Significant Impact	**MM-HAZ-1:** **Remedial Action Plan.** Prior to the start of construction for the proposed Project, soils underlying the entirety of the Project site must be excavated and removed in accordance with the Remedial Action Plan, as well as, architectural and engineering plans. Implementation of the proposed Project shall require the excavation, stockpiling, profiling, and appropriate disposal of all former landfill materials encountered during remediation activities. Once the Regional Water Quality Control Board has deemed remediation to be complete, construction of the Project shall proceed.	Less Than Significant
Hydrology and Water Quality			
Would the project violate any water quality standards or waste discharge requirements or otherwise	Less Than Significant Impact	No mitigation measures are required.	Not Applicable

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
substantially degrade surface or ground water quality?			
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.	Not Applicable
Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	--	--	--
a. result in substantial erosion or siltation on or off site;	Less Than Significant Impact	No mitigation measures are required.	Not Applicable
b. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;	Less Than Significant Impact	No mitigation measures are required.	Not Applicable

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
c. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	Less Than Significant Impact	No mitigation measures are required.	Not Applicable
d. impede or redirect flood flows?	Less Than Significant Impact	No mitigation measures are required.	Not Applicable
In 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.	Not Applicable
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.	Not Applicable
Would the project have a cumulative effect on hydrology or water quality resources?	Less Than Significant Impact	No mitigation measures are required.	Not Applicable
Land Use and Planning			
Would the project cause a significant environmental impact due to a conflict with any land use	Less than Significant Impact	No mitigation measures are required.	Not Applicable

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			
Would the project have a cumulative effect on land use resources?	Less than Significant Impact	No mitigation measures are required.	Not Applicable
Noise			
Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Potentially Significant Impact	MM-NOI-1: Construction activities for the Modelo Project shall take place during the permitted time and day per Chapter 19.19.160. of the City's Municipal Code. The applicant shall ensure that construction activities are limited to the hours of 7 a.m. to 10 p.m. Monday through Saturday, and not at all during other hours or on Sundays or public holidays. This condition shall be listed on the final designs for Modelo Project to the satisfaction of the City of Commerce Engineering Department. MM-NOI-2: The City of Commerce shall require the applicant to adhere to the following measures as a condition of approving the grading permit for the Modelo Project: • The Project contractor shall, to the extent feasible, schedule construction activities to avoid the simultaneous operation of construction equipment so as to minimize noise levels resulting from operating several pieces of high noise level emitting equipment. • All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers. Enforcement shall be accomplished by random field inspections by applicant personnel during construction activities, to the satisfaction of the City of Commerce Engineering Department.	Significant and Unavoidable

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		• Construction noise reduction methods such as shutting off idling equipment, construction of a temporary noise barrier, maximizing the distance between construction equipment staging areas and adjacent residences, and use of electric air compressors and similar power tools, rather than diesel equipment, shall be used where feasible. • During construction, stationary construction equipment shall be placed such that emitted noise is directed away from or shielded from sensitive receptors. • Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted at all construction entrances to allow surrounding property owners to contact the job superintendent if necessary. In the event the City of Commerce receives a complaint, appropriate corrective actions shall be implemented and a report of the action provided to the reporting party. MM-NOI-3: Prior to issuance of building permits, the City shall require a detailed noise analysis of the final mechanical equipment specifications to review shielding, enclosures, and/or the location of proposed equipment to verify sound levels will comply with the limits dictated by Chapter 19.19.160. of the City's Municipal Code. It is anticipated that proper screening around roof-mounted equipment would offer sufficient shielding to achieve compliance with the noise ordinance. MM-NOI-4: The Project applicant shall offer to upgrade windows on the façades of homes facing Zindell Avenue. Increasing the sound attenuation of these windows would more than offset the increases in traffic noise from Project-generated trips along Zindell Avenue.	

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Would the project result in generation of excessive groundborne vibration or groundborne noise levels?	Potentially Significant Impact	**MM-NOI-1:** Construction activities for the Modelo Project shall take place during the permitted time and day per Chapter 19.19.160. of the City's Municipal Code. The applicant shall ensure that construction activities are limited to the hours of 7 a.m. to 10 p.m. Monday through Saturday, and not at all during other hours or on Sundays or public holidays. This condition shall be listed on the final designs for Modelo Project to the satisfaction of the City of Commerce Engineering Department. **MM-NOI-2:** The City of Commerce shall require the applicant to adhere to the following measures as a condition of approving the grading permit for the Modelo Project: • The Project contractor shall, to the extent feasible, schedule construction activities to avoid the simultaneous operation of construction equipment so as to minimize noise levels resulting from operating several pieces of high noise level emitting equipment. • All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers. Enforcement shall be accomplished by random field inspections by applicant personnel during construction activities, to the satisfaction of the City of Commerce Engineering Department. • Construction noise reduction methods such as shutting off idling equipment, construction of a temporary noise barrier, maximizing the distance between construction equipment staging areas and adjacent residences, and use of electric air compressors and similar power tools, rather than diesel equipment, shall be used where feasible. • During construction, stationary construction equipment shall be placed such that emitted noise is directed away from or shielded from sensitive receptors.	Less Than Significant

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		• Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted at all construction entrances to allow surrounding property owners to contact the job superintendent if necessary. In the event the City of Commerce receives a complaint, appropriate corrective actions shall be implemented and a report of the action provided to the reporting party.	
Would the project have a cumulative effect on noise resources?	Potentially Significant Impact	MM-NOI-1: Construction activities for the Modelo Project shall take place during the permitted time and day per Chapter 19.19.160. of the City's Municipal Code. The applicant shall ensure that construction activities are limited to the hours of 7 a.m. to 10 p.m. Monday through Saturday, and not at all during other hours or on Sundays or public holidays. This condition shall be listed on the final designs for Modelo Project to the satisfaction of the City of Commerce Engineering Department. MM-NOI-2: The City of Commerce shall require the applicant to adhere to the following measures as a condition of approving the grading permit for the Modelo Project: • The Project contractor shall, to the extent feasible, schedule construction activities to avoid the simultaneous operation of construction equipment so as to minimize noise levels resulting from operating several pieces of high noise level emitting equipment. • All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers. Enforcement shall be accomplished by random field inspections by applicant personnel during construction activities, to the satisfaction of the City of Commerce Engineering Department.	Significant and Unavoidable

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		• Construction noise reduction methods such as shutting off idling equipment, construction of a temporary noise barrier, maximizing the distance between construction equipment staging areas and adjacent residences, and use of electric air compressors and similar power tools, rather than diesel equipment, shall be used where feasible. • During construction, stationary construction equipment shall be placed such that emitted noise is directed away from or shielded from sensitive receptors. • Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted at all construction entrances to allow surrounding property owners to contact the job superintendent if necessary. In the event the City of Commerce receives a complaint, appropriate corrective actions shall be implemented and a report of the action provided to the reporting party. MM-NOI-3: Prior to issuance of building permits, the City shall require a detailed noise analysis of the final mechanical equipment specifications to review shielding, enclosures, and/or the location of proposed equipment to verify sound levels will comply with the limits dictated by Chapter 19.19.160 of the City's Municipal Code. It is anticipated that proper screening around roof-mounted equipment would offer sufficient shielding to achieve compliance with the noise ordinance. MM-NOI-4: The Project applicant shall offer to upgrade windows on the façades of homes facing Zindell Avenue. Increasing the sound attenuation of these windows would more than offset the increases in traffic noise from Project-generated trips along Zindell Avenue.	

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Population and Housing			
Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Less than Significant Impact	No mitigation measures are required.	Not Applicable
Would the project have a cumulative effect on housing and/or population resources?	Less than Significant Impact	No mitigation measures are required.	Not Applicable
Public Services			
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:			
Fire protection?	Less than Significant Impact	No mitigation measures are required.	Not Applicable
Police protection?	Less than Significant Impact	No mitigation measures are required.	Not Applicable
Schools?	Less than Significant Impact	No mitigation measures are required.	Not Applicable

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Parks?	Less than Significant Impact	No mitigation measures are required.	Not Applicable
Other public facilities?	Less than Significant Impact	No mitigation measures are required.	Not Applicable
Would the project have a cumulative effect on public services resources?	Less than Significant Impact	No mitigation measures are required.	Not Applicable
Recreation			
Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	Less than Significant Impact	No mitigation measures are required.	Not Applicable
Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	Less than Significant Impact	No mitigation measures are required.	Not Applicable
Would the project have a cumulative effect on recreation resources?	Less than Significant Impact	No mitigation measures are required.	Not Applicable

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Transportation			
Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	Potentially Significant Impact	**MM-TRA-1: Intersection #4 Telegraph Road/I-5 Northbound Ramps (Garfield Avenue) (City of Commerce/Caltrans).** The proposed Project shall implement the following improvements: • Reconfiguring the southbound approach of the intersection to accommodate a right-turn lane. This would result in a southbound approach providing two through lanes and one right-turn lane. This improvement could be implemented by restriping the existing lanes and no widening would be required. A conceptual plan of the proposed mitigation is shown in Figure 3.15-14. **MM-TRA-2: Intersection #6 Telegraph Road/I-5 Northbound Off-Ramp (Slauson Avenue) (City of Commerce/Caltrans).** The proposed Project shall pay its fair-share toward the implementation of the following improvements: • Signalizing the intersection as it meets the peak hour signal warrant under existing conditions. Signalization would reduce the delay experienced by drivers exiting the freeway as they attempt to turn left onto Telegraph Road. It should be noted that the Project does not add any traffic to the eastbound left-turn movement (the intersection movement that experiences the highest delay and is responsible for the poor overall operating LOS of the intersection). A signal warrant analysis for this intersection is provided in appendix to the TIS. Other proposed projects within the study area also contribute traffic to this intersection and, therefore, the Project should be required to pay its fair share of the cost of this intersection signalization.	Significant and Unavoidable

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		Since this intersection is controlled by both the City and Caltrans, Caltrans would have to approve the design of a traffic signal at this location. This study also considered whether the installation of a traffic signal could queue off-ramp traffic back onto the freeway mainline lanes, creating a safety concern. In this case, however, the proposed traffic signal would likely give the exiting traffic more gaps in Telegraph Road traffic, thereby reducing the off-ramp queues. Caltrans has proposed long-range improvements to the I-5 freeway section through the study area and may be unwilling to permit improvements to ramps that may be removed or modified as part of that improvement program. The latest schedule for these I-5 freeway improvements suggests that this corridor improvement could be more than 15-20 years away. **MM-TRA-3: Intersection #11 Garfield Avenue/ Slauson Avenue (City of Commerce).** The proposed Project shall implement the following improvements: • Reconfiguring the southbound approach of the intersection to accommodate a right-turn lane. This would result in a southbound approach providing a left-turn lane, two through lanes, and a right-turn lane. This improvement could be implemented by restriping the existing lanes and no widening would be required. A conceptual plan of the proposed mitigation is shown in Figure 3.15-15. **MM-TRA-4: Intersection #13 I-5 Southbound Ramps/Slausen Avenue (City of Commerce/Caltrans).** The proposed Project shall implement the following improvements:	

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		• Reconfiguring the intersection into two three-legged intersections. Intersection 13a would be a T intersection between the I-5 Southbound Ramps & Slauson Avenue and Intersection 13b would be a T intersection between Gage Avenue & Slauson Avenue. To implement this mitigation measure, street widening, new signals, reconfiguration with the existing rail crossing, and signal timing work would be necessary. A conceptual plan of the proposed mitigation is shown in Figure 3.15-16. Intersection 13a would be restriped to provide one left-turn lane, two through lanes, and one through/right-turn lane in the eastbound direction; two left-turn lanes and one free right-turn lane in the southbound direction; two through lanes and one free right-turn lane in the westbound direction; and a left-turn/through/right-turn lane out of the northbound driveway. Wellman Street, which is adjacent to the proposed intersection, would be closed off to Slauson Avenue completely with a cul-de-sac. Neighbors wishing to leave the neighborhood would instead use Greenwood Avenue. Intersection 13b would be restriped to provide two through lanes and one right-turn lane in the eastbound direction; one left-turn/through/right-turn lane for the southbound driveway; two left-turn lanes, two through lanes, and a through/right-turn lane in the westbound direction; and two left-turn lanes and a free right-turn lane in the northbound direction. The railroad crossing would shift to the right and would need reconstruction. **MM-TRA-5: Intersection #14 Telegraph Road/Slausen Avenue (City of Commerce).** The proposed Project shall implement the following improvements: • Reconfiguring the eastbound approach of the intersection to accommodate an additional through lane, resulting in an eastbound approach providing one left-turn lane, three through lanes, and one right-turn lane. The westbound	

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		approach of the intersection would be modified to accommodate a new through/right-turn lane, resulting in one left-turn lane, two through lanes, one through/right-turn lane, and one right-turn lane. The overlap phase on the westbound approach would be eliminated with the addition of the through/right-turn lane. The southbound approach would be modified to accommodate a second right-turn lane and would eliminate the existing free right-turn lane. The approach would provide a left-turn lane, two through lanes, and two right-turn lanes. No changes are proposed for the northbound lanes along Telegraph Road. This improvement could be implemented by restriping the existing lanes in both directions and no widening would be required, although reconfiguration of the "pork-chop" right-turn island on the southbound approach would be necessary. A conceptual plan of the proposed mitigation is shown in Figure 3.15-17. MM-TRA-6: Intersection #17 Eastern Avenue/ Gage Avenue (City of Bell Gardens). The proposed Project shall implement the following improvements: • Reconfiguring the southbound approach of the intersection to accommodate a through/right-turn lane. This would result in a southbound approach providing one left-turn lane, two through lanes, and one through/right-turn lane. This improvement could be implemented by restriping the existing lanes and no widening would be required. The through lane would need to be striped south of the intersection. A conceptual plan of the proposed mitigation is shown in Figure 3.15-18. MM-TRA-7: Intersection #18 Garfield Avenue/ Gage Avenue (City of Bell Gardens). The proposed Project shall implement the following improvements:	

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		• Reconfiguring the northbound approach of the intersection to accommodate a right-turn lane and the southbound approach of the intersection to accommodate a right-turn lane. This would result in a northbound approach providing one left-turn lane, two through lanes, and one right-turn lane and a southbound approach providing one left-turn lane, two through lanes, and one right-turn lane. This improvement could be implemented by restriping the existing wide through/right-turn lanes in each direction into two lanes – one through lane and one right-turn lane. No widening would be required. A conceptual plan of the proposed mitigation is shown in Figure 3.15-19. MM-TRA-8: Intersection #22 Eastern Avenue/ Florence Avenue (City of Bell Gardens). The proposed Project shall implement the following improvements: • Reconfiguring the southbound approach of the intersection to accommodate a through/right-turn lane. This would result in a southbound approach providing two left-turn lanes, two through lanes, one through/right-turn lane, and one right-turn lane. This improvement could be implemented by restriping one of the existing through lanes and, therefore, no widening would be required. The right-turn lane immediately adjacent to the curb would have to be signed as a "Freeway Only" turn lane. A conceptual plan of the proposed mitigation is shown in Figure 3.15-20. MM-TRA-9: Intersection #26 Paramount Boulevard/ Telegraph Road (City of Pico Rivera). The proposed Project shall implement the following improvements: • Reconfiguring the westbound approach of the intersection to accommodate a through/right-turn lane. This would result in a westbound approach providing one left-turn lane, two through lanes, and one through/right-turn	

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		lane. This improvement could be implemented by removing part of the median and moving back the stop bar at the adjacent intersection. The existing crosswalk would have to be relocated as a result of the right-turn lane. No widening would be required. A conceptual plan of the proposed mitigation is shown in Figure 3.15-21.	
Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	Less than Significant Impact	No mitigation measures are required.	Not Applicable
Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Less than Significant Impact	No mitigation measures are required.	Not Applicable
Would the project result in inadequate emergency access?	Less than Significant Impact	No mitigation measures are required.	Not Applicable
Would the project have a cumulative effect on transportation resources?	Potentially Significant Impact	**MM-TRA-1: Intersection #4 Telegraph Road/I-5 Northbound Ramps (Garfield Avenue) (City of Commerce/Caltrans).** The proposed Project shall implement the following improvements: • Reconfiguring the southbound approach of the intersection to accommodate a right-turn lane. This would result in a southbound approach providing two through lanes and one right-turn lane. This improvement could be implemented by restriping the existing lanes and no widening would be required. A conceptual plan of the proposed mitigation is shown in Figure 3.15-14.	Less Than Significant

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		MM-TRA-2: Intersection #6 Telegraph Road/I-5 Northbound Off-Ramp (Slauson Avenue) (City of Commerce/Caltrans). The proposed Project shall pay its fair-share toward the implementation of the following improvements: • Signalizing the intersection as it meets the peak hour signal warrant under existing conditions. Signalization would reduce the delay experienced by drivers exiting the freeway as they attempt to turn left onto Telegraph Road. It should be noted that the Project does not add any traffic to the eastbound left-turn movement (the intersection movement that experiences the highest delay and is responsible for the poor overall operating LOS of the intersection). A signal warrant analysis for this intersection is provided in appendix to the TIS. Other proposed projects within the study area also contribute traffic to this intersection and, therefore, the Project should be required to pay its fair share of the cost of this intersection signalization. Since this intersection is controlled by both the City and Caltrans, Caltrans would have to approve the design of a traffic signal at this location. This study also considered whether the installation of a traffic signal could queue off-ramp traffic back onto the freeway mainline lanes, creating a safety concern. In this case, however, the proposed traffic signal would likely give the exiting traffic more gaps in Telegraph Road traffic, thereby reducing the off-ramp queues. Caltrans has proposed long-range improvements to the I-5 freeway section through the study area and may be unwilling to permit improvements to ramps that may be removed or modified as part of that improvement program. The latest schedule for these I-5 freeway improvements suggests that this corridor improvement could be more than 15-20 years away.	

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		MM-TRA-3: Intersection #11 Garfield Avenue/ Slauson Avenue (City of Commerce). The proposed Project shall implement the following improvements: • Reconfiguring the southbound approach of the intersection to accommodate a right-turn lane. This would result in a southbound approach providing a left-turn lane, two through lanes, and a right-turn lane. This improvement could be implemented by restriping the existing lanes and no widening would be required. A conceptual plan of the proposed mitigation is shown in Figure 3.15-15. **MM-TRA-4: Intersection #13 I-5 Southbound Ramps/Slausen Avenue (City of Commerce/Caltrans).** The proposed Project shall implement the following improvements: • Reconfiguring the intersection into two three-legged intersections. Intersection 13a would be a T intersection between the I-5 Southbound Ramps & Slauson Avenue and Intersection 13b would be a T intersection between Gage Avenue & Slauson Avenue. To implement this mitigation measure, street widening, new signals, reconfiguration with the existing rail crossing, and signal timing work would be necessary. A conceptual plan of the proposed mitigation is shown in Figure 3.15-16. Intersection 13a would be restriped to provide one left-turn lane, two through lanes, and one through/right-turn lane in the eastbound direction; two left-turn lanes and one free right-turn lane in the southbound direction; two through lanes and one free right-turn lane in the westbound direction; and a left-turn/through/right-turn lane out of the northbound driveway. Wellman Street, which is adjacent to the proposed intersection, would be closed off to Slauson Avenue completely with a cul-de-sac. Neighbors wishing to leave the	

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		neighborhood would instead use Greenwood Avenue. Intersection 13b would be restriped to provide two through lanes and one right-turn lane in the eastbound direction; one left-turn/through/right-turn lane for the southbound driveway; two left-turn lanes, two through lanes, and a through/right-turn lane in the westbound direction; and two left-turn lanes and a free right-turn lane in the northbound direction. The railroad crossing would shift to the right and would need reconstruction. **MM-TRA-5: Intersection #14 Telegraph Road/Slausen Avenue (City of Commerce).** The proposed Project shall implement the following improvements: • Reconfiguring the eastbound approach of the intersection to accommodate an additional through lane, resulting in an eastbound approach providing one left-turn lane, three through lanes, and one right-turn lane. The westbound approach of the intersection would be modified to accommodate a new through/right-turn lane, resulting in one left-turn lane, two through lanes, one through/right-turn lane, and one right-turn lane. The overlap phase on the westbound approach would be eliminated with the addition of the through/right-turn lane. The southbound approach would be modified to accommodate a second right-turn lane and would eliminate the existing free right-turn lane. The approach would provide a left-turn lane, two through lanes, and two right-turn lanes. No changes are proposed for the northbound lanes along Telegraph Road. This improvement could be implemented by restriping the existing lanes in both directions and no widening would be required, although reconfiguration of the “pork-chop” right-turn island on the southbound approach would be necessary. A conceptual plan of the proposed mitigation is shown in Figure 3.15-17.	

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		MM-TRA-6: Intersection #17 Eastern Avenue/ Gage Avenue (City of Bell Gardens). The proposed Project shall implement the following improvements: • Reconfiguring the southbound approach of the intersection to accommodate a through/right-turn lane. This would result in a southbound approach providing one left-turn lane, two through lanes, and one through/right-turn lane. This improvement could be implemented by restriping the existing lanes and no widening would be required. The through lane would need to be striped south of the intersection. A conceptual plan of the proposed mitigation is shown in Figure 3.15-18. **MM-TRA-7: Intersection #18 Garfield Avenue/ Gage Avenue (City of Bell Gardens).** The proposed Project shall implement the following improvements: • Reconfiguring the northbound approach of the intersection to accommodate a right-turn lane and the southbound approach of the intersection to accommodate a right-turn lane. This would result in a northbound approach providing one left-turn lane, two through lanes, and one right-turn lane and a southbound approach providing one left-turn lane, two through lanes, and one right-turn lane. This improvement could be implemented by restriping the existing wide through/right-turn lanes in each direction into two lanes – one through lane and one right-turn lane. No widening would be required. A conceptual plan of the proposed mitigation is shown in Figure 3.15-19. **MM-TRA-8: Intersection #22 Eastern Avenue/ Florence Avenue (City of Bell Gardens).** The proposed Project shall implement the following improvements: • Reconfiguring the southbound approach of the intersection to accommodate a through/right-turn lane. This would result in a southbound approach providing two left-turn lanes, two through lanes, one through/right-turn lane,	

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		and one right-turn lane. This improvement could be implemented by restriping one of the existing through lanes and, therefore, no widening would be required. The right-turn lane immediately adjacent to the curb would have to be signed as a "Freeway Only" turn lane. A conceptual plan of the proposed mitigation is shown in Figure 3.15-20. **MM-TRA-9: Intersection #26 Paramount Boulevard/ Telegraph Road (City of Pico Rivera).** The proposed Project shall implement the following improvements: Reconfiguring the westbound approach of the intersection to accommodate a through/right-turn lane. This would result in a westbound approach providing one left-turn lane, two through lanes, and one through/right-turn lane. This improvement could be implemented by removing part of the median and moving back the stop bar at the adjacent intersection. The existing crosswalk would have to be relocated as a result of the right-turn lane. No widening would be required. A conceptual plan of the proposed mitigation is shown in Figure 3.15-21.	
Tribal Cultural Resources			
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	--	--	--

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
place, or object with cultural value to a California Native American tribe, and that is:			
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	Less Than Significant Impact	No mitigation measures are required.	Not Applicable
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	Potentially Significant Impact	**MM-TCR-1:** While no TCRs have been identified that may be affected by the proposed Project, the following approach for the inadvertent discovery of TCRs has been prepared to ensure there are no impacts to unanticipated resources. Should a potential TCR be encountered, construction activities near the encounter shall be temporarily halted within 50 feet of the discovery and the City notified. The City will notify Native American tribes that have been identified by the NAHC to be traditionally and culturally affiliated with the geographic area of the Project. If the potential resource is archaeological in nature, appropriate management requirements shall be implemented as outlined in mitigation measure MM-CUL-1. If the City determines that the potential resource is a TCR (as defined by PRC, Section 21074), tribes consulting under AB 52 and SB 18 would be provided a reasonable period of time, typically 5 days from the date of a new discovery is made, to conduct a site visit and make recommendations regarding future ground disturbance activities as well as the treatment and disposition of any discovered TCRs. A qualified archaeologist shall implement a plan for the treatment and disposition of any discovered TCRs based on the nature of the resource and considering the recommendations of the tribe(s).	Less Than Significant

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
		Implementation of proposed recommendations will be made based on the determination of the City that the approach is reasonable and feasible. All activities would be conducted in accordance with regulatory requirements.	
Would the project have a cumulative effect on tribal cultural resources?	Potentially Significant Impact	MM-TCR-1: While no TCRs have been identified that may be affected by the proposed Project, the following approach for the inadvertent discovery of TCRs has been prepared to ensure there are no impacts to unanticipated resources. Should a potential TCR be encountered, construction activities near the encounter shall be temporarily halted within 50 feet of the discovery and the City notified. The City will notify Native American tribes that have been identified by the NAHC to be traditionally and culturally affiliated with the geographic area of the Project. If the potential resource is archaeological in nature, appropriate management requirements shall be implemented as outlined in mitigation measure MM-CUL-1. If the City determines that the potential resource is a TCR (as defined by PRC, Section 21074), tribes consulting under AB 52 and SB 18 would be provided a reasonable period of time, typically 5 days from the date of a new discovery is made, to conduct a site visit and make recommendations regarding future ground disturbance activities as well as the treatment and disposition of any discovered TCRs. A qualified archaeologist shall implement a plan for the treatment and disposition of any discovered TCRs based on the nature of the resource and considering the recommendations of the tribe(s). Implementation of proposed recommendations will be made based on the determination of the City that the approach is reasonable and feasible. All activities would be conducted in accordance with regulatory requirements.	Less Than Significant

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
Utilities and Service Systems			
Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Less Than Significant Impact	No mitigation measures are required.	Not Applicable
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.	Not Applicable
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.	Not Applicable
Would the project generate solid waste in excess of State or local standards, or in excess of the	Less Than Significant Impact	No mitigation measures are required.	Not Applicable

Table ES-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measure(s)	Level of Significance After Mitigation
capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			
Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Less Than Significant Impact	No mitigation measures are required.	Not Applicable
Would the project have a cumulative effect on utilities and/or service systems resources?	Less Than Significant Impact	No mitigation measures are required.	Not Applicable

E.S.9 Summary of Project Alternatives

Section 15126.6 of the State CEQA Guidelines identifies the parameters within which consideration and discussion of alternatives to the project should occur. As stated in this section of the guidelines, alternatives must focus on those that are reasonably feasible and that attain most of the basic objectives of the project. Each alternative should be capable of avoiding or substantially lessening any significant impacts of the project. The rationale for selecting the alternatives to be evaluated and a discussion of the No Project Alternative are also required, per Section 15126.6.

This section discusses the alternatives to the Project, including the No Project Alternative, under consideration. The No Project Alternative, which is a required element of an EIR pursuant to Section 15126.6(e) of the State CEQA Guidelines, examines the environmental impacts that would occur if the Project were not to proceed and no development activities were to occur. The other alternatives are discussed as part of the "reasonable range of alternatives." The alternatives addressed in this section are listed below, followed by a more detailed discussion of each:

Alternative A – No Project/Existing Land Use Plan Alternative

- Alternative B – No Project/No Development Alternative
- Alternative C – Reduced Development Alternative 1
- Alternative D – Reduced Development Alternative 2

E.S.9.1 Alternative A - No Project/Existing Land Use Plan Alternative

Section 15126.6(e) of the State CEQA Guidelines requires that an EIR evaluate and analyze the impacts of a No Project Alternative. When the 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, the No Project/Existing Land Use Plan Alternative, as required by the State CEQA Guidelines, analyzes the effects of continued implementation of the City of Commerce 2020 General Plan (General Plan). The City is currently in the process of updating its General Plan; however since the new General Plan has not yet been adopted, this discussion will only refer to the General Plan adopted in 2008. The City's General Plan Land Use Map designates the Veterans Memorial Park as Public Facilities and the vacant lot as Commercial Manufacturing (City of Commerce 2009).

School sites, government offices, utility and transportation easements, and libraries all fall within the General Plan's Public Facilities land use designation. This designation corresponds with the City's Public Facility (PF) zone designation. The PF zone is intended to provide adequate space for public and quasi-public community facilities. Permitted uses within the PF zone include municipal and other government buildings, public educational facilities, religious facilities, and recreational areas (City of Commerce 2018). The Commercial Manufacturing designation is designed to encourage a balanced mix of commercial, office professional, and light manufacturing uses along a number of high visibility traffic corridors. This land use designation corresponds to the Commercial/Manufacturing (C/M1) zone district (City of Commerce 2008). The C/M1 zone is intended to concentrate commercial and light industrial uses along major arterials and in other areas that are easily accessible. The industrial uses considered appropriate in the C/M1 zone are limited to support services, such as machine shops and some light manufacturing. Commercial or industrial uses that might create offensive levels of noise, air pollution, glare, radioactivity or other nuisances are prohibited from this zone (City of Commerce 2018).

Under this Alternative, the existing Veterans Memorial Park would continue to operate as it currently does, because that use is consistent with the zoning and General Plan designation (PF zone). The vacant lot would be developed as a commercial and light industrial use. As described in the Municipal Code, the C/M-1 zone has a development standard of 2.0 Floor Area Ratio (FAR) to 1.0 FAR and a maximum lot coverage of 50%. Therefore, the 7.92-acre vacant site could be built to two stories, with a footprint of 172,497.6 square feet, totaling 344,995.2 square feet.

Table ES-2. Alternative A Land Uses

Land Use	Stories	Total Area (Square Feet)
Veterans Memorial Park	NA	409,464.0
Commercial Manufacturing	2	344,995.2

Notes: NA = not applicable

E.S.9.2 Alternative B - No Project/No Development Alternative

CEQA requires the alternatives analysis to include a No Project Alternative where the Project does not proceed. The purpose of analyzing a No Project Alternative is to allow decision makers to compare the impacts of approving the project with the impacts of not approving the project (State CEQA Guidelines Section 15126.6[e][1]). Pursuant to State CEQA Guidelines Section 15126.6(e)(2), requirements of the analysis of the No Project alternative are as follows:

> The No Project analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time the environmental analysis is commenced, as well as what would reasonably be expected to occur in the foreseeable future if the proposed project were not approved, based on current plans, and consistent with available infrastructure and community services.

Alternative B - No Project/No Development Alternative assumes that the Project site would remain in its current condition as described in Section 2.3, Project Description, Existing Setting. No discretionary actions would be required by local, state, or federal agencies for this alternative. Therefore, under this Alternative, the Project site would continue to operate as the Veterans Memorial Park and an undeveloped vacant lot.

E.S.9.3 Alternative C - Reduced Development Alternative 1

CEQA requires that EIRs "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives" (14 CCR 15126(a)).

Alternative C - Reduced Development Alternative 1 assumes the Project would operate as described in Section 2, Project Description, with the following reductions:

- 750 apartment units
- 64,000-squre-foot community center
- 1,100-seat movie theater

Table ES-3. Alternative C Land Uses

Proposed Land Use	Number	Approximate Size (Square Feet)	Total Area (Square Feet)
Residential Land Uses			
Studios	750	500[1]	_
1 Bedrooms		675[1]	_
2 Bedrooms		980[1]	_
3 Bedrooms		1,150[1]	_
Total	750	_	_
Ancillary Residential Uses			
Lobby	--	5,500	5,500
Leasing Office	--	2,500	2,500
Mail Center	--	6,500	6,500
Clubroom	--	9,000	9,000
Game/TV Room	--	5,000	5,000
Fitness Center	--	7,000	7,000
Conference Room	--	3,500	3,500
		Total	761,900
Commercial Land Uses			
Movie Theater	--	27,500	27,500
Arcade (entertainment/bowling)	--	20,000	20,000
Fitness Center	--	15,000	15,000
Restaurant	--	16,000	16,000
General Retail	--	28,000	28,000
Grocery and Food Hall	--	25,000	25,000
Pharmacy	--	6,000	6,000
		Total	137,500
Tower			
Residential/Commercial	--	65,000	65,000
		Total	65,000
Community Center			
Community Center	--	64,000	64,000
		Total	64,000
Park and Green Space			
Open Green Space	--	100,000	100,000
Children's Playground	--	20,000	20,000
Youth Sports Field	--	50,000	50,000
Grass Amphitheater	--	3,600	3,600

Table ES-3. Alternative C Land Uses

Proposed Land Use	Number	Approximate Size (Square Feet)	Total Area (Square Feet)
Benches/Stands	--	5,000	5,000
		Total	196,020[2]
Museum			
		Total	5,000

Source: Comstock Realty 2020

Notes:

1 size/unit

2 Totals approximately 4.75 acres

E.S.9.4 Alternative D - Reduced Development Alternative 2

CEQA requires that EIRs "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives" (14 CCR 15126(a)).

Alternative D - Reduced Development Alternative 2 assumes the Project would operate as described in Section 2, Project Description, with the following reductions:

- 750 apartment units
- 64,000-square-foot community center
- 1,100-seat movie theater
- 12,000-square-foot grocery store
- No museum space

Table ES-4. Alternative D Land Uses

Proposed Land Use	Number	Approximate Size (Square Feet)	Total Area (Square Feet)
Residential Land Uses			
Studios	750	500[1]	_
1 Bedrooms		675[1]	_
2 Bedrooms		980[1]	_
3 Bedrooms		1,150[1]	_
Total	750	_	_
Ancillary Residential Uses			
Lobby	--	5,500	5,500
Leasing Office	--	2,500	2,500
Mail Center	--	6,500	6,500
Clubroom	--	9,000	9,000

Table ES-4. Alternative D Land Uses

Proposed Land Use	Number	Approximate Size (Square Feet)	Total Area (Square Feet)
Game/TV Room	--	5,000	5,000
Fitness Center	--	7,000	7,000
Conference Room	--	3,500	3,500
		Total	761,900
Commercial Land Uses			
Movie Theater	--	27,500	27,500
Arcade (entertainment/bowling)	--	20,000	20,000
Fitness Center	--	15,000	15,000
Restaurant	--	16,000	16,000
General Retail	--	28,000	28,000
Grocery and Food Hall	--	12,000	12,000
Pharmacy	--	6,000	6,000
		Total	124,500
Tower			
Residential/Commercial	--	65,000	65,000
		Total	65,000
Community Center			
Community Center	--	64,000	64,000
		Total	64,000
Park and Green Space			
Open Green Space	--	100,000	100,000
Children's Playground	--	20,000	20,000
Youth Sports Field	--	50,000	50,000
Grass Amphitheater	--	3,600	3,600
Benches/Stands	--	5,000	5,000
		Total	196,020[2]

Source: Comstock Realty 2020

Notes:

1 size/unit

2 Totals approximately 4.75 acres

E.S.10 References

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1 Introduction

1.1 Purpose and Scope

The purpose of this environmental impact report (EIR) is to disclose the potential environmental impacts of the proposed Modelo Project (Project). The proposed Project constitutes a "project" as defined in the California Environmental Quality Act (CEQA) Guidelines Section 15378. The City of Commerce (City) is the lead agency in preparing this EIR in accordance with CEQA (California Public Resources Code, Section 21000 et seq.) and implementing the State CEQA Guidelines (14 CCR 15000 et seq.). The analysis within this EIR is a project-level analyses.

As shown in Figure 1-1, Project Location, the approximately 17.37-acre Project site is located in the City of Commerce (City), within the south central portion of Los Angeles County (County), approximately six miles east of Downtown Los Angeles. Specifically, the proposed Project is located immediately west of the Interstate 5 (I-5) Freeway, south of Zindell Avenue, and east of a single-family residential neighborhood located west of Avenida Aguascalientes, and north of the Rio Hondo River and Path. The postal addresses associated with the Project site consist of 7316 Gage Avenue and 6364 Zindell Avenue. The Project site is comprised of the following four Assessor Parcel Numbers (APNs): 6357-018-005 (7.92 acres); 6357-019-900 – Parcel 1 (4.98 acres); 6357-019-904 – Parcel 2 (4.40 acres); and, 6357-019-905 (0.02 acre). The proposed Project involves the demolition of the existing Veterans Memorial Park (which is currently in an advanced state of disrepair) and an adjacent vacant parcel and the redevelopment of the Project site to accommodate a mixed-use residential development. The proposed Project would include the construction of 850 residential units, 165,000 square feet of commercial uses, a 77,050-square-foot community center, a 5,000-square-foot museum, and approximately 4.75 acres of parks and open space. Additionally, due to the previous use of the Project site as a landfill, the Project would include the remediation of the entire Project site to allow for safe implementation of the Project. Upon approval of the Project, the land use designation of the Project site would change from Public Facilities (PF) and Commercial Manufacturing (C/M1), to Public Open Space, Commercial Retail, and Residential with the corresponding Specific Plan zone.

EIRs are informational documents "which will inform public agency decision-makers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project." (14 CCR 15121). The purpose of this EIR is to present the evaluation of the anticipated environmental effects of the Project.

1.2 CEQA Requirements

CEQA requires the preparation of an EIR for any project that a lead agency determines may have a significant impact on the environment. According to Section 21002.1(a) of CEQA, "The purpose of an environmental impact report is to identify the significant effects on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided."

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

The basic purposes of CEQA are to:

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 (14 CCR 15002).

The EIR process typically consists of three parts: (1) the Initial Study (IS) and Notice of Preparation (NOP), (2) the Draft EIR, and (3) the Final EIR. The IS/NOP is intended to encourage interagency communication concerning the proposed action and to provide sufficient background information about the proposed action so that agencies, organizations, and members of the public can respond with specific comments and questions on the scope and content of the EIR. The City has prepared an IS in order to determine whether the proposed Project could potentially result in significant impacts to the environment, requiring preparation of an EIR. Based upon the information contained within the IS, the City concluded that an EIR should be prepared.

The NOP was distributed to the State Clearinghouse, interested agencies, organizations, and persons on August 19, 2019. Specifically, the City sent the NOP to 20 agencies and organizations, along with a copy of the IS on compact disc. The City also sent the NOP to property owners within a 500-foot buffer of the Project area and to entities or individuals who own property within the Project area. Additionally, the City published the NOP in local newspapers. Recipients of the IS/NOP were requested to provide responses within 30 days after their receipt of the IS/NOP. Hardcopies of the IS/NOP were made available for review at the City's Public Works and Development Services Department office. An electronic copy of the IS/NOP was also made available on the City's website. Additionally, a scoping meeting was held on August 24, 2019, at the existing Veterans Memorial Park (Project site). A summary of the proposed Project and the CEQA process was presented at the meeting. The purpose of this meeting was to seek input from public agencies and the general public regarding the environmental issues and concerns that may potentially result from the proposed Project.

The 30-day IS/NOP public review period ended September 17, 2019. In response to the NOP, 54 written comment letters were received during the IS/NOP public review period. These letters and the IS/NOP are included in Appendix A of this EIR. The scoping meeting, comments and comment letters express recommendations for the Project design, as well as concerns relating to the Project's construction and operational impacts to transportation and traffic (including parking), public services (specifically the increased need for police protection services), air quality (specifically, pollution), population and housing (specifically, population increases in the area and the correlated socioeconomic repercussions, such as homelessness, security issues etc.), and cultural resources. These comments were considered during preparation of this EIR.

This EIR focuses on the environmental impacts identified as potentially significant during the Initial Study and scoping process. The following issues were determined to be potentially significant and are therefore addressed in Chapter 3, Environmental Analysis, of this EIR:

- Aesthetics
- Air Quality
- Biological Resources

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

The EIR will be made available for review to the public and public agencies for 45 days to enable them to provide comments on the "sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated" (14 CCR 15204). The timeframe of the public review period is identified in the Notice of Availability attached to this Draft EIR. During this period, copies of the Draft EIR are available for review at the City's Public Works and Development Services Department office, located at 2535 Commerce Way, Commerce, and the Draft EIR is also available for public review online at www.ci.commerce.ca.us.

During this period, comments from the general public, organizations, and agencies regarding environmental issues analyzed in the Draft EIR and the Draft EIR's accuracy and completeness may be submitted to the lead agency at the following address:

ATTN: Jose Jimenez
City of Commerce
Planning Department
2535 Commerce Way,
Commerce CA 90040
Email: jimenez@ci.commerce.ca.us

As the lead agency for the proposed Project, the City has assumed responsibility for preparing this document. The City's Planning Commission will act in an advisory role, and the City Council has final decision-making authority over the proposed Project and associated discretionary actions. The City will use the information included in this EIR to consider potential impacts to the physical environment associated with the proposed Project when considering approval. As set forth in Section 15021 of the State CEQA Guidelines, the City, as lead agency, has the duty to avoid or minimize environmental damage where feasible. Specifically, 14 CCR 15021(d) states that:

CEQA recognizes that in determining whether and how a project should be approved, a public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social factors and in particular the goal of providing a decent home and satisfying living environment for every Californian. An agency

shall prepare a statement of overriding considerations as described in Section 15093 to reflect the ultimate balancing of competing public objectives when the agency decides to approve a project that will cause one or more significant effects on the environment.

Prior to approval of the proposed Project or an alternative to the proposed Project, the City, as the lead agency and decision-making entity, is required to certify that this EIR has been completed in accordance with CEQA, that the proposed Project has been reviewed and the information in this EIR has been considered, and that this EIR reflects the independent judgment of the City. CEQA also requires the City to adopt "findings" with respect to each significant environmental effect identified in the EIR (Pub. Resources Code Section 21081; Cal. Code Regulations, Title 14, Section 15091). For each significant effect, CEQA requires the approving agency to make one or more of the following findings:

- The proposed project has been altered to avoid or substantially lessen significant impacts identified in the Final EIR.
- The responsibility to carry out such changes or alterations is under the jurisdiction of another agency.
- There are specific economic, legal, social, technological, or other considerations, which make infeasible the mitigation measures or alternatives identified in the Final EIR.

If the City concludes that the proposed Project will result in significant effects that cannot be substantially lessened or avoided by feasible mitigation measures and alternatives, the City must adopt a "statement of overriding considerations" prior to approval of the proposed Project (Pub. Resources Code Section 21081(b)). Such statements are intended under CEQA to provide a written means by which the lead agency balances in writing the benefits of the proposed Project and the significant and unavoidable environmental impacts. Where the lead agency concludes that the economic, legal, social, technological, or other benefits outweigh the unavoidable environmental impacts, the lead agency may find such impacts "acceptable" and approve the proposed Project.

In addition, the City must also adopt a Mitigation Monitoring and Reporting Program (MMRP) describing the changes that were incorporated into the proposed Project or made a condition of Project approval in order to mitigate or avoid significant effects on the environment (Pub. Resources Code Section 21081.6). The MMRP is adopted at the time of Project approval and is designed to ensure compliance during project implementation. Upon approval of the proposed Project, the City will be responsible for implementation of the proposed Project's MMRP. This document will be attached to the Final EIR.

1.3 EIR Document Organization

This EIR is organized as follows:

Executive Summary - Outlines the conclusions of the environmental analysis and provides a summary of the proposed Project and the Project alternatives analyzed in the EIR. This section also includes a table summarizing all environmental impacts identified in the EIR along with the associated mitigation measures proposed to reduce or avoid each impact.

Chapter 1: Introduction - Serves as a forward to the EIR, introducing the Project, the applicable environmental review procedures, and the organization of the EIR.

Chapter 2: Project Description - Provides a detailed description of the setting, objectives, characteristics, operation, and construction of the proposed Project and required discretionary approvals.

Chapter 3: Introduction to Environmental Analysis - Describes the potential environmental impacts of the proposed Project, as well as proposed mitigation measures to reduce or avoid any potentially significant impacts. The discussion in Chapter 3 is organized by 17 environmental issue areas as follows:

Section 3.1	Aesthetics	Section 3.10	Land Use and Planning
Section 3.2	Air Quality	Section 3.11	Noise
Section 3.3	Biological Resources	Section 3.12	Population and Housing
Section 3.4	Cultural Resources	Section 3.13	Public Services
Section 3.5	Energy	Section 3.14	Recreation
Section 3.6	Geology and Soils	Section 3.15	Transportation
Section 3.7	Greenhouse Gas Emissions	Section 3.16	Tribal Cultural Resources
Section 3.8	Hazards and Hazardous Materials	Section 3.17	Utilities and Service Systems
Section 3.9	Hydrology and Water Quality		

For each environmental issue area, the analysis and discussion are organized into eight subsections as described below:

- **Environmental Setting** – This subsection describes the physical environmental conditions in the vicinity of the proposed Project at the time of publication of the NOP. The environmental setting establishes the baseline conditions by which the County will determine whether specific Project-related impacts are significant.
- **Relevant Plans, Policies, and Ordinances** - This subsection describes the laws, regulations, ordinances, plans, and policies applicable to the environmental issue area and the proposed Project.
- **Thresholds of Significance** – This subsection identifies a set of thresholds by which the level of impact is determined.
- **Methodology** – This subsection describes how the analysis was conducted.
- **Impacts Analysis** – This subsection provides a detailed analysis regarding the environmental effects of the proposed Project, and whether the impacts of the Project would meet or exceed the thresholds of significance.
- **Cumulative Impacts** – Provides an evaluation of the potential cumulative impacts of the Project in combination with identified related projects.
- **Mitigation Measures** – This subsection identifies potentially feasible mitigation measures that would avoid or substantially reduce significant adverse project impacts.
- **Level of Significance After Mitigation** – This subsection discusses whether Project-related impacts would be reduced to below a level of significance with implementation of the mitigation measures identified in the EIR. If applicable, this subsection also identifies any residual significant and unavoidable adverse impacts of the proposed Project that would result even with implementation of any feasible mitigation measures.

In addition to the eight subsections listed above, full citations for all documents referred to in each environmental issue area discussion are included at the end of each section or chapter.

Chapter 4: Alternatives - Discusses alternatives to the proposed Project, including a No Project Alternative. This chapter describes the rationale for selecting the range of alternatives discussed in the EIR and identifies the alternatives considered by the City that were rejected from further discussion as infeasible during the scoping process. Lastly, Chapter 4 includes a discussion of the environmental impacts of the alternatives that were carried forward for analysis and identifies the environmentally superior alternative.

Chapter 5: Other CEQA Considerations – Provides a discussion of potential environmental impacts as a result of the proposed Project, including those that can be reduced to a less-than-significant level and those significant environmental effects that cannot be avoided if the Project is implemented. These include impacts that can be mitigated, but cannot be reduced to a less than significant level.

Chapter 6: List of Preparers - Gives names and contact information of those responsible for writing this EIR.

Appendices include various technical studies prepared for the proposed Project, as listed in the Table of Contents.

The City, as the designated lead agency for the proposed Project, is responsible for enforcing and verifying that each mitigation measure is implemented as required; however, the project applicants shall be responsible for implementing the mitigation measures as required by the proposed Project. As part of the Final EIR process, a mitigation monitoring and reporting program will be prepared.

SOURCE: Esri, Digitial Globe, Open Street Map

DUDEK

0 355 710 Feet

FIGURE 1-1

Project Location

Modelo Project

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2 Project Description

This chapter provides a description of the proposed Modelo Project (Project). Pursuant to Section 15124 of the State CEQA Guidelines, this chapter describes the location, objectives, and characteristics of the proposed Project, followed by a statement describing the intended uses of this environmental impact report (EIR).

2.1 California Environmental Quality Act

CEQA, a statewide environmental law contained in California Public Resources Code (PRC) Sections 21000–21177, applies to proposed projects initiated by, funded by, or requiring discretionary approvals from state or local government agencies that have the potential to adversely affect the environment (PRC Section 21000 et seq.). The overarching goal of CEQA is to protect the physical environment. To achieve that goal, CEQA requires that public agencies identify the environmental effects of their discretionary actions and consider alternatives and mitigation measures that could avoid or reduce significant adverse impacts when avoidance or reduction is feasible. It also gives other public agencies and the public an opportunity to comment on a project. If significant adverse impacts cannot be avoided, reduced, or mitigated to below a level of significance, the public agency is required to prepare an EIR and balance the project's environmental concerns with other goals and benefits in a statement of overriding considerations.

This EIR was prepared to satisfy the CEQA requirements outline above. This EIR is a public document used by the City as the CEQA Lead Agency to analyze the environmental effects of the Project and to disclose possible ways to reduce or avoid significant environmental impacts, including alternatives to the proposed Project. As an informational document, this EIR does not make recommendations for or against approving the Project. The main purpose of this EIR is to inform public agency decision makers and the public about potential environmental impacts of the Project (State CEQA Guidelines Section 15121). This EIR will be used by the City, as the lead agency under CEQA, in making decisions with regard to the adoption of the proposed Project described above and the related approvals described below. The City's Public Works & Development Services Department directed and supervised the preparation of this EIR. Although prepared with assistance from the consulting firm, Dudek, the content contained within and the conclusions drawn by this EIR reflect the sole independent judgment of the City.

2.2 Project Location

As shown in Figure 1-1, Project Location, the Project site is located in the City of Commerce (City), within the south central portion of Los Angeles County (County), approximately six miles east of Downtown Los Angeles. The City is bounded by the cities of Montebello and Pico Rivera to the east, unincorporated East Los Angeles to the north, the cities of Vernon, Bell, and Maywood to the west, and the cities of Bell Gardens and Downey to the south. The Project site is located in the southeastern corner of the City, near the City's boundaries with Bell Gardens, Downey, Pico Rivera, and Montebello.

The Project site is located immediately west of the Interstate 5 (I-5) Freeway, south of Zindell Avenue, and east of a single-family residential neighborhood located west of Avenida Aguascalientes, and north of the Rio Hondo River and Path. The postal addresses associated with the Project site consist of 7316 Gage Avenue and 6364 Zindell Avenue. The project site is composed of four Assessor's Parcel Numbers: 6357-018-005 (7.92 acres); 6357-019-900 – Parcel 1 (4.98 acres); 6357-019-904 – Parcel 2 (4.40 acres); and, 6357- 019-905 (0.2 acre). The latitude and longitude of the approximate center of the project site is 33°58'21.61″ North and 118°7′32.22″ West.

2.3 Existing Setting

Surrounding Land Uses

The Project site is in a highly urbanized area and is surrounded by a mix of residential, commercial, industrial, and open space land uses. The general vicinity surrounding the Project site is developed with various commercial businesses to the east, across the I-5 freeway (within the City of Montebello); a Denny's, Best Western Plus Commerce Hotel, a warehouse (east of Zindell Avenue) and single-/multi-family dwellings (west of Zindell Avenue) to the north; a single-family residential neighborhood and neighborhood commercial center to the west; and the Rio Hondo River and Path and single-family dwellings to the south (within the City of Downey).

Project Site Conditions

As shown in Figure 2-1, Existing Site Conditions, the approximately 17.37-acre Project site currently consists of the Veterans Memorial Park and an undeveloped vacant lot. The parcels comprising the Project site were previously part of a construction borrow-pit type of landfill created for, and during, the construction of the I-5 freeway. The native soil was removed from the Project site and placed within the footprint of the I-5 freeway. The landscape and structures that were previously within the footprint of the I-5 freeway were demolished and placed in the hole where the native soil had been removed from the Project site. The landfill operated between 1948 to 1954, before being covered and redeveloped. Limited outside waste was accepted during this period of time.

The Veterans Memorial Park was constructed between 1965 and 1970, and consists of a baseball diamond, two basketball courts, a community center, a parking lot, and miscellaneous outdoor recreational spaces. Due to the age of Veterans Memorial Park, the utility of the improvements made are deteriorating and the outdoor recreational spaces are aging. In addition, the existing community center has been shuttered due to structural and safety issues, and temporary trailers are used in lieu of the community center. Over time, much of the ground surface at the Veterans Memorial Park, which is sitting atop the landfill material from 1954, has settled over the weight of different types of debris. The vacant lot to the east of Veterans Memorial Park has been vacant since 1988, at which time an industrial structure that was formerly the International Paper (grocery bag) factory was demolished. The vacant lot, although previously paved, is now characterized by sparse, emergent vegetation, which covers disparate portions of the remaining asphalt and concrete under existing conditions.

General Plan and Zoning

The City of Commerce 2020 General Plan (General Plan) was adopted in January 2008 to establish and maintain an orderly pattern of development in the City, utilize land use classification as a means to implement the City's land use policies, identify permitted land uses and their location and distribution, and establish standards for development density and intensity (City of Commerce 2008). The City is currently in the process of updating its General Plan; however since the new General Plan has not yet been adopted, this discussion will only refer to the General Plan adopted in 2008. As shown in Figure 2-2, Zoning Map, the City's General Plan Land Use Map designates the Veterans Memorial Park as Public Facilities and the vacant lot as Commercial Manufacturing (City of Commerce 2009). School sites, government offices, utility and transportation easements, and libraries all fall within the General Plan's Public Facilities land use designation. This designation corresponds with the City's Public Facility (PF) zone designation. The PF zone is intended to provide adequate space for public and quasi-public community facilities. Permitted uses within the PF zone include municipal and other government buildings, public educational facilities, religious facilities, and recreational areas (City of Commerce 2018). The Commercial

Manufacturing designation is designed to encourage a balanced mix of commercial, office professional, and light manufacturing uses along a number of high visibility traffic corridors. This land use designation corresponds to the Commercial/Manufacturing (C/M1) zone district (City of Commerce 2008). The C/M1 zone is intended to concentrate commercial and light industrial uses along major arterials and in other areas that are easily accessible. The industrial uses considered appropriate in the C/M1 zone are limited to support services, such as machine shops and some light manufacturing. Commercial or industrial uses that might create offensive levels of noise, air pollution, glare, radioactivity or other nuisances are prohibited from this zone (City of Commerce 2018). Upon approval of the Project, the land use designation of the Project site would change from Public Facilities (PF) and Commercial Manufacturing (C/M1), to Public Open Space, Commercial Retail, and Residential with the corresponding Specific Plan zone.

Transportation and Transit

Major streets surrounding the Project site include Slauson Avenue, Telegraph Road, Gage Avenue, Garfield Avenue, and Florence Avenue. The I-5 freeway and the Los Angeles Metropolitan Transportation Authority's (Metro) Gold Line railway provide regional access in the City. The I-5 freeway, an eight-lane-above-grade facility, runs northwest to southeast through the City and is located approximately 60 feet to the Project site's eastern boundary. Local access to the Project site is provided via the I-5 freeway northbound (NB) and southbound (SB) ramps at Slauson Avenue. The Metro Gold Line's eastern terminus at the Atlantic Station in East Los Angeles is approximately 4.34 miles northwest of the Project site. From the Atlantic Station, several Metro Local Lines would connect to the Project site. Metro Local Line stops located within 0.5-mile of the Project site include Line 62 at Telegraph Road and Slauson Avenue and Line 108 at Slauson Avenue and Gage Avenue. Additionally, Commerce Bus Line stops located within 0.5-mile of the Project site include the Orange Route stop at Eastern Avenue and Washington Boulevard, the Green Route stop at Kuhl Drive and Zindell Avenue, and the Yellow Route at Greenwood Avenue and Gage Avenue.

As shown in Figure 2-3, Eastside Transit Corridor Phase 2 Project, in addition to the existing transit described above, planned transit in the vicinity of the Project site includes the Eastside Transit Corridor Phase 2 Project (Eastside Transit Project). The Eastside Transit Project proposes to extend the Gold Line further east from its current terminus at the Atlantic Station in East Los Angeles to South El Monte via State Route (SR-) 60 and/or Whittier along Washington Boulevard in Pico Rivera. The proposed Washington Boulevard extension would place a station at Washington Boulevard and Rosemead Boulevard, approximately 1.6 miles northeast of the Project site. Metro anticipates releasing a Supplemental/Recirculated Draft EIR for public review and comment in 2021, followed by public hearings in the project area to gather community input and comments on the draft environmental document (Metro 2019).

2.4 Project Objectives

The primary objectives of the proposed Project include the following:

- Create a welcoming pedestrian-friendly contemporary village that will complement and enhance the City and the surrounding community.
- Provide an attractive lifestyle for residents, as well as draw visitors from all over Southern California to utilize the public spaces, youth sports complex, all-inclusive playground, and entertainment options.

- Provide a revitalized Veterans Memorial Park with new structures, an all-inclusive playground, a contemporary soccer and baseball youth sports complex, a contemporary library, and ample outdoor green space to maximize opportunities for community events and services.
- Create open and green public spaces that will integrate the Project's community space with the mixed-use entertainment/retail and residential structures.
- Enhance transit connections between the City of Commerce and surrounding municipalities by creating a transit oriented Project that takes advantage of both the existing Metro bus service and the future Metro Gold Line extension planned for Washington Boulevard in Pico Rivera.
- Create a progressive, forward-looking and vibrant community that is a desirable place for people to live, work, and play, all while offering robust community services for all.
- Provide connections to the Rio Hondo River and Path, as well as the surrounding neighborhood.
- Transform a deteriorating public park and vacant industrial lot into a 21st-Century mixed-use development that integrates vitally important public community uses with robust private development.
- Remediate the former on-site landfill to provide a safer environment for future park visitors, as well as residents living in the City.
- Provide new residential units comprised of a mixture of townhomes for sale and for-rent apartment and townhouse style units.
- Provide leading-edge environmentally friendly features in an effort to reduce the use of non-sustainable energy, reduce the Project's overall carbon footprint, encourage an outdoor and pedestrian lifestyle, and limit the visitors' and residents' exposure to harmful pollution.

2.5 Proposed Project

The Project involves the demolition of the existing Veterans Memorial Park (which is currently in an advanced state of disrepair) and an adjacent vacant parcel and the redevelopment of the Project site to accommodate a mixed-use development. As shown in Figure 2-4, Conceptual Site Plan, the proposed Project would include the construction of 850 residential units, 165,000 square feet of commercial uses, a 77,050-square-foot community center, a 5,000-square-foot museum, and approximately 4.75 acres of parks and open space. Table 2-1 below shows the proposed breakdown of land uses for the Project Site.

Additionally, due to the previous use of the Project site as a landfill, the Project involves remediation to allow for safe implementation of the Project. Upon approval of the Project, the land use designation of the Project site would change from Public Facilities (PF) and Commercial Manufacturing (C/M1), to Public Open Space, Commercial Retail, and Residential with the corresponding Specific Plan zone.

Table 2-1. Breakdown of Land Uses

Proposed Land Use	Number	Approximate Size (Square Feet)	Total Area (Square Feet)
Residential Land Uses			
Studios	85	500[1]	42,500
1 Bedrooms	298	675[1]	201,150
2 Bedrooms	340	980[1]	333,200
3 Bedrooms	127	1,150[1]	146,050

Table 2-1. Breakdown of Land Uses

Proposed Land Use	Number	Approximate Size (Square Feet)	Total Area (Square Feet)
Lobby	–	5,500	5,500
Leasing Office	–	2,500	2,500
Mail Center	–	6,500	6,500
Clubroom	–	9,000	9,000
Game/TV Room	–	5,000	5,000
Fitness Center	–	7,000	7,000
Conference Room	–	3,500	3,500
		Total	**761,900**
Commercial Land Uses			
Movie Theater	–	55,000	55,000
Arcade (entertainment/bowling)	–	20,000	20,000
Fitness Center	–	15,000	15,000
Restaurant	–	16,000	16,000
General Retail	–	28,000	28,000
Grocery and Food Hall	–	25,000	25,000
Pharmacy	–	6,000	6,000
		Total	**165,000**
Tower			
Residential/Commercial	–	65,000	65,000
		Total	**65,000**
Community Center			
Community Center	–	77,050	77,050
		Total	**77,050**
Park and Green Space			
Open Green Space	–	100,000	100,000
Children's Playground	–	20,000	20,000
Youth Sports Field	–	50,000	50,000
Grass Amphitheater	–	3,600	3,600
Benches/Stands	–	5,000	5,000
		Total	**196,020[2]**
Museum			
		Total	**5,000**

Source: Comstock Realty 2019
Notes:
1 size/unit
2 Totals approximately 4.75 acres

2.5.1 Project Details

Veterans Memorial Park

As shown in Figure 2-5, Project Renderings, the new structures proposed as part of the new Veterans Memorial Park would include a four-story, 77,050-square-foot community center. The community center would include indoor sports courts and offices, a library, and a ballroom/event space as well as supporting amenities (e.g. offices, restrooms, lobbies etc.).The community center would be approximately 120 feet in height and located on the southeastern portion of the Project site along the I-5 freeway. A Sports Complex comprising youth-sized soccer and baseball fields (to accommodate local and regional league and tournament matches), a playground, and public open space would be located immediately adjacent to the community center. The green space would lead towards the grass-stepped amphitheater, which includes concrete bench steps and would essentially separate the residential development on the west of the Project site and commercial development to the east. The Project also proposes an art component, including a 5,000-square-foot Latino Museum, and murals.

Residential

The Project would include the construction of 850 new residential units, comprised of a mixture of 25-50 townhomes for sale, and the rest for-rent apartment and townhouse style units. The 850 residential apartment units would be split into several Type 5a, 5b and 3b construction structures of varying heights on the western portion of the Project site.[1] For-sale townhomes would be constructed as Type 5a or 5b, and would be two stories in height, with a maximum height of 30 feet to the roof parapet. A private pool for townhome owners would be located in close proximity to the proposed townhomes. Parking is proposed as a combination of in-unit grade-level garage and subterranean parking accessible from the structure beneath the for-rent apartment units.

The apartment and townhouse for-rent units would vary from 35 feet to 75 feet (3 to 7 stories) in height, with a maximum height of 85 feet including roof pitches and architectural elements. Private access pools would be allocated to every two residential structures. Each structure would include its own event spaces, amenity rooms, package rooms, and bicycle storage areas. Direct, private access from subterranean parking to each residential building would be provided.

Entertainment Retail

As shown in Table 2-1, a portion of the 165,000 square feet of commercial land uses would be developed with entertainment retail comprising of a three-story building located along the northeast edge of the site. The uses proposed within the entertainment retail structures would include approximately:

- A 55,000-square-foot movie theater
- 16,000-square feet for restaurant uses
- A 15,000-square-foot fitness center
- 20,000 square feet for an entertainment/arcade/bowling alley
- 25,000 square feet for a grocery store/food hall
- 28,000 square feet for general retail uses
- A 6,000-square-foot pharmacy.

[1] "Type 5a, 5b and 3b construction structures" refers to the standard fire resistance ratings as defined in the California Building Code.

In addition to the above-mentioned uses, the proposed commercial building would include an approximately 250-foot (15-story) high tower on the northeastern corner of the site. The proposed tower would be 220 feet high to the top floor and 250 feet high at its highest point (i.e. including the architectural screen) and would provide an additional 65,000 square feet of residential uses. The proposed Project's commercial and entertainment land uses would operate within different business hours depending on the use (for example, bars and restaurants would operate during different hours of the day than retail stores); however, the proposed Project would generally operate daily from 6:00 a.m. through 2:00 a.m.

Parking and Site Access

The Project would provide 1.5 parking spaces per unit, so a total of 1,273 spaces, 50 of which would be above-grade, and 75 of which would be loading-zone spaces. The Project would provide approximately 525 spaces for commercial uses. The subterranean parking structure would be constructed beneath the retail, community center, and residential living areas. Public access would be provided for the community center and retail visitors. Private access would be provided for residential uses. Passenger vehicle access to the Project site would occur from either the Gage Avenue driveway on the eastern parcel, or from the end of Zindell Avenue into the western parcel. Vehicular traffic from retail and park services would be routed through the Gage Avenue driveway, and directed away from residential uses. Bicycle path traffic from the Rio Hondo Bike Path would be encouraged to utilize the Project's internal circulation to access Project amenities and Bicycle parking for visitors and residents would be provided throughout the Project site.

Transportation and Transit

The Project proposes to add a Commerce Bus Line stop at Veterans Park, near the community center and retail uses, on the eastern portion of the Project site. Additionally, a connection from the Commerce Bus Line to the proposed Washington Boulevard Metro Gold Line Extension, at Washington Boulevard and Rosemead Boulevard in the City of Pico Rivera, would provide access to the Project site. The Project proposes to enhance the existing bus stops at Slauson Avenue and Gage Avenue through additional shade, seating, and signage.

Bicycle parking for visitors and residents would be provided throughout the Project site. Bicycle path traffic from the Rio Hondo Bike Path would be encouraged to use the new Veterans Park amenities, as well as the proposed entertainment retail uses.

Sustainability

The Project would include energy-saving and sustainability goals to optimize building performance and enhance interior environments to promote health and well-being, and would be designed to achieve Leadership in Energy and Environmental Design (LEED) Gold or Platinum certification. Sustainable design features would include:

- UVA and UVB-resistant windows and glass/glazing throughout the Project[2]
- Maximally-filtered mechanical ventilation systems in all structures
- Connection to City of Commerce's Community Choice Provider Energy Purchasing Program
- Solar-path driven design of pool and window locations to reduce need for cooling and heating
- Low-vapor flooring, wall-coating, and paint materials throughout the Project

[2] Ultraviolet A (UVA) and Ultraviolet B (UVB) refer to the different wavelengths of UV radiation from the sun.

- Light Emitting Diode (LED) and low-energy light fixtures and bulbs throughout the Project
- Low petroleum-content paving throughout the Project
- Energy provided by Photo-voltaic cells, where possible.
- Managed cooling systems provided by ventilation, where and when seasonally possible.
- Highly insulated roof membranes and structures
- Electric car chargers
- Maximum shade for residential windows and retail spaces, provided by trees, awnings, and louvers, to reduce energy usage (designed according to solar patterns)
- Reclaimed water usage in landscaping and outdoor space irrigation
- Low-water usage and native planting throughout the landscaping
- Turf versus living grass in high foot-traffic areas of youth sports complex and Veterans Park

2.6 Project Construction

Remediation

A Remedial Action Plan for the vacant lot on the Project site was approved in August 2016 by the Los Angeles Regional Water Quality Control Board (LARWQCB), and would be amended and expanded to include remediation of the entire Project site. Remediation of the Project site involves the excavation and removal of all former landfill debris and contaminated soils to an approximately 20-foot depth. The excavation of soils is estimated to be approximately 380,000 cubic yards (cy) that would be transferred to a RWQCB-approved landfill site in Southern California. Upon removal, the Project's soil-bottoms and sidewalls would be tested to ensure all contaminants and debris have been removed. Remediation of the Project site is expected to last for approximately 9-12 months beginning in May 2020.

Construction

Once the RWQCB has deemed remediation to be complete, construction of the Project would proceed. The initial construction process entails construction of separate subterranean parking structures beneath the retail, community center, and residential living areas, followed by Phase I of Project construction. Phase I would commence in March 2022 and would include the construction of the 165,000 square feet of commercial land uses, the 77,050-square-foot community center, 400 residential units, and the proposed public open space- all on the eastern portion of the Project site. During Phase I of Project construction, the existing community center would remain open for public use, with the expectation that by the time Phase II of Project construction commences, the new community center would be open for use and the existing community center could then be demolished. Phase II of Project construction would commence in December 2023 and would include the construction of the remaining 450 residential units.

Construction of the Project is anticipated to commence in March 2022 following completion of site remediation, and would terminate in 2024. Construction activities would include demolition, site preparation, grading/earthwork, building construction, paving, and architectural coating. During the most intensive phase of construction, approximately 105 workers would be required per day and approximately 64 truck trips would occur per day. Off-road construction equipment that would be used during construction would include an excavator, a skid steer loader, rollers, air compressors, a forklift, and a crane. It is estimated that the Project would require excavation to approximately 20 feet below ground surface. As stated above, the total cut for the Project would involve approximately 380,000 cy of earthwork materials, which would be exported from the Project site. The total fill required for the Project would include approximately 85,000 cy of earthwork materials, which would be imported to the Project site.

2.7 Intended Uses of This EIR

An EIR is a public document used by a public agency to analyze the potential environmental effects of a project and to disclose possible ways to reduce or avoid potentially significant environmental impacts, including alternatives to the proposed project. As an informational document, an EIR does not make recommendations for or against approving a project. The main purpose of an EIR is to inform public agency decision makers and the public about potential environmental impacts of the project (State CEQA Guidelines Section 15121). This EIR will be used by the City, as the lead agency under CEQA, in making decisions with regard to the proposed Project described above and the related approvals listed below.

The City is expected to use the EIR in its decision-making relative to the Modelo Project. The required discretionary approvals sought by the City consist of the following:

- A Development Agreement and Cost Reimbursement Agreement
- A General Plan Amendment (to change the land use designation from Public Facilities and Commercial Manufacturing to Public Open Space, Commercial Retail, and Residential with the corresponding Specific Plan zone)
- An associated Zone Amendment in the official City of Commerce Zoning Map and other exhibits to reflect the new zoning for the Project site.
- Approval of the Specific Plan for the Project Site
- Approval of the Project Master Signage Plan
- Certification of the EIR and consequently, approval of the proposed Project
- Construction, Building, Grading, and Occupancy Permits

Other regulatory agencies that may also require permits or other approvals for the proposed Project include:

- State Water Resources Control Board – Project Applicant must submit a Notice of Intent to comply with the General Construction Activity National Pollutant Discharge Elimination System (NPDES) Permit
- Los Angeles RWQCB – Approval of updated Remediation Action Plan for the entire Project site
- Los Angeles County Fire Department – Plan approval
- Los Angeles County Sheriff's Department – Plan approval
- Utility providers – Utility connection permits

2.8 References

City of Commerce. 2008. *City of Commerce 2020 General Plan*. Adopted January 2008. Accessed, November 7, 2019. http://www.ci.commerce.ca.us/DocumentCenter/Home/View/152.

City of Commerce. 2009. *City of Commerce 2020 General Plan* "Land Use Map" [map]. Printed August 6, 2009. Accessed, November 7, 2019. http://www.ci.commerce.ca.us/DocumentCenter/Home/View/349.

City of Commerce. 2015. "Zoning Map." Revision December 29, 2015. Accessed, November 7, 2019. http://www.ci.commerce.ca.us/DocumentCenter/View/4486.

City of Commerce. 2018. City of Commerce Municipal Code Title 19 Zoning. Current through April 24, 2018. https://library.municode.com/ca/commerce/codes/code_of_ordinances?nodeId=TIT19ZO.

Comstock. 2019. “Draft Project Description.” July 19, 2019.

Metro. 2019. “Eastside Transit Corridor Phase 2.” Accessed November 7, 2019. https://www.metro.net/projects/eastside_phase2/.

SOURCE: Esri, Digitial Globe, Open Street Map

DUDEK

0 150 300 Feet

FIGURE 2-1

Existing Site Conditions

Modelo Project

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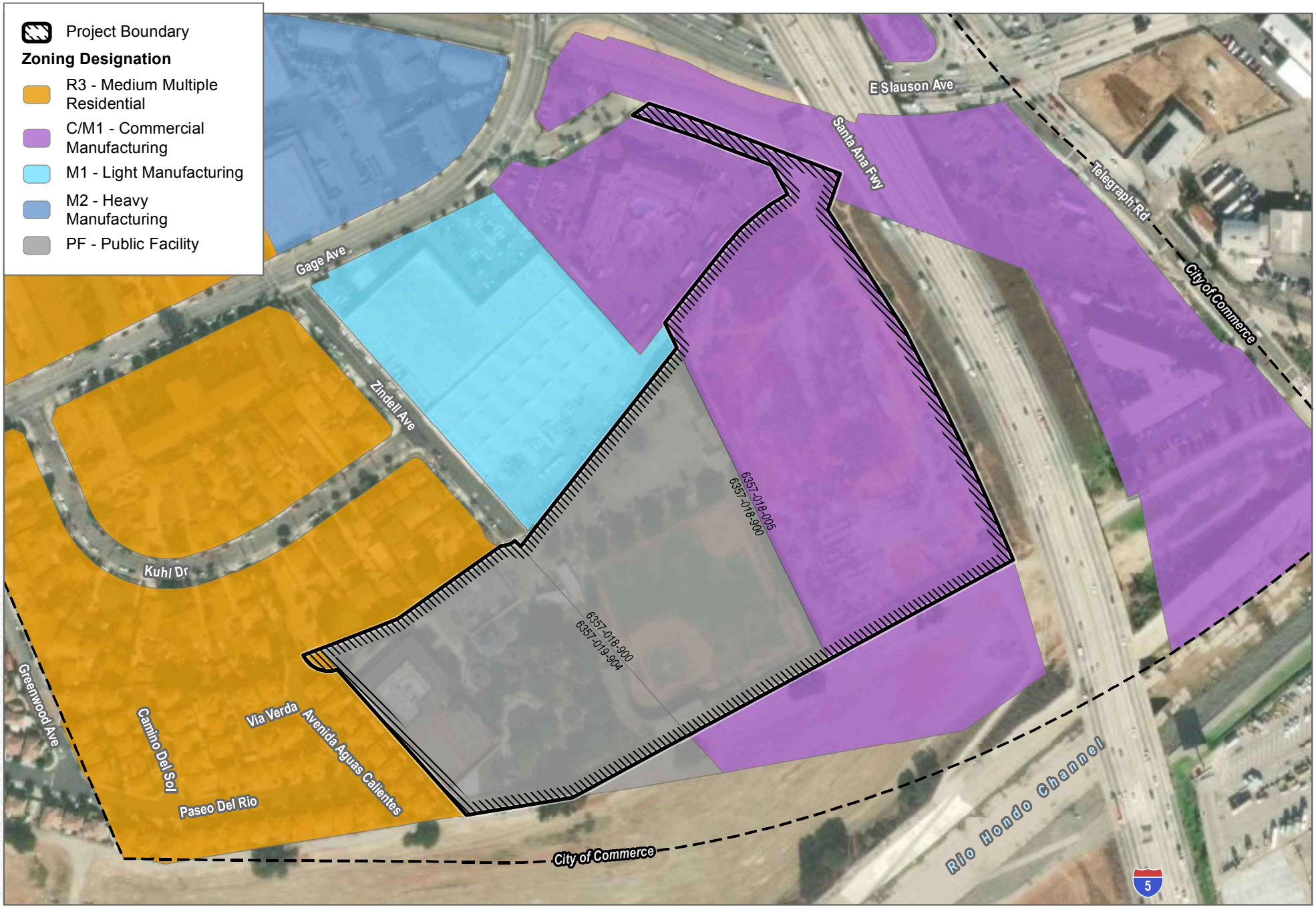

SOURCE: Esri, Digitial Globe, Open Street Map, SCAG 2016

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0 150 300 Feet

FIGURE 2-2

Zoning Map

Modelo Project

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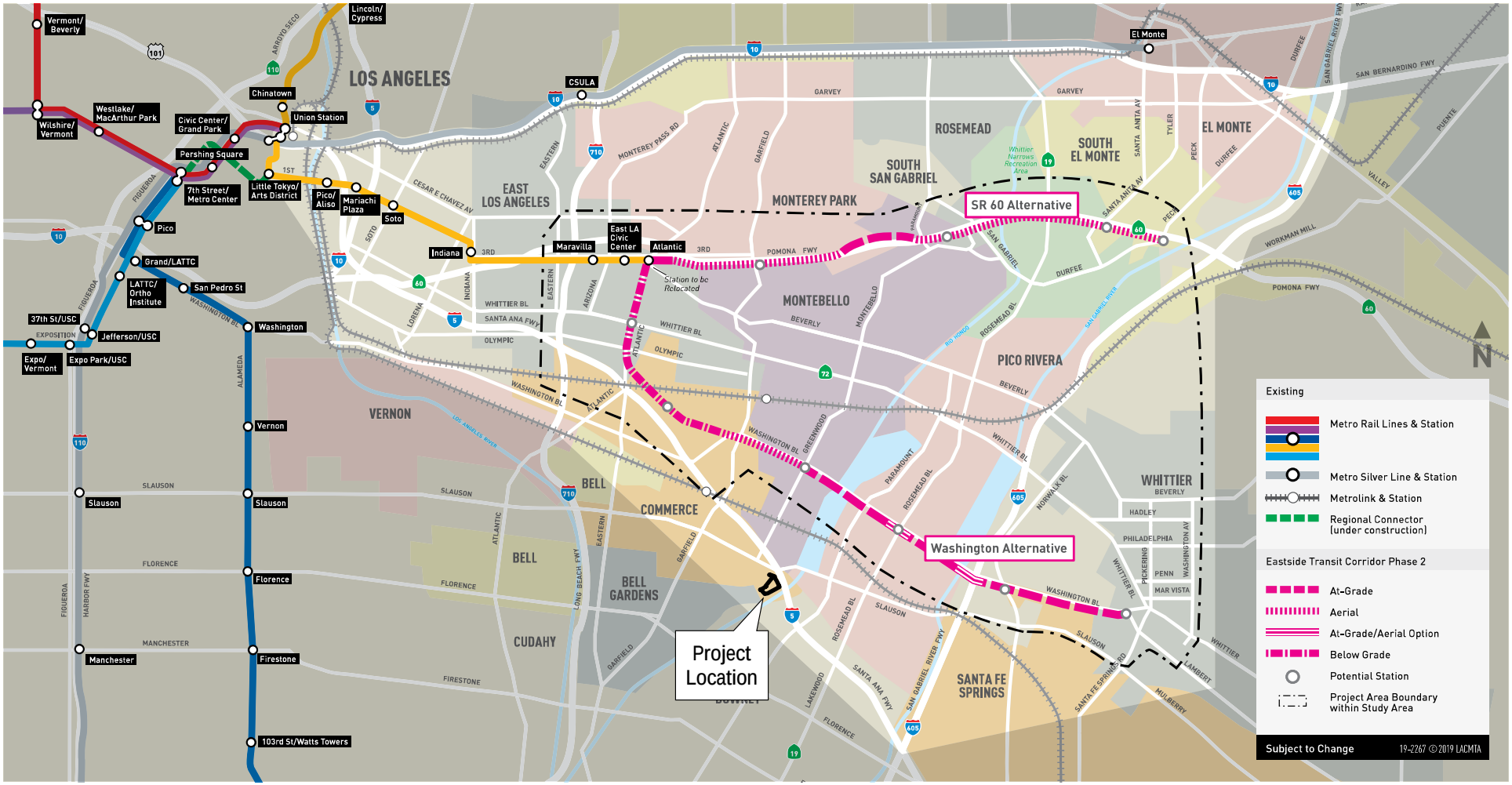

MAP NOT TO SCALE

SOURCE: METRO 2019

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FIGURE 2-3

Eastside Transit Corridor Phase 2 Project

Modelo Project

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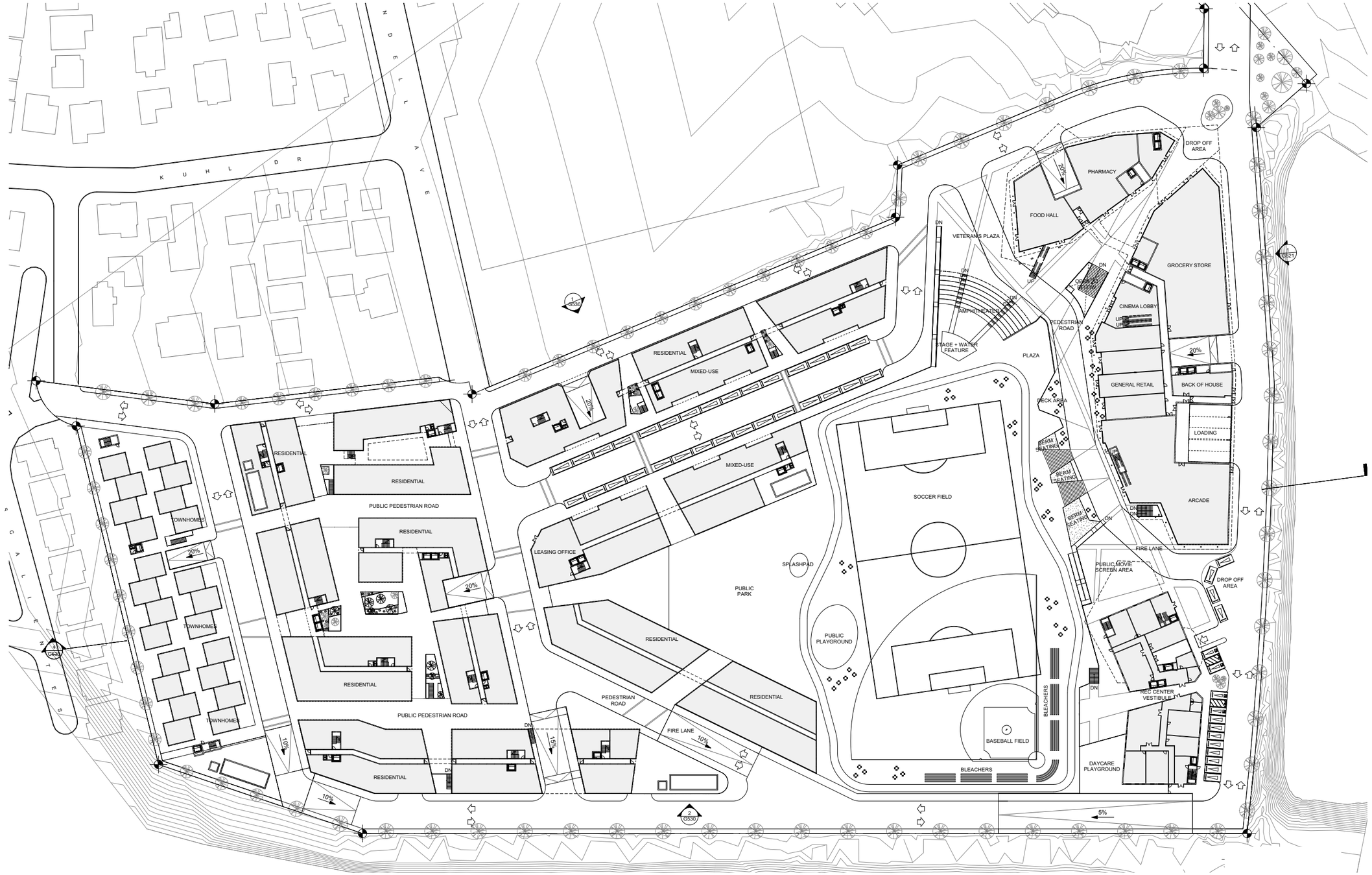

SOURCE: TIGHE Architecture 2019

FIGURE 2-4

Conceptual Site Plan

Modelo Project

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Northeast View

Southwest View

SOURCE: Comstock 2019

FIGURE 2-5

Project Renderings

Modelo Project

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3 Introduction to Environmental Analysis

The following sections contain an analysis, by issue area, of the potentially significant environmental effects of the Modelo Project (Project). The environmental issue areas analyzed in this section are as follows:

- Aesthetics (Section 3.1)
- Air Quality (Section 3.2)
- Biological Resources (Section 3.3)
- Cultural Resources (Section 3.4)
- Energy (Section 3.5)
- Geology and Soils (Section 3.6)
- Greenhouse Gas Emissions (Section 3.7)
- Hazards and Hazardous Materials (Section 3.8)
- Hydrology and Water Quality (Section 3.9)
- Land Use and Planning (Section 3.10)
- Noise (Section 3.11)
- Population and Housing (Section 3.12)
- Public Services (Section 3.13)
- Recreation (Section 3.14)
- Transportation (Section 3.15)
- Tribal Cultural Resources (Section 3.16)
- Utilities and Service Systems (Section 3.17)

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

- Environmental Setting
- Relevant Plans, Policies, and Ordinances
- Thresholds of Significance
- Methodology
- Impacts Analysis
- Cumulative Impacts
- Mitigation Measures
- Level of Significance after Mitigation
- References

As stated in the Initial Study (see Appendix A), it was found that the proposed Project would have either no new impacts/no impacts or a less than significant impact with or without new mitigation relative to the following environmental issue areas. As such, these issue areas are not included in this EIR.

- Agriculture and Forestry Resources
- Mineral Resources
- Wildfire

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3.1 Aesthetics

This section describes the existing visual conditions of the Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Project.

Comments received in response to the Notice of Preparation (see Appendix A) included concerns regarding impacts of shade and shadow impacts on existing and proposed development resulting from the implementation of the proposed Project.

Information contained in this section is based on observations made during site visits conducted by Dudek in May 2019. Other documentation used in this analysis includes satellite imagery, and conceptual site plans, and mass models prepared by the applicant. Other sources consulted are listed in Section 3.1.9 References.

The City of Commerce's (City) General Plan does not designate any scenic vistas within the City and according to the Caltrans' California Scenic Highway Mapping System, the Project site is not located adjacent to, or in the vicinity of, a designated state scenic highway or eligible state scenic highway. As described in the Notice of Preparation/Initial Study (NOP/IS), impacts to scenic vistas and scenic highways were determined to be less than significant (or no impact) and were scoped out for further analysis in the EIR. As a result, these resources are not discussed further.

3.1.1 Environmental Setting

3.1.1.1 Visual Character and Quality

The City has approximately 13,000 residents and approximately 60,000 people who work or patronize businesses in the City (City of Commerce 2008a). According to the City's General Plan, commercial, manufacturing, entertainment, and industrial land uses account for more than 70% of the City's total land area. Residential land uses account for approximately 8% of the City's total land area, the majority of which are the single-family residential units (City of Commerce 2008a). Comprised of Veterans Memorial Park and an adjacent vacant parcel, the Project site is located in the City's Southeast Planning Area that includes residential, commercial, and industrial land uses (see Section 3.10, Land Use and Planning).

Project Site

The Project site consists of a disturbed, vacant lot on its eastern half and Veterans Memorial Park on its western half (Figure 2-1, Existing Site Conditions). There are no structures present on the vacant lot and the lot has been vacant since 1988. Prior to that, an industrial structure formerly known as the International Paper (a grocery bag manufacturer) factory was located on the lot before it was demolished in 1988. In addition to litter, ruderal vegetation including invasive and non-native grasses and shrubs proliferate throughout the remnant asphalt and concrete across the site. The vegetation tends to be taller along the lot's boundaries. Several palm trees are also scattered sparsely across the lot. Along its eastern boundary, approximately eight utility poles run parallel to the west of the Interstate (I-) 5 freeway and lead to an attachment on a single billboard. Along its western boundary, a chain-linked fence, approximately 10 feet tall, and well-maintained hedges separate the vacant lot from Veterans Memorial Park. Leftover industrial debris (mostly metal foundational beams) are piled approximately 10 feet east of the chain-linked fence and hedges.

Constructed between 1965 and 1970, Veteran's Memorial Park consists of a baseball stadium with bleachers, field lights and an electronic scoreboard; two paved parking lots, two outdoor basketball courts with bleachers, a community center (adjacent to the basketball courts), a children's playground, and miscellaneous turf and picnic table spaces. Several gazebo-like structures are present in the turf and picnic area near the children's play area. In addition to stadium lights, shorter overhead lights are distributed throughout the site. Fencing separates the various courts and rod fencing is installed around a portion of the play area. Well-maintained ornamental trees are present throughout the site and provide shade to park users. A gate to the park is located at the end of Zindell Avenue and directs visitors towards a low sign and tall flag pole. The park's parking lots are situated along its northern boundary. The site was previously used as a landfill and was last operated as such in 1954.

Photographs of the vacant lot and Veterans Memorial Park are presented on Figure 3.1-1, Site Photos.

Surrounding Land Uses

The land uses surrounding the Project site consists of a mix of residential, commercial, industrial, and open space. Industrial and commercial buildings, and their associated parking lots, are located to the north and north of the Project site. This area contains commercial buildings and warehouses, a restaurant, and a motel/hotel. The tallest building, the motel/hotel, is four stories and is comprised of two rectangular wings. The warehouse is a long and wide, two-story tilt-up structure and the property includes surface parking lots and several shipping and receiving bays. Sparse landscaping, primarily trees and some turf near the restaurant, is scattered on the Project site and generally occurs near or within parking lots. The location and vicinity adjacent uses can be found in Figure 3.1-2, Surrounding Uses.

The I-5 freeway is located east of the Project site. The City of Montebello is generally located immediately east of the I-5 freeway and near the Project area. A small, rectangular shaped portion of the City of Commerce is bound by the I-5 freeway to the west and Telegraph Road to the east, and includes limited commercial development including a diner (7780 Slauson Avenue), a flower shop, and a tan-painted stucco exterior three-story hotel (Travelodge; 7810 East Telegraph Road). The City of Montebello is comprised of largely commercial and industrial zones. Notable development in the area includes several large, approximately two-story warehouses and various commercial business and their associated parking lots. There are no residential units in this area of the City of Montebello located east of the Project site and I-5 freeway.

Apartments and several single-family residential neighborhoods are located west of Zindell Avenue and north of the westernmost portion of the Project site (Figure 3.1-2, Surrounding Uses). Nearby single-family homes to the north of the westernmost portion of the Project site are visibly older than those located to the immediate west. Homes to the north are single-story structures that are typically lined by vertical metal bar fencing. Homes display a variety of color and typically include ornamental trees or landscape shrubs in front and back yards. Located approximately 500 feet to the north of the westernmost portion of the Project site, is an apartment development fronting Gage Avenue, which consists of two separate complexes. The larger of the two developments is a three-story, T-shaped structure with peach and tan painted stucco exteriors. The structure and associated surface parking lot are surrounded by an approximately 5-foot high, steel vertical fence with regularly spaced concrete pillars. The smaller apartment building, a short, two-story L-shaped structure is painted off-white and is located at the southwestern corner of the Gage Avenue/Zindell Avenue intersection.

The single-family residential neighborhood to the west is gated and is comprised of two-story homes with reddish/brown tile roofs and brown or tan exteriors. Two-story homes to the west of the Project site are setback approximately 15 feet from the Project boundary and are buffered from nearby park uses (i.e., the community center and basketball courts) by a narrow, 15-foot undeveloped easement/corridor. According to the City, single-

family residential development to the west of the Project site is located on a minimum lot area of 2,000 square feet per unit and a maximum of 35 feet in height (three stories tall) (City of Commerce 2008a). Distances between residential buildings to the west of the Project site are less than 10 feet and are occasionally as close as 5 feet. A similar assortment of residential homes are located in Bell Gardens approximately 600 feet west of the Project site (i.e., west of Greenwood Avenue).

To the south of the Project site is the Rio Hondo River and Bike Path, and single-family dwelling units located in the City of Downey. The nearest residential units are located 350 feet south of the Project site, beyond the Rio Hondo River. The land use designated for the residential units south of the Project site and in the City of Downey is low density residential (City of Downey 2012). The homes are single-story structures and have a setback between the home and the right-of-way of approximately 20 feet. These residential units are allowed a maximum lot area of 5,000 square feet per unit. The houses all vary between stucco, shiplap, and stacked stone front-facing exteriors but all are neutral in color (tan, white, pale yellow). The houses typically maintain ornamental trees and landscape shrubs in front and back yards, and the roof tiles are reddish brown or grey in color.

Comprised of a wide concrete channel, the Rio Hondo River carries seasonal flows and varies in width from approximately 400 feet wide to 230 feet wide near the Project site. There is no development along the Rio Hondo Bike Path and it is not within the boundaries of the City. The path is flat and features scattered landscaping.

3.1.1.2 Light and Glare

Existing lighting within the Project site includes parking area lighting in Veterans Memorial Park, approximately seven field lights around the park's baseball stadium, overhead lighting for the two basketball courts and scattered throughout turf and play areas, building lights on the park's community center, and billboard lighting on the vacant lot. Commercial, industrial and residential lands uses to the north and west include typical sources of nighttime lighting including lighting for general safety and illumination, and parking lot and street lighting. Commercial development to the north of the Project site's vacant lot (i.e. the, hotel and restaurant) include illuminated signage.

Nighttime light that spills outside of the Project site, as well as lighted signs, can be annoying to neighbors and potentially harmful to motorists, cyclists, and pedestrians. Nighttime lighting can result in sky glow (the brightening of the night sky) and light trespass (a result of spill light shining in undesirable locations). Nighttime lighting in excess of what is necessary for its purpose is called light pollution. Light pollution cannot be eliminated, but it can be minimized to help create dark skies and to decrease energy consumption. Veterans Memorial Park closes around 7:00 pm to 8:30 pm, depending on the day. Although field lights from the park's baseball diamond is not operated every evening, these field lights are a source of general nighttime lighting in the immediate surrounding area.

3.1.2 Relevant Plan, Policies, and Ordinances

Federal

The following federal regulations pertaining to aesthetics and scenic resources would apply to the Proposed Project.

Federal Highway Beautification Act (HBA)

The Federal Highway Beautification Act (HBA), enacted in 1965, regulates the placement and maintenance of outdoor advertising signs, displays, and devices to protect public investments in highways, to promote the safety and recreational value of public travel, and to preserve natural beauty. States that are not in compliance with the HBA would receive a 10% reduction in their federal-aid highway funds.

State

The following state regulations pertaining to aesthetics and scenic resources would apply to the Proposed Project.

California Scenic Highway System

Created by the California State Legislature in 1963, the California Scenic Highway Program includes highways designated by the California Department of Transportation (Caltrans) as scenic. The purpose of the program is to protect the scenic beauty of California highways and adjacent corridors through conservation and land use regulation.

The nearest officially designated State Scenic Highway is a portion of State Highway 2 that extends through the San Gabriel Mountains, beginning just north of the City of La Cañada Flintridge. The portion of State Highway 2 that is officially designated as a State Scenic Highway is located approximately 17 miles northwest of the Project site. There are no designated scenic highways located in the Proposed Project's vicinity.

California Code of Regulations, Outdoor Advertising Regulations, Title 4, Division 6

A classified landscaped freeway is a section of freeway with ornamental vegetation planting that meets the criteria established by the California Code of Regulations, Outdoor Advertising Regulations, Title 4, Division 6. This designation is used in the control and regulation of outdoor advertising displays. The segment of the I-5 Freeway located immediately adjacent to the Project site is not a designated "Landscaped Freeway" segment.

Local

The following local/regional regulations pertaining to aesthetics and scenic resources would apply to the proposed Project.

City of Commerce General Plan

The Community Development, Transportation, Housing, and Resource Management Elements of the City of Commerce General Plan provides objectives, policies, and programs regarding aesthetics and scenic resources including the following:

> **Community Development Policy 1.3**
> The City of Commerce will continue to implement specific standards for new commercial developments located adjacent to residential neighborhoods in order to ensure that adequate buffers are provided so that negative impacts such as noise, light pollution, truck use, and traffic may be mitigated.
>
> **Community Development Policy 1.6**
> The City of Commerce will ensure that commercial and industrial development provide sufficient landscaped buffers and other design features to separate new non-residential uses located in areas adjacent to existing residential neighborhoods.
>
> **Community Development Policy 6.2**
> The City of Commerce will strive to see that commercial properties are maintained and that obsolete signage is removed.

Community Development Policy 6.3
The City of Commerce will require new commercial and industrial development to employ architectural and site design techniques that will promote quality and efficient development.

Housing Policy 2.1
The City of Commerce will continue to promote, maintain, and enhance the character and identity of the residential neighborhoods.

Housing Policy 4.1
The City of Commerce will ensure that new higher-density residential projects are kept at a scale (number of units, height, etc.) compatible in design with adjacent residential areas.

Housing Policy 4.2
The City of Commerce will ensure that those areas developed in higher densities shall be buffered from adjacent lower-density residential development with medium-density residential development.

Resources Management Policy 4.5
The City of Commerce will require that at least five percent of the site area of all new commercial and industrial developments be landscaped.

City of Commerce Municipal Code – Chapter 19.19.130 – Light and Glare

The primary controls with respect to light and glare include specific sections of the City of Commerce Municipal Code that govern property maintenance and light trespass. These regulations are identified in Section 19.19.130 [Light and Glare] of the City of Commerce Municipal Code (City of Commerce 2008b). This section of the Municipal Code includes specific provisions regarding glare and light trespass. This section states the following:

- Lighting for safety purposes shall be provided at entryways, along walkways, between buildings, and within parking areas.
- Lighting standards shall not exceed the maximum permitted building height or 25 feet, whichever is less.
- The candle power of all lights shall be the minimum needed to accomplish the purpose of the light.
- No flickering or flashing lights shall be permitted in any residential or commercial zone. All lights shall be constant and shall not charge intensity or color more often than once every 30 minutes.
- Lights sources shall not be located in buffer areas, except those required to illuminate pedestrian walkways.
- All lights shall be directed, oriented, and shielded to prevent lighting from shining onto adjacent properties, onto public rights-of-way, and into driveway areas in a manner that would obstruct drivers' vision. Landscape lighting shall be low-level, unobtrusive fixtures.
- Lighting for advertising signs shall not cause light or glare on surrounding properties.

City of Commerce Municipal Code – Chapter 19.19.220 – General Development Standards and Design Guidelines

A set of general development standards and design guidelines are applied to all new construction, renovation, and alteration of existing uses or structures in all zone districts and land uses (City of Commerce 2008c). The following are relevant to aesthetics and scenic resources:

- Site Planning and Contextual Design
  - Primary structures should be oriented to face the street, avoiding views from the street of parking garages and alleys. Garages, parking, and loading areas shall not be the dominant element in the overall design of a project and should be designed to minimize visual disruption.
  - Building design and siting shall minimize negative impact on views from adjacent properties.
  - Building forms and details should be in keeping with adjacent neighborhood character where appropriate.
  - The mass and height of a new building shall not be disproportionate in size or designed to overwhelm neighboring structures. Upper stories should be stepped back from the ground level facade whenever possible to avoid overwhelming neighboring structures.
  - A building front should provide visual interest and a sense of human scale. Freestanding, singular buildings shall be oriented with their major facade and entry toward the street.
- Landscaping and Paving
  - Landscaping shall be designed to minimize the impacts of development on surrounding properties and be used to provide privacy.
  - A combination of water-conserving landscape and irrigation techniques is required, such as the use of drought tolerant plant species.
  - Landscaping shall be used to define specific areas such as entrances to buildings and parking areas or transitions between land uses.
  - Landscaping shall be provided around the base of buildings to reduce building mass and height.
  - Driveways and service areas shall be subordinate to and blend well with adjacent buildings.
- Architectural Treatments
  - Exterior architectural treatments shall be of high quality and complement the overall design scheme. When appropriate, exterior architectural treatments shall complement existing structures in the immediate vicinity.
  - Accent treatment, such as changes in exterior materials and texture is required and a minimum of two primary building materials shall be
  - At ground level, expanses of blank building walls shall be minimized with creative use of materials, textures, color and/or building form.

City of Commerce Municipal Code – Chapter 19.31, Division 23 – Art in Public Places Program

The intent of the Art in Public Places Program is to provide a collection of nationally recognized and permanent outdoor artwork throughout the City. The program is designed to present the community with a variety of artistic styles and themes, all of the highest possible quality. The requirements of this Program shall apply to 1) commercial or industrial developments, having a project cost equal to or in excess of $250,000; and 2) residential development of more than four lots of units, including single-family residential structures, condominiums, apartments, townhouses, or other dwelling units, if the aggregate project cost exceed $250,000.

3.1.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to aesthetics are based on Appendix G of the State CEQA Guidelines. Through the analysis in the Initial Study (see Appendix A), it was determined that the proposed Project would not have a substantial adverse effect on scenic vistas (i.e., Threshold A) and scenic resources within a state scenic highway (i.e., Threshold B). Accordingly, these issues are not further analyzed in the EIR. Based on the remaining thresholds (Thresholds C and D), according to Appendix G of the State CEQA Guidelines, a significant impact related to aesthetics would occur if the Project would:

C. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality.
D. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

With regard to Threshold C, the Project site is located in an urbanized area. As such, the focus of the Threshold C analysis presented below pertains to potential conflicts with applicable zoning or other regulations governing scenic quality.

3.1.4 Methodology

Analysis contained in this section is based on observations made during site visits conducted by Dudek in May 2019. Other documentation used in this analysis includes satellite imagery, and conceptual site plans, and mass models prepared by the applicant.

3.1.5 Impacts Analysis

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

The Proposed Project is located in an urbanized area. Table 3.1-1, Aesthetics Consistency Table, details all applicable policies and regulations by which the Proposed Project would be required to abide by. As per Table 3.1-1, the Proposed Project would comply with all applicable policies in the City's General Plan, including policies requiring appropriate buffers between existing and new developments in order to preserve community character.

As proposed, the Project at build-out would alter the existing character of both Veteran's Memorial Park and the currently vacant lot located to the east. The current zoning of the 17.32-acre Project site is Public Facilities (PF) and Commercial/Manufacturing (C/M1). As discussed in Chapter 2, Project Description, PF is inclusive of school sites, government offices, utility and transportation easements, and libraries, and C/M1 encourages a mix of commercial, office professional, and light manufacturing uses. Upon approval of the Project, there would be an amendment to the City's General Plan to change Veteran's Memorial Park's land use designation from PF to Commercial, and would also include a corresponding Specific Plan zone that would allow for the proposed residential, commercial, tower, community center, park and green space, and museum. Therefore, the Project would be in compliance with applicable zoning regulations.

As noted earlier, the land uses surrounding the Project site consists of a mix of residential, commercial, industrial, and open space. The residential neighborhood to the north is characterized by one story single-family residences on small lots, and the residential neighborhood to the west is characterized by two story single-family residences. The proposed townhome units on the Project site would be two stories in height (approximately 30 feet tall maximum), and the proposed for-rent apartment development would vary between 35 feet to 75 feet in height (approximately three to seven stories). An additional 10 feet associated with roof pitches and architectural projections would raise the maximum height of residential apartment buildings to approximately 85 feet tall. Despite the variance in height between the Proposed Project's residential structures and the adjacent neighborhood, the adjacent neighborhood borders a relatively small section of the Project site (Figure 2-5, Project Renderings). Specifically, the proposed residential structures in the western half the existing neighborhood borders the Project site would be the site where the proposed townhomes would be of the Project site closest to the existing gated, two-story residential neighborhood would be two to three stories high. The building height of proposed development gradually increases as the Project continues east and is more distant from the existing residential neighborhood in the area, thus creating an appropriate buffer and transition between the existing neighborhoods and the Proposed Project.

The tallest proposed building is a commercial structure that is approximately 15 stories (approximately 220 feet tall; 250 feet tall at the highest point of the architectural screen). It is located on the northeastern corner of the Project site (Figure 2-5, Project Renderings). The nearby existing hotel, located approximately 300 feet northwest of the aforementioned commercial building, is four stories tall, or approximately 40 to 50 feet tall. However, as discussed in Table 3.1-1, Aesthetics Consistency Table, the height difference would not conflict with municipal code or General Plan policies. Additionally, based on Figure 2-4, Conceptual Site Plan, a landscaped buffer would be installed between the proposed commercial building (approximately 75 feet tall) and the existing nearby hotel. Further, the proposed multi-story tower would be stepped back from the west elevation of the underlying commercial structure such that the tower is furthered buffered from the existing four-story hotel.

Table 3.1-1, Aesthetics Consistency Table, indicates that the Project would comply with all design guidelines outlined by the City, including applicable policies in the City's General Plan, the City's Municipal Code, Chapter 19.19.220 – General Development Standards and Design Guidelines and Chapter 19.19.130 – Light and Glare. The Project would not substantially degrade the existing visual character of the Project site, and in some cases the Project would improve the existing visual quality of the site compared to what exists today (particularly for the vacant lot portion of the site). In many areas, the Project site is set back at an appropriate distance and shielded by vegetated slopes or landscaping. The Project site would not conflict with applicable zoning ordinances upon approval of the Proposed Project. Therefore, the Project would not conflict with applicable zoning and other regulations governing scenic quality and impacts would be **less than significant.** No mitigation is required.

Table 3.1-1. Aesthetics Consistency Table

Goal/Policy Number	Policy Text	Consistency Analysis	Project Consistency
Community Development Policy 1.3	The City of Commerce will continue to implement specific standards for new commercial developments located adjacent to residential neighborhoods in order to ensure that adequate buffers are provided so that negative impacts such as noise, light pollution, truck use, and traffic may be mitigated.	As described in Section 2.7, Intended Uses of This EIR, of the EIR, the Proposed Project is seeking several discretionary approvals. During the approval process, the City would review the Project and associated Specific Plan to ensure implementation of specific standards for new commercial developments located adjacent to residential neighborhoods in order to ensure that adequate buffers are provided.	The Proposed Project would be consistent with this policy.
Community Development Policy 1.6	The City of Commerce will ensure that commercial and industrial development provide sufficient landscaped buffers and other design features to separate new non-residential uses located in areas adjacent to existing residential neighborhoods.	According to Chapter 2, Project Description, of the EIR, sustainable landscaping would be incorporated into the site design. Additionally, Figure 2-4, Conceptual Site Plan, retail and other commercial use areas would be located in the eastern half of the Project site. This location provides the farthest distance from the new non-residential uses from the adjacent existing residential neighborhoods, therefore providing a buffer between the two.	The Proposed Project would be consistent with this policy.
Community Development Policy 6.2	The City of Commerce will strive to see that commercial properties are maintained and that obsolete signage is removed.	As stated in Chapter 2, Project Description, a Master Sign Plan would be developed and is required in conjunction with the approval of the EIR. All commercial uses would be appropriately maintained and signage would be managed in accordance with a Master Sign Plan that would be subject to review and approval of the City.	The Proposed Project would be consistent with this policy.
Community Development Policy 6.3	The City of Commerce will require new commercial and industrial development to employ architectural and site design techniques that will promote quality and efficient development.	As described in Section 2.7, Intended Uses of This EIR, of the EIR, the Proposed Project is seeking several discretionary approvals. During the approval process, the City would review the Project to ensure new commercial uses proposed would employ architectural and site design techniques to promote quality and efficient development.	The Proposed Project would be consistent with this policy.

Table 3.1-1. Aesthetics Consistency Table

Goal/Policy Number	Policy Text	Consistency Analysis	Project Consistency
Housing Policy 2.1	The City of Commerce will continue to promote, maintain, and enhance the character and identity of the residential neighborhoods.	The proposed Project seeks to create open and green public spaces that will integrate the Project's community space with the mixed-use entertainment/retail and residential structures. Thus, the Project would be designed to enhance the City and surrounding community through a pedestrian-friendly contemporary village.	The Proposed Project would be consistent with this policy.
Housing Policy 4.1	The City of Commerce will ensure that new higher-density residential projects are kept at a scale (number of units, height, etc.) compatible in design with adjacent residential areas.	The Project site is in a highly urbanized area and is surrounded by a mix of residential, commercial, industrial, and open space land uses. Given the Project site's proximity to existing residential areas, the Proposed Project would be designed to integrate the Project's mix of uses with the adjacent residential areas.	The Proposed Project would be consistent with this policy.
Housing Policy 4.2	The City of Commerce will ensure that those areas developed in higher densities shall be buffered from adjacent lower-density residential development with medium-density residential development.	To ensure the Project is buffered from adjacent low-density residential development, the Project would include a mix of housing types, along with expansive open space and recreational areas.	The Proposed Project would be consistent with this policy.
Resources Management Policy 4.5	The City of Commerce will require that at least five percent of the site area of all new commercial and industrial developments be landscaped.	According to Chapter 2, Project Description, of the EIR, sustainable landscaping would be incorporated into the site design. For example, reclaimed water would be used to irrigate landscaping and native plantings would be installed throughout the Project site. As detailed in Table 2-1 of this EIR, approximately 200,000 square feet of the Project (approximately 15% of the Project's total area) would consist of park and green space in which landscaping would be prominent. While industrial land uses are not proposed, the Project's commercial areas will be landscaped in accordance with City policy.	The Proposed Project would be consistent with this policy.

Table 3.1-1. Aesthetics Consistency Table

Goal/Policy Number	Policy Text	Consistency Analysis	Project Consistency
City of Commerce Municipal Code – Chapter 19.19.130 – Light and Glare	The primary controls with respect to light and glare include specific sections of the City of Commerce Municipal Code that govern property maintenance and light trespass. These regulations are identified in Section 19.19.130 [Light and Glare] of the City of Commerce Municipal Code. This section of the Municipal Code includes specific provisions regarding glare and light trespass. This section states the following: Lighting for safety purposes shall be provided at entryways, along walkways, between buildings, and within parking areas. Lighting standards shall not exceed the maximum permitted building height or 25 feet, whichever is less. The candle power of all lights shall be the minimum needed to accomplish the purpose of the light. No flickering or flashing lights shall be permitted in any residential or commercial zone. All lights shall be constant and shall not charge intensity or color more often than once every 30 minutes. Lights sources shall not be located in buffer areas, except those required to illuminate pedestrian walkways. All lights shall be directed, oriented, and shielded to prevent lighting from shining onto adjacent properties, onto public rights-of-way, and into driveway areas in a manner that would obstruct drivers' vision. Landscape lighting shall be low-level, unobtrusive fixtures. Lighting for advertising signs shall not cause light or glare on surrounding properties.	Implementation of the Project and operation of future development would result in an increase of light and glare sources on site. For example, interior and exterior lighting would be installed in residential areas and street lights would be installed along new interior roads on the Project site. Interior and exterior lighting would also be installed in proposed park and commercial development areas. Consistent with existing conditions, field lighting would be installed at the baseball/soccer field and would consist of modern LED lamps. Advertisement lighting would be installed for commercial development proposed in the eastern portion of the Project site. All lighting installed on the Project site would comply with applicable guidelines included in the Specific Plan that would be comparable to Municipal Code regulations concerning lighting and glare such that areas are properly illuminated, light sources are operating as intended, and lighting is appropriately directed, oriented and shielded to protect views.	The Proposed Project would be consistent with this policy.

Table 3.1-1. Aesthetics Consistency Table

Goal/Policy Number	Policy Text	Consistency Analysis	Project Consistency
City of Commerce Municipal Code – Chapter 19.19.220 – General Development Standards and Design Guidelines (Site Planning and Contextual Design)	Primary structures should be oriented to face the street, avoiding views from the street of parking garages and alleys. Garages, parking, and loading areas shall not be the dominant element in the overall design of a project and should be designed to minimize visual disruption. Building design and siting shall minimize negative impact on views from adjacent properties. Building forms and details should be in keeping with adjacent neighborhood character where appropriate. The mass and height of a new building shall not be disproportionate in size or designed to overwhelm neighboring structures. Upper stories should be stepped back from the ground level facade whenever possible to avoid overwhelming neighboring structures. A building front should provide visual interest and a sense of human scale. Freestanding, singular buildings shall be oriented with their major facade and entry toward the street.	As proposed, perimeter residential buildings would be oriented outward towards streets or existing adjacent development. Parking for apartment buildings would generally be located underground and as such, would not be dominant Project elements. As proposed, the scale of development would generally increase from west to east such that residential uses (i.e., two-story townhomes) proposed in the western area of the Project site would be compatible with existing two-story residences to the west. With the exception of new apartment buildings (seven stories maximum) in the western area of the Project site that would be noticeably taller than existing single-story residences to the north of Zindell Avenue, the mass and height of new buildings would typically be proportionate in size to existing development in the surrounding area. In regard to the proposed tower in the northeastern corner of the Project site, the multi-story structure would be stepped back from the western ground level façade. The Proposed Project is seeking several discretionary approvals. During the approval process, the City would review the Project to ensure that proposed development would employ comply with relevant City site planning and context specific design standards to minimize visual disruption, negative impacts on views, and compatibility with existing development.	The Proposed Project would be consistent with this policy.

Table 3.1-1. Aesthetics Consistency Table

Goal/Policy Number	Policy Text	Consistency Analysis	Project Consistency
City of Commerce Municipal Code – Chapter 19.19.220 – General Development Standards and Design Guidelines (Landscaping and Paving)	• Landscaping shall be designed to minimize the impacts of development on surrounding properties and be used to provide privacy. • A combination of water-conserving landscape and irrigation techniques is required, such as the use of drought tolerant plant species. • Landscaping shall be used to define specific areas such as entrances to buildings and parking areas or transitions between land uses. • Landscaping shall be provided around the base of buildings to reduce building mass and height.	As stated in Chapter 2, Project Description, of the EIR, a sustainability feature of the Project includes low water usage and drought tolerant native plantings throughout the landscaping on the Project site. Proposed landscaping would be utilized to define specific areas including the perimeter of the Project site, proposed drop-off area in the northeastern corner of the site, and pedestrian walkways in residential development areas,	The Proposed Project would be consistent with this policy.
City of Commerce Municipal Code – Chapter 19.19.220 – General Development Standards and Design Guidelines (Architectural Treatments)	• Exterior architectural treatments shall be of high quality and complement the overall design scheme. When appropriate, exterior architectural treatments shall complement existing structures in the immediate vicinity. • Accent treatment, such as changes in exterior materials and texture is required and a minimum of two primary building materials shall be • At ground level, expanses of blank building walls shall be minimized with creative use of materials, textures, color and/or building form.	While the specific design of proposed development has not been determined at this time, the Project would be conditioned to comply with all applicable City policies, regulations, and standards related to design and architectural treatment. Further, the Proposed Project is seeking several discretionary approvals. During the approval process, the City would review the Project to ensure new commercial uses proposed would employ architectural treatments to ensure high quality and creative design development that is complimentary to existing uses.	
City of Commerce Municipal Code – Chapter 19.31, Division 23 – Art in Public Places Program	The intent of the Art in Public Places Program is to provide a collection of nationally recognized and permanent outdoor artwork throughout the City. The program is designed to present the community with a variety of artistic styles and themes, all of the highest possible quality. The requirements of this Program shall apply to 1) commercial or industrial developments, having a project cost equal to or in excess of $250,000; and 2) residential development of more than four lots of units, including single-family residential structures, condominiums, apartments, townhouses, or other dwelling units, if the aggregate project cost exceed $250,000.	As the Project includes commercial and residential development and development costs would be in excess of $250,000, the requirements of the Public Places Program are applicable to the Project. As such, permanent outdoor artwork would be incorporated into the Project.	The Proposed Project would be consistent with this policy.

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

The Project site currently contains a community center building, parking lot lighting poles, and multiple field lights in Veteran's Memorial Park. These lights do not operate once the park is closed for the day (i.e., 7:00 p.m. or 8:30 p.m. depending on the day) and field lights do not operate every evening. Existing sources of lighting and glare also operate on commercial, residential and industrial land uses to the north and west of the Project site.

As proposed, the Project would entail the development of townhomes, apartment buildings consisting of studios and 1-, 2-, and 3-bedroom units, commercial uses including a movie theatre, arcade, fitness center, restaurants, and grocery story, community center, and parks and green space. A full breakdown of proposed land use is presented in Chapter 2, Project Description. Redevelopment of the Project site as proposed would result in an increase in lighting and glare sources. New sources of lighting and glare installed on the Project site would include indoor and outdoor lighting for general illumination and safety, walkway and parking area lighting, interior roadway lighting, and lighting associated with new signage and recreational areas. Nighttime exterior lighting would generally be provided at the Project site for safety and circulation purposes. Consistent with the City's Municipal Code, Section 19.19.130 – Light and Glare, lighting would be directed, oriented, and shielded to prevent lighting from shining onto adjacent properties, onto public rights-of-way, and into driveway areas in a manner that would obstruct drivers' visions. Additionally, all lighting associated with the Project would comply with relevant City policies and municipal code standards, inclusive of regulations such as lighting fixtures being compatible with the architectural style of the Project and lighting being provided at entryways, along walkways, between buildings, and within parking areas (Section 3.1.2, Relevant Plans, Policies, Ordinances). Furthermore, development of the Project would be guided by a Specific Plan that would include lighting regulations and standards similar to those established in City policies and development standards. While windows on the proposed structures and lighting sources have the potential to create perceptible glare, these uses and sources would not be inconsistent with the surrounding land uses. As previously stated, the Project site is surrounded by commercial, industrial, and residential development. Lastly, future development on the Project would not typically use highly reflective building materials. Therefore, impacts due to new sources of light and glare would be **less than significant**. No mitigation is required.

3.1.6 Cumulative Impacts

Conflicts with Regulations Governing Scenic Quality

Overall, the Proposed Project's implementation will improve the overall visual and aesthetic quality of the site. The existing underutilized properties consists of the aging Veterans Memorial Park and a vacant, undeveloped lot. As proposed, these sites would be developed with new residential buildings, commercial/retail buildings, new City recreational buildings, and open and green space. As detailed in Table 3.1-1, the Proposed Project would be consistent with most applicable City policies and regulations concerning scenic quality, and similar to the Project, future projects in the cumulative study area would be required to demonstrate compliance with applicable scenic quality regulations. If non-compliance with a particular regulation would result in a significant impact, mitigation would be required to reduce impacts to the extent feasible. Because the Project would comply with most scenic regulations identified in Table 3.1-1, impacts would be less than significant and the Project **would not result in a cumulatively considerable impact** related to conflicts with scenic quality regulations. No mitigation is required.

Light or Glare

The Project would have the potential to result in an incremental increase in light and glare associated with the new development. However, the City's Zoning Ordinance and the General Plan policies require new development to avoid glare impacts and be considerate of light trespass on adjacent residential neighborhoods. In addition, all lighting installed on the Project site would comply with applicable guidelines included in the Specific Plan that would be comparable to Municipal Code regulations concerning lighting and glare, such that areas are properly illuminated, light sources are operating as intended, and lighting is appropriately directed, oriented, and shielded to protect views. Lastly, the proposed multi-story residential and commercial tower would be located over 0.15 mile from the nearest existing residence, and with implementation of the design measures described above, lighting associated with this component of the Project would have limited potential to significantly impact existing nighttime views. Therefore, impacts would be less than significant and the Project **would not result in a cumulatively considerable impact** related to light and glare. No mitigation is required.

3.1.7 Mitigation Measures

Impacts would be **less than significant**. No mitigation measures are required.

3.1.8 Level of Significance After Mitigation

Impacts would be **less than significant**.

3.1.9 References

Caltrans (California Department of Transportation). 2019. Scenic Highways – list of eligible and officially designated State Scenic Highways (XLSX). https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways. Accessed November 2019.

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City of Downey. 2012. City of Downey – General Plan Land Use Map. Updated October 5, 2012. Accessed November 2019. https://www.downeyca.org/home/showdocument?id=152.

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View from Veterans Memorial Park of vacant lot, industrial debris, Interstate (I-) 5, and surrounding commercial developments.

View of the play structures, community center, and passive open space areas at Veterans Memorial Park.

Parking lot and baseball diamond at Veterans Memorial Park.

Basketball court and community center at Veterans Memorial Park.

DUDEK

FIGURE 3.1-1

Site Photos

Modelo Project

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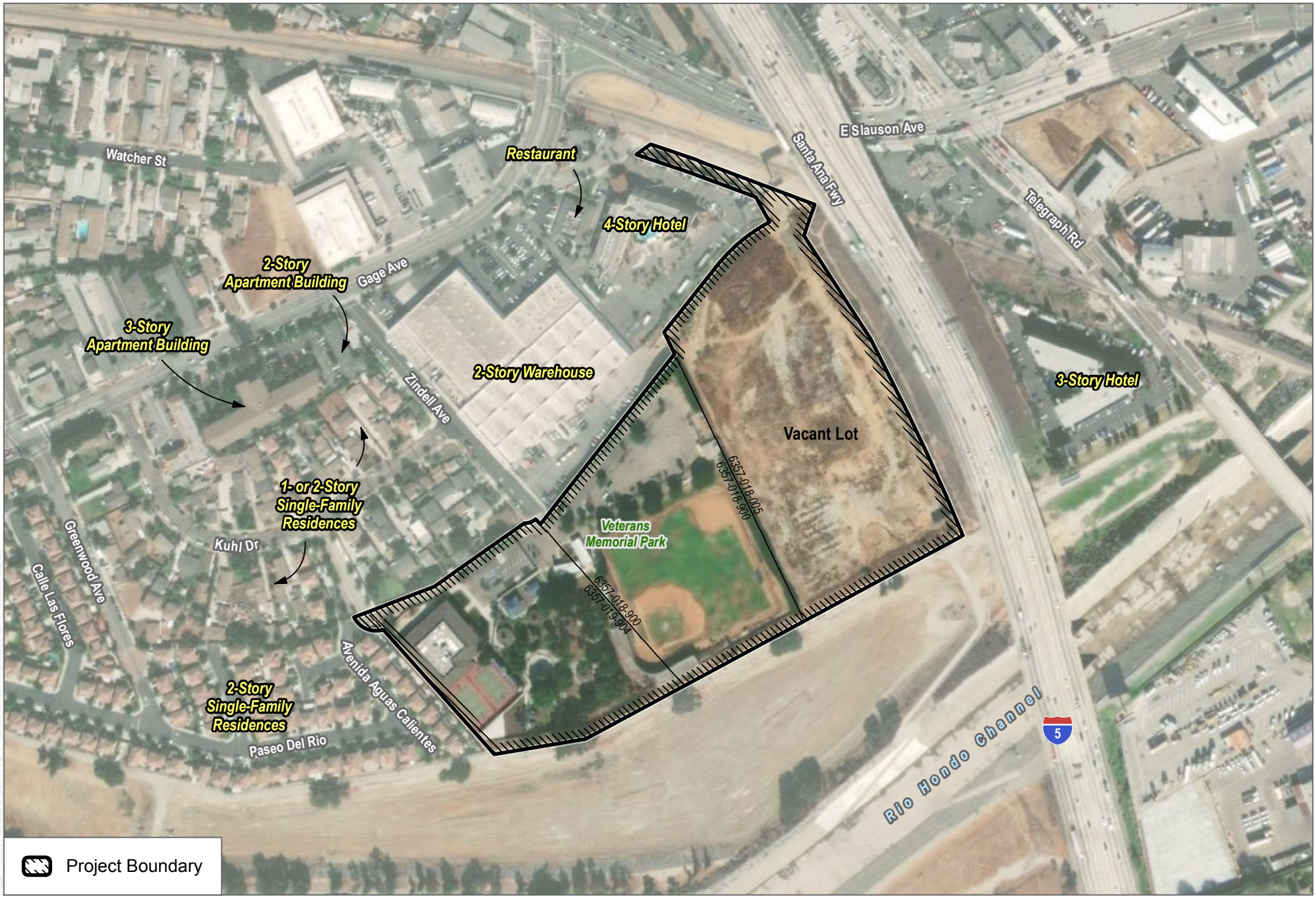

SOURCE: Esri, Digitial Globe, Open Street Map

DUDEK

0 175 350 Feet

FIGURE 3.1-2

Surrounding Uses

Modelo Project

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3.2 Air Quality

This section describes the existing air quality setting of the proposed Project area, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Project.

Comments received in response to the Notice of Preparation (see Appendix A) included concerns regarding impacts on air quality for existing sensitive receptors located proximate to the Project site, future residents of the Project site, and consistency with the Southern California Association of Governments (SCAG) growth projections.

Information contained in this section is based on an evaluation of the Project area. Other documentation used in this analysis includes emissions modeling and a health risk assessment, which are included in Appendix B and Appendix C, respectively. Other sources consulted are listed in Section 3.2.9 References.

3.2.1 Environmental Setting

The Project site is located 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.

3.2.1.1 Meteorological and Topographical Conditions

The primary factors that determine air quality are the locations of air pollutant sources and the amount of pollutants emitted. Meteorological and topographical conditions, however, are also important. Factors such as wind speed and direction, air temperature gradients and sunlight, and precipitation and humidity interact with physical landscape features to determine the movement and dispersal of air pollutants. The SCAB's air pollution problems are a consequence of the combination of emissions from the nation's second largest urban area, meteorological conditions adverse to the dispersion of those emissions, and mountainous terrain surrounding the SCAB that traps pollutants as they are pushed inland with the sea breeze (SCAQMD 2017). Meteorological and topographical factors that affect air quality in the SCAB are described below.[1]

Climate

The SCAB is characterized as having a Mediterranean climate (typified as semiarid with mild winters, warm summers, and moderate rainfall). The general region 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) and of manufactured influences (e.g., development patterns and lifestyle). Moderate temperatures, comfortable humidity, and limited precipitation characterize the climate in the SCAB. The average annual temperature varies little throughout the SCAB, averaging 75°F. However, with a less-pronounced oceanic influence, the eastern inland portions of the SCAB show greater variability in annual minimum and maximum temperatures. All portions of the SCAB have recorded temperatures over 100°F in

[1] The discussion of meteorological and topographical conditions of the SCAB is based on information provided in the *Final 2016 Air Quality Management Plan* (SCAQMD 2017).

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 SCAB 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% at the coast and 57% in the eastern part of the SCAB. Precipitation in the SCAB is typically 9–14 inches annually and is rarely in the form of snow or hail because of typically warm weather. The frequency and amount of rainfall is greater in the coastal areas of the SCAB.

In the City, the climate is typically warm during summer when temperatures tend to be in the 80s and cool during winter when temperatures tend to be in the 50s. The warmest month of the year is August with an average maximum temperature of 79°F; whereas, the coldest month of the year is December with an average minimum temperature of 55°F. The wettest month of the year is January with an average rainfall of 3.69 inches (WRCC 2019).

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)[2]) 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 ozone (O_3) and a substantial portion of fine particulate matter ($PM_{2.5}$, particles less than 2.5 microns 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. Due to 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 (amsl), the sea breezes carry the pollutants inland to escape over the mountain slopes or through the passes. At a height of 1,200 feet amsl, the terrain prevents the pollutants from entering the upper atmosphere, resulting in the pollutants settling in the foothill communities. Below 1,200 feet amsl, 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

[2] NO_x is a general term pertaining to compounds of nitric oxide (NO), nitrogen dioxide (NO_2), and other oxides of nitrogen.

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

3.2.1.2 Pollutants and Effects

3.2.1.2.1 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 federal and state 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, nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), PM_{10}, $PM_{2.5}$, and lead. These pollutants, as well as toxic air contaminants (TACs), are discussed in the following paragraphs.[3] In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants.

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 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).[4] The O_3 that EPA and the California Air Resources Board (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). These health problems are particularly acute in sensitive receptors such as the sick, the elderly, and young children.

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3 The descriptions of each of the criteria air pollutants and associated health effects are based on the EPA's Criteria Air Pollutants (EPA 2016a) and the CARB Glossary of Air Pollutant Terms (CARB 2016a).

4 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.

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.

NO_2 can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections (EPA 2016b).

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.

In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions.

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.

SO_2 is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. When combined with particulate matter, SO_2 can injure lung tissue and reduce visibility and the level of sunlight. SO_2 can also yellow plant leaves and erode iron and steel.

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 and 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 and 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 blood stream, causing damage elsewhere in the body. Additionally, these substances can transport adsorbed gases such as chlorides or ammonium into the lungs, also causing injury. PM_{10} tends to collect in the upper portion of the respiratory system; whereas, $PM_{2.5}$ 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.

People with influenza, people with chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death as a result of breathing particulate matter. People with bronchitis can expect aggravated symptoms from breathing in particulate matter. Children may experience a decline in lung function due to breathing in PM_{10} and $PM_{2.5}$ (EPA 2009).

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%. With the phaseout of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emissions sources of greater concern.

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 performance, psychomotor performance, reaction time, and growth. Children are highly susceptible to the effects of lead.

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 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 health standards for VOCs as a group.

3.2.1.2.2 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 noncancerous 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. In addition, the California Air Toxics "Hot Spots" Information and Assessment Act, Assembly Bill (AB) 2588, was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere. The 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.

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. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic 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% of DPM is less than 1 micrometer in diameter (about 1/70th the diameter of a human hair), and thus is a subset of $PM_{2.5}$ (CARB 2016b). DPM is typically composed of carbon particles ("soot," also called black carbon, or BC) 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 2016b). 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 of trucks, buses, and cars and off-road diesel engines, including locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70% 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 noncancerous 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 2016b). Those most vulnerable to noncancerous health effects are children whose lungs are still developing and the elderly who often have chronic health problems.

Odorous Compounds. Odors are generally regarded as an annoyance 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 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. 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; 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. When fungal spores are present, any activity that disturbs the soil, such as digging, grading, or other earth-moving operations, can cause the spores to become airborne and thereby increase the risk of exposure. 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.

Valley fever is not considered highly endemic to Los Angeles County. Per the County of Los Angeles Department of Public Health, the total number of cases in the City for coccidioidomycosis cases is 11 in 2017, or 5.4 cases per 100,000 people per year (Los Angeles County 2017). Statewide incidences in 2017 were 18.8 per 100,000 people (CDPH 2017).

Even if present at a site, earth-moving activities may not result in increased incidence of valley fever. Propagation of *Coccidioides immitis* is dependent on climatic conditions, with the potential for growth and surface exposure highest following early seasonal rains and long dry spells. *Coccidioides immitis* spores can be released when filaments are disturbed by earth-moving activities, although receptors must be exposed to and inhale the spores to be at increased risk of developing valley fever. Moreover, exposure to *Coccidioides immitis* does not guarantee that an individual will become ill—approximately 60% of people exposed to the fungal spores are asymptomatic and show no signs of an infection (USGS 2000).

3.2.1.3 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). Residential land uses are located along the Project site boundary to the east. The closest off-site sensitive receptors to the Project site include residences located adjacent to the western boundary of the Project site.

3.2.1.4 Regional and Local Air Quality Conditions

3.2.1.4.1 South Coast Air Basin Attainment Designation

Pursuant to the 1990 federal Clean Air Act amendments, the EPA classifies air basins (or portions thereof) as “attainment” or “nonattainment” for each criteria air pollutant, based on whether the NAAQS have been achieved. Generally, if the recorded concentrations of a pollutant are lower than the standard, the area is classified as “attainment” for that pollutant. If an area exceeds the standard, the area is classified as “nonattainment” for that pollutant. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated as “unclassified” or “unclassifiable.” The designation of “unclassifiable/attainment” means that the area meets the standard or is expected to be meet the standard despite a lack of monitoring data. Areas that achieve the standards after a nonattainment designation are re-designated as maintenance areas and must have approved Maintenance Plans to ensure continued attainment of the standards. The California Clean Air Act, like its federal counterpart, called for the designation of areas as “attainment” or “nonattainment,” but based on CAAQS rather than the NAAQS. Table 3.2-1 depicts the current attainment status of the Project site with respect to the NAAQS and CAAQS, as well as the attainment classifications for the criteria pollutants are outlined in Table 3.2-1.

Table 3.2-1. 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)	Unclassifiable/Attainment	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 (Pb)	**Nonattainment**	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 2016c (national); CARB 2016d (California).
Notes: Bold text = not in attainment; Attainment = meets the standards; Attainment/Maintenance = achieve 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.

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 area for federal PM_{10} standards. The SCAB is designated as an attainment area for federal and state CO standards, federal and state NO_2 standards, and federal and state SO_2 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 (EPA 2016c; CARB 2016d).

Despite the current nonattainment status, air quality within the SCAB has generally improved since the inception of air pollutant monitoring in 1976. This improvement is mainly due to lower-polluting on-road motor vehicles, more stringent regulation of industrial sources, and the implementation of emission reduction strategies by the SCAQMD. This trend toward cleaner air has occurred in spite of continued population growth. Despite this growth, air quality has improved significantly over the years, primarily due to the impacts of the region's air quality control program. PM_{10} levels have declined almost 50% since 1990, and $PM_{2.5}$ levels have also declined 50% since measurements began in 1999 (SCAQMD 2013). Similar improvements are observed with O_3, although the rate of O_3 decline has slowed in recent years.

3.2.1.4.2 Local 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 at the Project site. 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 most recent background ambient air quality data from 2016 to 2018 are presented in Table 3.2-2. The Pico Rivera monitoring station, located at 4144 San Gabriel River Parkway, Pica Rivera, California 90660, is the nearest air quality monitoring station to the Project site, located approximately 4.1 miles northeast from the Project site. The data collected at this station are considered representative of the air quality experienced in the Project vicinity. Air quality data for CO, O_3, NO_2, and $PM_{2.5}$ from the Pico Rivera monitoring station are provided in Table 3.2-2. Because SO_2 and PM_{10} are not monitored at the Pico Rivera monitoring station, SO_2 and

PM_{10} measurements were taken from the Los Angeles – North Main Street monitoring station (1630 N. Main Street, Los Angeles, California 90012, approximately 8.9 miles northwest from the Project site). The number of days exceeding the ambient air quality standards are also shown in Table 3.2-2.

Table 3.2-2. Local Ambient Air Quality Data

Monitoring Station	Unit	Averaging Time	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
					2016	*2017*	*2018*	*2016*	*2017*	*2018*
Ozone (O_3)										
Pico Rivera	ppm	Maximum 1-hour concentration	California	0.09	0.124	0.121	0.116	15	23	23
	ppm	Maximum 8-hour concentration	California	0.070	0.081	0.087	0.082	6	9	5
			National	0.070	0.081	0.086	0.082	6	9	5
Nitrogen Dioxide (NO_2)										
Pico Rivera	ppm	Maximum 1-hour concentration	California	0.18	0.063	0.075	0.076	0	0	0
			National	0.100	0.063	0.075	0.077	0	0	0
	ppm	Annual concentration	California	0.030	0.019	0.019	0.018	—	—	—
			National	0.053	0.019	0.019	0.018	—	—	—
Carbon Monoxide (CO)										
Pico Rivera	ppm	Maximum 1-hour concentration	California	20	2.8	2.5	2.0	*0*	*0*	*0*
			National	35	2.8	2.5	2.0	*0*	*0*	*0*
	ppm	Maximum 8-hour concentration	California	9.0	1.7	2.2	1.8	0	0	0
			National	9	1.7	2.2	1.8	0	0	0
Sulfur Dioxide (SO_2)										
Los Angeles – North Main Street	ppm	Maximum 1-hour concentration	National	0.075	0.013	0.006	0.018	0	0	0
	ppm	Maximum 24-hour concentration	National	0.14	0.001	0.002	0.001	0	0	0
	ppm	Annual concentration	National	0.030	0.0003	0.0001	0.0003	—	—	—
Coarse Particulate Matter (PM_{10})[a]										
Los Angeles – North Main Street	$\mu g/m^3$	Maximum 24-hour concentration	California	50	74.6	96.2	81.2	21 (ND)	40 (ND)	31 (31.8)
			National	150	64.0	64.6	68.2	0 (0.0)	0 (0.0)	0 (0.0)
	$\mu g/m^3$	Annual concentration	California	20	—	—	31.8	—	—	—

Table 3.2-2. Local Ambient Air Quality Data

Monitoring Station	Unit	Averaging Time	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
					2016	*2017*	*2018*	*2016*	*2017*	*2018*
Fine Particulate Matter ($PM_{2.5}$)[a]										
Pico Rivera	μg/m³	Maximum 24-hour concentration	National	35	46.5	49.5	56.3	2 (6.2)	1 (3.2)	2 (6.1)
	μg/m³	Annual concentration	California	12	11.7	12.1	—	—	—	—
			National	12.0	11.7	12.2	12.9	—	—	—

Sources: CARB 2017a; EPA 2016d.
Notes: — = not available; μg/m³ = micrograms per cubic meter; ND = insufficient data available to determine the value; ppm = parts per million
Data taken from CARB iADAM (http://www.arb.ca.gov/adam) and EPA AirData (https://www.epa.gov/outdoor-air-quality-data) represent the highest concentrations experienced over a given year.
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 $PM_{2.5}$.
Pico Rivera Monitoring Station is located at 4144 San Gabriel River Parkway, Pica Rivera, California 90660.
Los Angeles – North Main Street Monitoring Station is located 1630 N. Main Street, Los Angeles, California 90012.
[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. The numbers in parentheses are the measured number of samples that exceeded the standard.

3.2.2 Relevant Plans, Policies, and Ordinances

Federal

Criteria Air Pollutants

The federal Clean Air Act, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The 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 emission standards; issuing stationary source emission standards and permits; and establishing acid rain control measures, stratospheric O_3 protection measures, and enforcement provisions. Under the Clean Air Act, NAAQS are established for the following criteria pollutants: 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 1- to 3-year periods, depending on the pollutant. The Clean Air Act requires the EPA to reassess the NAAQS at least every 5 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 a state implementation plan that demonstrates how those areas will attain the NAAQS within mandated time frames.

Hazardous Air Pollutants

The 1977 federal Clean Air Act amendments required the EPA to identify National Emission Standards for Hazardous Air Pollutants 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.

State

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 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 basin 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.

California air districts have based their thresholds of significance for 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.

All others are not to be equaled or exceeded. The NAAQS and CAAQS are presented in Table 3.2-3.

Table 3.2-3. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	*Primary*[c,d]	*Secondary*[c,e]
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]	
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)	
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)	

Table 3.2-3. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	*Primary*[c,d]	*Secondary*[c,e]
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]	—
PM_{10}[i]	24 hours	50 μg/m³	150 μg/m³	Same as Primary Standard
	Annual Arithmetic Mean	20 μg/m³	—	
$PM_{2.5}$[i]	24 hours	—	35 μg/m³	Same as Primary Standard
	Annual Arithmetic Mean	12 μg/m³	12.0 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	—	—
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 the number of particles when the relative humidity is less than 70%	—	—

Source: CARB 2016c.

Notes: μg/m³ = micrograms per cubic meter; mg/m³= milligrams per cubic meter; ppm = parts per million by volume; O_3 = ozone; NO_2 = nitrogen dioxide; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter with an aerodynamic diameter less than or equal to 10 microns; $PM_{2.5}$ = particulate matter with an aerodynamic diameter less than or equal to 2.5 microns.

[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. CAAQS 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 per 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 1. For $PM_{2.5}$, the 24-hour standard is attained when 98% 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 on 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 national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm.

[g] To attain the national 1-hour 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 national 1-hour 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 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM_{10} standards (primary and secondary) of 150 $\mu g/m^3$ were also 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 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 $\mu g/m^3$ as a quarterly average) remains in effect until 1 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 (Tanner). The California TAC list identifies more than 700 pollutants, of which carcinogenic and noncarcinogenic 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 (HRA), 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.

In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines (CARB 2000). The regulation is anticipated to result in an 80% decrease in statewide diesel health risk in 2020 compared with the diesel risk in 2000. Additional regulations apply to new trucks and diesel fuel, including the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, the In-Use Off-Road Diesel Vehicle Regulation, and the New Off-Road Compression-Ignition (Diesel) Engines and Equipment program. These regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel-powered equipment. There are several Airborne Toxic Control Measures that reduce diesel emissions, including In-Use Off-Road Diesel-Fueled Fleets (13 CCR 2449 et seq.) and In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025).

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.

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 in the SCAB, where the project is located. The 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. The SCAQMD's Air Quality Management Plans (AQMPs) include control measures and strategies to be implemented to attain state and federal ambient air quality standards in the SCAB. The SCAQMD then implements these control measures as regulations to control or reduce criteria pollutant emissions from stationary sources or equipment.

The most recent adopted AQMP is the 2016 AQMP (SCAQMD 2017), which was adopted by the SCAQMD governing board on March 3, 2017. The 2016 AQMP is a regional blueprint for achieving air quality standards and healthful air. The 2016 AQMP represents a new approach, focusing on available, proven, and cost effective alternatives to traditional strategies, while seeking to achieve multiple goals in partnership with other entities promoting reductions in GHGs and toxic risk, as well as efficiencies in energy use, transportation, and goods movement (SCAQMD 2017). Because mobile sources are the principal contributor to the SCAB's air quality challenges, the SCAQMD has been and will continue to be closely engaged with CARB and the EPA, who have primary responsibility for these sources. The 2016 AQMP recognizes the critical importance of working with other agencies to develop funding and other incentives that encourage the accelerated transition of vehicles, buildings, and industrial facilities to cleaner technologies in a manner that benefits not only air quality but also local businesses and the regional economy. These "win-win" scenarios are key to implementation of this 2016 AQMP with broad support from a wide range of stakeholders.

Applicable Rules

Emissions that would result from mobile, area, and stationary sources during construction and operation of the project are subject to the rules and regulations of the SCAQMD. The SCAQMD rules applicable to the project may include the following:

- **Rule 401 – Visible Emissions:** This rule establishes the limit for visible emissions from stationary sources.
- **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.
- **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.
- **Rule 431.2 – Sulfur Content of Liquid Fuels:** The purpose of this rule is to limit the sulfur content in diesel and other liquid fuels for the purpose of reducing the formation of SO_x and particulates during combustion and of enabling the use of add-on control devices for diesel-fueled internal combustion engines. The rule applies to all refiners, importers, and other fuel suppliers such as distributors, marketers, and retailers, as well as to users of diesel, low-sulfur diesel, and other liquid fuels for stationary-source applications in the SCAQMD. The rule also affects diesel fuel supplied for mobile sources.

- **Rule 461 – Gasoline Transfer and Dispensing:** This rule requires testing of vapor recovery systems for gasoline dispensing facilities from certified vapor recovery testing companies and contractors. This rule applies to the transfer of gasoline from any tank truck, trailer, or railroad tank car into any stationary storage tank or mobile fueler, and from any stationary storage tank or mobile fueler into any mobile fueler or motor fuel tank.
- **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 NO_x, 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.
- **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.

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.

With respect to air quality planning and other regional issues, SCAG has prepared the 2008 Regional Comprehensive Plan: Helping Communities Achieve a Sustainable Future (2008 RCP) for the region (SCAG 2008). The 2008 RCP sets the policy context in which SCAG participates in and responds to the SCAQMD air quality plans and builds off the SCAQMD AQMP processes that are designed to meet health-based criteria pollutant standards in several ways (SCAG 2008). First, it complements AQMPs by providing guidance and incentives for public agencies to consider best practices that support the technology-based control measures in AQMPs. Second, the 2008 RCP emphasizes the need for local initiatives that can reduce the region's GHG emissions that contribute to climate change, an issue that is largely outside the focus of local attainment plans, which is assessed in Chapter 3. Third, the 2008 RCP emphasizes the need for better coordination of land use and transportation planning, which heavily influences the emissions inventory from the transportation sectors of the economy. This also minimizes land use conflicts, such as residential development near freeways, industrial areas, or other sources of air pollution.

On April 7, 2016, SCAG's Regional Council adopted the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS). The 2016 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The 2016 RTP/SCS charts a course for closely integrating land use and transportation so that the region can grow smartly and sustainably. The 2016 RTP/SCS was prepared through a collaborative, continuous, and comprehensive process with input from local governments, county transportation commissions, tribal governments, nonprofit organizations, businesses, and local stakeholders within Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. In June 2016, SCAG received its conformity determination from the Federal Highway Administration and the Federal Transit Administration indicating that all air quality conformity requirements for the 2016 RTP/SCS and associated 2015 Federal Transportation Improvement Program Consistency Amendment through Amendment 15-12 have been met (SCAG 2016). The SCAQMD 2016 AQMP applies the updated SCAG growth forecasts assumed in the 2016 RTP/SCS.

City of Commerce

The Air Quality Element of the City's 2020 General Plan (City of Commerce 2008) includes issues and policies that would be applied to the Project related to air quality. These applicable issues and policies are as follows:

Issue: Land Use Planning to Protect Sensitive Receptors

Policy AQ-1.1 The City will consider environmental justice issues as they are related to potential health impacts associated with air pollution and ensure that all land use decisions, including enforcement actions, are made in an equitable fashion to protect residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location from the health effects of air pollution.

Policy AQ-1.2 The City will encourage the applicants for sensitive land uses (e.g., residences, schools, daycare centers, playgrounds and medical facilities) to incorporate design features (e.g., pollution prevention, pollution reduction, barriers, landscaping, ventilation systems, or other measures) in the planning process to minimize the potential impacts of air pollution on sensitive receptors.

Policy AQ-1.3 The City will promote and support mixed-use land patterns that allow the integration of retail, office, institutional and residential uses. Consult with the AQMD when siting new facilities with dust, odors or TAC emissions to avoid siting those facilities near sensitive receptors and avoid siting sensitive receptors near sources of air pollution.

Policy AQ-1.4 The City will facilitate communication among residents, businesses and the AQMD to quickly resolve air pollution nuisance complaints. Distribute information to advise residents on how to register a complaint with the SCAQMD.

Policy AQ-1.5 The City will require that owners of new developments that have the potential to emit air pollutants that would impact sensitive receptors to notify residents and businesses adjacent to the proposed site prior to starting construction.

Policy AQ-1.6 The City will consider all feasible alternatives to minimize emissions from diesel equipment (e.g., trucks, construction equipment, and generators).

Policy AQ-1.7 The City will actively participate in decisions on the siting or expansion of facilities or land uses (e.g. freeway expansions), to ensure the inclusion of air quality.

Issue: Reducing Mobile Emissions

Policy AQ-2.1 The City will require that developers of high density and mixed-use developments consult with the local transit agency and incorporate all appropriate and feasible transit amenities into the plans.

Policy AQ-2.2 The City will establish a Mixed-Use Zoning District that offers incentives to mixed-use developments. The Mixed-Use designation that is applicable to the Atlantic Boulevard corridor implements this policy.

Policy AQ-2.3 The City will adopt and implement codes that encourage community centers, telecommuting programs, and home-based businesses.

Policy AQ-2.4 The City will create opportunities to receive State transportation funds by adopting incentives (e.g., an expedited review process) for planning and implementing infill development projects within urbanized areas that include job centers and clean transportation nodes (e.g., preparation of "transit village" plans).

Policy AQ-2.5 The City will collaborate with local, regional, state and federal agencies to create incentives for "job/housing opportunity zones," to promote housing in job-rich areas and jobs in housing-rich areas. The Housing Opportunity areas identified in the Community Development Element are consistent with this policy.

Policy AQ-2.6 The City will design safe and efficient vehicle access to commercial land uses from arterial streets to ensure efficient vehicular ingress and egress.

Policy AQ-2.7 The City will promote mass transit ridership through careful planning of routes, headways, origins and destinations, and types of vehicles.

Policy AQ-2.8 The City will seek new cooperative relationships between employers and employees to reduce vehicle miles traveled (VMT).

Policy AQ-2.9 The City will work with large employers and commercial/industrial complexes to create Transportation Management Associations and to implement trip/VMT action strategies.

Policy AQ-2.10 The City will cooperate with surrounding jurisdictions to provide incentives, adopt regulations and develop transportation demand management programs educe and eliminate vehicle trips and VMT.

Policy AQ-2.11 The City will collaborate with local transit agencies to develop programs and educate employers about employee rideshare and transit.

Policy AQ-2.12 The City will Identify and develop non-motorized transportation corridors (e.g., bicycling and pedestrian trails and lanes).

Policy AQ-2.13 The City will establish requirements for special event centers to provide off-site parking and park-n-ride facilities at remote locations. Remote parking should be as close as practicable to the event site and the operator should operate or provide alternative-fuel vehicles for shuttles.

Policy AQ-2.14 The City will encourage special event center operators to provide discounted transit passes with event tickets or offer discounted on-site parking for carpooling patrons (four or more persons per vehicle).

Issue: Alternative Fuels

Policy AQ-3.1 The City will manage the city's transportation fleet fueling standards to achieve the greatest number of alternative fuel vehicles in the city fleet.

Policy AQ-3.2 The City will support the development of alternative fuel infrastructure that is publicly accessible.

Policy AQ-3.3 The City will establish programs for priority or free parking on city streets or in city parking lots for alternative fuel vehicles.

Policy AQ-3.4 The City will cooperate with federal and state agencies and the AQMD in their efforts to reduce exposure from railroad and truck emissions.

Policy AQ-3.5 The City will collaborate with the USEPA, CARIB, AQMD, and warehouse owners to create programs and ordinances to minimize the amount of diesel emissions related to warehousing operations.

Policy AQ-3.6 The City will manage the city's transportation fleet fueling standards to achieve the greatest number of alternative fuel vehicles in the city fleet.

Policy AQ-3.7 The City will support the development of alternative fuel infrastructure that is publicly accessible.

Issue: Transportation System Management Planning

Policy AQ-4.1 The City will synchronize traffic signals throughout the city and with adjoining cities and counties while allowing free flow of mass transit systems.

Policy AQ-4.2 The City will reduce traffic delays through highway maintenance, rapid emergency response, debris removal, and elimination of at-grade railroad crossings.

Policy AQ-4.3 The City will encourage businesses to schedule deliveries at off-peak traffic periods through the land use entitlement or business regulation process.

Policy AQ-4.4 The City will encourage the construction of HOV lanes whenever necessary to relieve congestion and reduce air pollution. Emphasize the use of HOV lanes, as well as light rail and bus routes, and pedestrian and bicycle facilities to improve mobility and air quality.

Policy AQ-4.5 The City will monitor traffic and congestion to determine when and where the city needs new transportation facilities to achieve increased mobility efficiency.

Policy AQ-4.6 The City will work with local transit providers to incorporate best design practices for transit into new development projects.

Policy AQ-4.7 The City will continue to implement the required components of the Congestion Management Plan (CMP), and continue to work with Los Angeles County on annual updates to the CMP.

Policy AQ-4.8 The City will support SCAG's Regional Growth Management Plan by developing intergovernmental agreements with appropriate governmental entities such as the Gateway Cities, sanitation districts, water districts, and those sub-regional entities identified in the Regional Growth Management Plan.

Issue: Environmental Justice

Policy AQ-5.1 The City will ensure that all future public facilities and improvements do not have a significant adverse air quality impact on the community and that any such impacts must be mitigated to the fullest extent possible.

Policy AQ-5.2 The City will oppose the over-concentration of polluting public facilities and improvements.

Policy AQ-5.3 The City will take a proactive role in meeting with regional planning agencies to ensure that the local community's voice is heard in air quality issues.

3.2.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to air quality is based on Appendix G of the State CEQA Guidelines. Through the analysis in the Initial Study (see Appendix A), it was determined that the proposed Project could have a potentially significant impact to air quality. Accordingly, all of the thresholds are further analyzed in the EIR. According to Appendix G of the State CEQA Guidelines, a significant impact related to air quality would occur if the Project would:

A. Conflict with or obstruct implementation of the applicable air quality plan.
B. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.
C. Expose sensitive receptors to substantial pollutant concentrations.
D. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Appendix G of the State 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 a project would have a significant impact on air quality.

The SCAQMD has established Air Quality Significance Thresholds, as revised in March 2015, which set forth quantitative emission significance thresholds below which a project would not have a significant impact on ambient air quality under project-level and cumulative conditions. The quantitative air quality analysis provided herein applies the SCAQMD thresholds identified in Table 3.2-4 to determine the potential for the proposed Project to result in a significant impact under CEQA.

Table 3.2-4. South Coast Air Quality Management District 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

Table 3.2-4. South Coast Air Quality Management District Air Quality Significance Thresholds

Criteria Pollutants Mass Daily Thresholds		
Pollutant	*Construction (pounds per day)*	*Operation (pounds per day)*
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 2019.

Notes: 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; SCAQMD = South Coast Air Quality Management District; NO_2 = nitrogen dioxide; ppm = parts per million; μg/m³ = micrograms per cubic meter.

Greenhouse gas emissions thresholds for industrial projects, as added in the March 2015 revision to the SCAQMD Air Quality Significance Thresholds, were not include included in Table 3.2-4 as they are addressed within the greenhouse gas emissions analysis and not the air quality study.

[a] The phase-out 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 evaluation of whether the Project would conflict with or obstruct implementation of the applicable air quality plan is based on the SCAQMD CEQA Air Quality Handbook (SCAQMD 1993), Chapter 12, Sections 12.2 and 12.3. The first criterion assesses if the Project would 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, which is addressed in detail under in Section 3.2.5. The second criterion is if the Project would exceed the assumptions in the AQMP or increments based on the year of Project buildout and phase, as discussed further in Section 3.2.5.

To evaluate the potential for the Project to violate any air quality standard or contribute substantially to an existing or projected air quality violation, this analysis applies the SCAQMD's construction and operational criteria pollutants mass daily thresholds, as shown in Table 3.2-4. A project would result in a substantial contribution to an existing air quality violation of the NAAQS or CAAQS for O_3, which is a nonattainment pollutant, if the project's

construction or operational emissions would exceed the SCAQMD VOC or NO_x thresholds shown in Table 3.2-4. These emissions-based thresholds for O_3 precursors are intended to serve as a surrogate for an "ozone significance threshold" (i.e., the potential for adverse O_3 impacts to occur). This approach is used because O_3 is not emitted directly (see the discussion of O_3 and its sources in Section 3.2.1.2, Pollutants and Effects), and the effects of an individual project's emissions of O_3 precursors (VOC and NO_x) on O_3 levels in ambient air cannot be determined through air quality models or other quantitative methods.

The assessment of the Project's potential to expose sensitive receptors to substantial pollutant concentrations includes a localized significance threshold (LST) analysis, as recommended by the SCAQMD, to evaluate the potential of localized air quality impacts to sensitive receptors in the immediate vicinity of the Project from construction. For project sites of 5 acres or less, the SCAQMD LST Methodology (2009) includes lookup tables that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance criteria (i.e., the emissions would not cause an exceedance of the applicable concentration limits for NO_2, CO, PM_{10}, and $PM_{2.5}$) without performing project-specific dispersion modeling. Although the proposed development area of the site is greater than 5 acres (estimated to be 17.37 acres), the Project would disturb less than 5 acres in 1 day, as discussed in detail in the following text, so it is appropriate to use the lookup tables for the LST evaluation.

The LST significance thresholds for NO_2 and CO represent the allowable increase in concentrations above background levels in the vicinity of a project that would not cause or contribute to an exceedance of the relevant ambient air quality standards, while the threshold for PM_{10} represents compliance with Rule 403 (Fugitive Dust). The LST significance threshold for $PM_{2.5}$ is intended to ensure that construction emissions do not contribute substantially to existing exceedances of the $PM_{2.5}$ ambient air quality standards. The allowable emission rates depend on the following parameters:

- Source-receptor area (SRA) in which the project is located
- Size of the project site
- Distance between the project site and the nearest sensitive receptor (e.g., residences, schools, hospitals)

The Project site is located in SRA 5 (Southeast Los Angeles County). The SCAQMD provides guidance for applying the California Emissions Estimator Model (CalEEMod) to the LSTs. LST pollutant screening level concentration data is currently published for 1-, 2-, and 5-acre sites for varying distances. Although the total disturbed acreage would be 17.37 acres over approximately 100 days, less than 5 acres will be disturbed during any construction phase; thus, Project emissions are compared to the SCAQMD 5-acre thresholds.

The nearest sensitive-receptor land use (a residence) is located adjacent to the western boundary of the Project property. As such, the LST receptor distance was assumed to be 82 feet (25 meters), which is the shortest distance provided by the SCAQMD lookup tables. The LST values from the SCAQMD lookup tables for SRA 5 (Southeast Los Angeles County) for a 5-acre Project site and a receptor distance of 25 meters are shown in Table 3.2-5.

Table 3.2-5. Construction Localized Significance Thresholds for Source Receptor Area 5 (Southeast Los Angeles County)

Pollutant	Threshold (pounds per day)
Construction	
NO_2	172
CO	1,480
PM_{10}	14
$PM_{2.5}$	7

Source: SCAQMD 2009.
Notes: NO_2 = nitrogen dioxide; CO = carbon monoxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.
Localized significance thresholds (LSTs) were determined based on the values for an interpolated 5-acre site at a distance of 25 meters from the nearest sensitive receptor.

The construction HRA methodology and assumptions are presented in Section 3.2.4.4 and 3.2.4.5. The construction HRA applies the SCAQMD risk thresholds presented in Table 3.2-4, which are a maximum incremental cancer risk greater than or equal to 10 in 1 million and a chronic hazard index greater than or equal to 1.0 (project increment). The CO hotspot assessment and construction HRA are evaluated under the potential for the Project to expose sensitive receptors to substantial pollutant concentrations (Section 3.2.5), along with the LST analysis.

The potential for the Project to result in other emissions, specifically an odor impact (Section 3.2.5) is based on the Project's land use type and anticipated construction activity, and the potential for the Project to create an odor nuisance pursuant to SCAQMD Rule 402.

3.2.4 Methodology

3.2.4.1 Construction Emissions

Emissions from the construction phase of the Project were estimated using CalEEMod Version 2016.3.2. Construction scenario assumptions, including phasing, equipment mix, and vehicle trips, were based on information provided by the Project applicant and CalEEMod default values when Project specifics were not known.

For purposes of estimating Project emissions, and based on information provided by the Project applicant, it is assumed that construction of the Project would commence in May 2020[5] and would last approximately 43 months, ending in January 2024. The analysis contained herein is based on the following assumptions (duration of phases is approximate):

- Demolition: 12 months (May 2020 – April 2021)
- Site Preparation: 6 months (April 2021 – September 2021)
- Grading: 6 months (September 2021 – February 2022)
- Building Construction: 21 months (February 2022 – October 2023)

[5] The analysis assumes a construction start date of May 2020, which represents the earliest date construction would initiate. Assuming the earliest start date for construction represents the worst-case scenario for criteria air pollutant and GHG emissions because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

- Paving: 2 months (October 2023 – November 2023)
- Architectural Coating: 2 months (December 2023 – January 2024)

Grading would include 380,000 cubic yards of cut and 85,000 cubic yards of fill. The cut is part of the remediation of the existing site as reflected in the demolition phase and would entirely be hauled offsite. The fill would also be sourced from offsite. Assuming a haul truck capacity of 16 cubic yards per truck, earth-moving activities would result in approximately 30,033 round trips (60,066 one-way truck trips) during the demolition and grading phases. CalEEMod default trip length values were used for the distances for all construction-related trips. Construction worker, vendor, and haul truck trips are based on the *Construction Traffic Analysis* for the project (Gibson 2020).

The construction equipment mix and vehicle trips used for estimating the Project-generated construction emissions are shown in Table 3.2-6.

Table 3.2-6. Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	*Average Daily Vendor Truck Trips*	*Total Haul Truck Trips*	*Equipment Type*	*Quantity*	*Usage Hours*
Demolition	16	0	49,440	Crushing/Proc. Equipment	3	8
				Dumpers/Tenders	4	8
				Excavators	5	8
				Generator Sets	3	8
				Rubber Tired Dozers	2	8
				Rubber Tired Loaders	4	8
Site Preparation	18	0	0	Crushing/Proc. Equipment	3	8
				Dumpers/Tenders	4	8
				Excavators	5	8
				Generator Sets	3	8
				Rubber Tired Dozers	2	8
				Rubber Tired Loaders	4	8
Grading	20	0	10,626	Crushing/Proc. Equipment	3	8
				Dumpers/Tenders	4	8
				Excavators	5	8
				Generator Sets	3	8
				Rubber Tired Dozers	2	8
				Rubber Tired Loaders	4	8
Building Construction	1,062	272	0	Cranes	1	7
				Forklifts	3	8
				Generator Sets	1	8
				Tractors/Loaders/Back hoes	3	7
				Welders	1	8

Table 3.2-6. Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	*Average Daily Vendor Truck Trips*	*Total Haul Truck Trips*	*Equipment Type*	*Quantity*	*Usage Hours*
Paving	16	0	0	Pavers	2	8
				Paving Equipment	2	8
				Rollers	2	8
Architectural Coating	212	0	0	Air Compressors	1	6

Notes: See Appendix B for details.

As discussed in Section 3.2.4.5, the Project would implement dust control strategies as a project design feature. To reflect implementation of proposed dust control strategies, the following was assumed in CalEEMod:

- Water exposed area three times per day (61% reduction in PM_{10} and $PM_{2.5}$).
- Limit vehicle travel on unpaved roads to 15 miles per hour.

3.2.4.2 Operational Emissions

Existing Site

Emissions from the operational phase of the existing Veterans Memorial Park were estimated using CalEEMod Version 2016.3.2. Operational year 2019 was assumed consistent with the current site.

Area Sources

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

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 2017). Consumer product VOC emissions are estimated in CalEEMod based on the floor area of residential and nonresidential buildings and on the default factor of pounds of VOC per building square foot per day. For parking lot land uses, CalEEMod estimates VOC emissions associated with use of parking surface degreasers based on a square footage of parking surface area and pounds of VOC per square foot per day.

VOC off-gassing emissions result from evaporation of solvents contained in surface coatings such as in paints and primers using during building maintenance. CalEEMod calculates the VOC evaporative emissions from application of nonresidential 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 SCAQMD's Rule 1113 (Architectural Coatings) governs the VOC content for interior and exterior coatings. The model

default reapplication rate of 10% of area per year is assumed. Consistent with CalEEMod defaults, it is assumed that the residential and nonresidential surface area for painting equals 2.0 times the floor square footage, with 75% assumed for interior coating and 25% assumed for exterior surface coating (CAPCOA 2017).

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 square foot of nonresidential building space per day) and number of summer days (when landscape maintenance would generally be performed) and winter days. For Los Angeles County, the average annual "summer" days are estimated to 365 days; however, it is assumed that landscaping equipment would likely only operate during the week (not weekends), so operational days were assumed to be 250 days per year in CalEEMod (CAPCOA 2017).

Energy Sources

As represented in CalEEMod, energy sources include emissions associated with building electricity and natural gas usage (non-hearth). Electricity use would contribute indirectly to criteria air pollutant emissions; however, the emissions from electricity use are only quantified for GHGs in CalEEMod, since criteria pollutant emissions occur at the site of the power plant, which is typically off site.

CalEEMod default values for energy consumption for each land use were applied for the Project analysis. The energy use from residential land uses is calculated in CalEEMod based on the Commercial Appliance Saturation Study (CAPCOA 2017).

Mobile Sources

Mobile sources for the Project would primarily be motor vehicles (automobiles, light-duty trucks, and heavy-duty delivery trucks) traveling to and from the Project site. Motor vehicles may be fueled with gasoline, diesel, or alternative fuels. Based on the Transportation Impact Analysis (TIA), the proposed development is anticipated to generate 1,491 daily trips, which was assumed for the weekday trip rate.[6] The weekend trip rates were adjusted based on the ratio of CalEEMod defaults. CalEEMod default data, including temperature, trip characteristics, variable start information, emissions factors, and trip distances, were conservatively used for the model inputs to estimate daily emissions from proposed vehicular sources. Project-related traffic was assumed to include a mixture of vehicles in accordance with the model outputs for traffic. Emission factors representing the vehicle mix and emissions for 2019 were used to estimate emissions associated with the current park.

Proposed Project

Emissions from the operational phase of the Project were estimated using CalEEMod Version 2016.3.2. Operational year 2024 was assumed consistent with completion of Project construction. The Project would incorporate the project design features summarized in Section 3.2.4.5.

[6] The trip rates expected to be generated by Vineyard II were estimated using *Institute of Transportation Engineers Trip Generation Manual, 9th Edition*, for the shopping center land use category (Institute of Transportation Engineers (ITE) Code 820) which accounts for "an integrated group of commercial establishments", as it is proposed for the site. Trip distribution and assignments for the proposed Costco is based on Costco Warehouse membership data as well as review of existing travel patterns in the study area.

Area Sources

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

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 2017). Consumer product VOC emissions are estimated in CalEEMod based on the floor area of residential and nonresidential buildings and on the default factor of pounds of VOC per building square foot per day. For parking lot land uses, CalEEMod estimates VOC emissions associated with use of parking surface degreasers based on a square footage of parking surface area and pounds of VOC per square foot per day.

VOC off-gassing emissions result from evaporation of solvents contained in surface coatings such as in paints and primers using during building maintenance. CalEEMod calculates the VOC evaporative emissions from application of nonresidential 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 SCAQMD's Rule 1113 (Architectural Coatings) governs the VOC content for interior and exterior coatings. The model default reapplication rate of 10% of area per year is assumed. Consistent with CalEEMod defaults, it is assumed that the residential and nonresidential surface area for painting equals 2.0 times the floor square footage, with 75% assumed for interior coating and 25% assumed for exterior surface coating (CAPCOA 2017).

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 square foot of nonresidential building space per day) and number of summer days (when landscape maintenance would generally be performed) and winter days. For Los Angeles County, the average annual "summer" days are estimated to 365 days; however, it is assumed that landscaping equipment would likely only operate during the week (not weekends), so operational days were assumed to be 250 days per year in CalEEMod (CAPCOA 2017).

Energy Sources

As represented in CalEEMod, energy sources include emissions associated with building electricity and natural gas usage (non-hearth). Electricity use would contribute indirectly to criteria air pollutant emissions; however, the emissions from electricity use are only quantified for GHGs in CalEEMod, since criteria pollutant emissions occur at the site of the power plant, which is typically off site.

CalEEMod default values for energy consumption for each land use were applied for the Project analysis. The energy use from residential land uses is calculated in CalEEMod based on the Commercial and Residential Appliance Saturation Study (CAPCOA 2017).

Mobile Sources

Mobile sources for the Project would primarily be motor vehicles (automobiles, light-duty trucks, and heavy-duty delivery trucks) traveling to and from the Project site. Motor vehicles may be fueled with gasoline, diesel, or alternative fuels. Based on the TIA, the proposed development is anticipated to generate 12,393 daily trips, which was assumed for the weekday trip rate.[7] The weekend trip rates were adjusted based on the ratio of CalEEMod defaults. CalEEMod default data, including temperature, trip characteristics, variable start information, emissions factors, and trip distances, were conservatively used for the model inputs to estimate daily emissions from proposed vehicular sources. Project-related traffic was assumed to include a mixture of vehicles in accordance with the model outputs for traffic. Emission factors representing the vehicle mix and emissions for 2024 were used to estimate emissions associated with full buildout of the Project.

3.2.4.3 Construction Health Risk Assessment

A construction health risk assessment (HRA) was performed to evaluate potential health risk associated with construction of the Project. The following discussion summarizes the dispersion modeling and HRA methodology; supporting construction HRA documentation, including detailed assumptions, is presented in Appendix C.

For risk assessment purposes, PM_{10} in diesel exhaust is considered DPM, originating mainly from off-road equipment operating at a defined location for a given length of time at a given distance from sensitive receptors. Less-intensive, more-dispersed emissions result from on road vehicle exhaust (e.g., heavy-duty diesel trucks). For the construction HRA, the CalEEMod scenario for the Project was adjusted to reduce diesel truck one-way trip distances to 1,000 feet to estimate emissions from truck pass-by at proximate receptors.

The air dispersion modeling methodology was based on generally accepted modeling practices of SCAQMD (SCAQMD 2018). Air dispersion modeling was performed using the EPA's American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) Version 19191 modeling system (computer software) with the Lakes Environmental Software implementation/user interface, AERMOD View Version 9.8.1. The HRA followed the Office of Environmental Health Hazard Assessment (OEHHA) 2015 guidelines (OEHHA 2015) and SCAQMD guidance to calculate the health risk impacts at all proximate receptors as further discussed below. The dispersion modeling included the use of standard regulatory default options. AERMOD parameters were selected consistent with the SCAQMD and EPA guidance and identified as representative of the Project site and Project activities. Principle parameters of this modeling are presented in Table 3.2-7.

Table 3.2-7. American Meteorological Society/Environmental Protection Agency Regulatory Model Principle Parameters

Parameter	Details
Meteorological Data	AERMOD-specific meteorological data for the Pico Rivera air monitoring station (PICO) was used for the dispersion modeling. A 5-year meteorological data set from 2010 through 2012 and 2015 through 2016 was obtained from the SCAQMD in a preprocessed format suitable for use in AERMOD.
Urban versus Rural Option	Urban dispersion option was selected due to the developed nature of the project area and per SCAQMD guidelines.

[7] The trip rates expected to be generated by the project were estimated using *Institute of Transportation Engineers Trip Generation Manual, 10th Edition*, for the existing and proposed land uses studied herein.

Table 3.2-7. American Meteorological Society/Environmental Protection Agency Regulatory Model Principle Parameters

Parameter	Details
Terrain Characteristics	The elevation of the site is 144 feet above sea level and the surrounding area is predominantly flat.
Elevation Data	Digital elevation data were imported into AERMOD and elevations were assigned to receptors and emission sources, as necessary. Digital elevation data were obtained through the AERMOD View in the United States Geological Survey's National Elevation Dataset format with a resolution of 1/3 degree (approximately 10 meters), consistent with the SCAQMD guidance (SCAQMD 2018).
Source Release Characterizations	The modeled line of volume sources was approximately 17 acres. A plume height dimension of 25 meters, a plume width dimension of 25 meters, and a release height of 5 meters was assumed for off-road equipment and diesel trucks.

Note: See Appendix C.

Regarding receptors, the construction scenario used a 2-kilometer by 2-kilometer Cartesian receptor grid with 100-meter spacing to establish the impact area and evaluate locations of maximum health risk impact. The construction scenario also used discrete receptors positioned at specific locations to evaluate the maximally exposed sensitive receptor. Discrete receptors included residences located adjacent to the Project property boundary.

The health risk calculations were performed using the Hotspots Analysis and Reporting Program Version 2 (HARP2) Air Dispersion and Risk Tool (ADMRT, dated 19121). AERMOD was run with all sources emitting unit emissions (1 gram per second) to obtain the necessary input values for HARP2. The line of volume sources was partitioned evenly based on the 1 gram per second emission rate. The ground-level concentration plot files were then used to estimate the long-term cancer health risk to an individual, and the noncancerous chronic health indices. There is no reference exposure level (REL) for acute health impacts from DPM, and, thus, acute risk was not evaluated.

Cancer risk is defined as the increase in probability (chance) of an individual developing cancer due to exposure to a carcinogenic compound, typically expressed as the increased chances in one million. Maximum Individual Cancer Risk is the estimated probability of a maximally exposed individual potentially contracting cancer as a result of exposure to TACs over a period of 30 years for residential receptor locations. For the construction HRA, the TAC exposure period was assumed to be from third trimester to 3.75 years for all receptor locations (i.e., the assumed duration of Project construction). The exposure pathway for DPM is inhalation only.

The SCAQMD has also established noncarcinogenic risk parameters for use in HRAs since some TACs increase noncancerous health risk due to long-term (chronic) exposures and some TACs increase noncancerous health risk due to short-term (acute) exposures. No short-term, acute relative exposure level has been established for DPM; therefore, acute impacts of DPM are not addressed in the HRA. Chronic exposure is evaluated in the construction HRA. Noncarcinogenic risks are quantified by calculating a hazard index, expressed as the ratio between the ambient pollutant concentration and its toxicity or REL, which is a concentration at or below which health effects are not likely to occur. The chronic hazard index is the sum of the individual substance chronic hazard indices for all TACs affecting the same target organ system. A hazard index less of than one (1.0) means that adverse health effects are not expected.

3.2.4.4 Roadway Health Risk Assessment

For informational purposes only, a HRA was performed to evaluate potential health risks of the proximate I-5 freeway to future sensitive receptors of the Project. The following discussion summarizes the dispersion modeling and HRA methodology; supporting operational HRA documentation, including detailed assumptions, is presented in Appendix C.

Operational year 2024 was evaluated consistent with the anticipated completion date of Project construction. Emissions during the operation of the Project include vehicles traveling on the I-5 freeway. For risk assessment purposes, PM10 in diesel exhaust is considered DPM, originating from diesel vehicles traveling on the I-5 freeway.

Emissions of DPM from motor vehicles on the I-5 freeway have the highest potential for cancer risk due to the high volume of heavy-duty vehicle traffic and proximity to the Project site. Traffic data was attained from California Department of Transportation Performance Measurement System (PeMS) October 2018 – October 2019 traffic volumes on California state highways. The annual vehicle miles traveled for the northbound and southbound portions of the I-5 freeway was calculated based on the segment length and traffic count volumes.

Data from the U.S. Environmental Protection Agency-approved version of CARB's mobile source emission inventory, EMFAC2017, was used to determine the composition of diesel vehicles within the overall vehicle fleet for Los Angeles County: Light-Duty Automobiles (identified as LDA), Light-Duty Trucks (identified as LDT1 and LDT2), Light-Heavy Duty Trucks (identified as LHDT1 and LHDT2), Medium-Heavy Duty Trucks (identified as MDV, MH, MHDT, OBUS, and SBUS), and Heavy-Heavy Duty Trucks (identified as HHDT). EMFAC2017 can generate emission factors (also referred to as emission rates) in grams per mile for the fleet in a class of motor vehicles within a county for a particular geographical study year.

EMFAC2017 was run assuming an aggregate speed for each vehicle class, and a vehicle miles traveled-weighted average emission factor was estimated for diesel-fueled vehicles of the following classes: LHDT1/LHDT2, MHDT, HHDT, and Non-Trucks. Vehicle miles traveled was calculated by taking the average daily traffic and multiplying it by the distance of the roadway segment evaluated. The I-5 freeway northbound was modeled a total length of 1.86 miles and the I-5 freeway southbound was modeled a total length of 1.86 miles. The total exhaust PM_{10} emissions (in pounds per hour and pounds per year) were then calculated for each roadway segment by multiplying the emission factor by the vehicle miles traveled.

For this analysis, Los Angeles County and calendar year 2024 was selected. The annual vehicle growth rate on the I-5 freeway is 0.63% per year (SCAG 2019), but the EMFAC2017 vehicle DPM emission factors would decrease over time due to regulatory requirements and fleet turnover (ranging from 0.13% to 56.36%); therefore, assuming the first operational year of 2024 for the analysis would present a conservative analysis. Furthermore, the volume of diesel vehicles will also decrease over time as more zero and near-zero emissions vehicles enter the fleet.

The Sacramento Metropolitan Air Quality Management District's Recommended Protocol for Evaluation the Location of Sensitive Land Uses Adjacent to Major Roadways (Protocol; SMAQMD 2011) provides a methodology for the assessment and disclosure of potential cancer risk from DPM attributable to siting sensitive land uses adjacent to freeways and major roadways. This guidance builds on the CARB 2005 Land Use and Air Quality Handbook: A Community Health Perspective. The Protocol defines a stepwise process that indicates the need for and methodology to conduct a site-specific HRA. Of particular note, the Protocol recommends a screening threshold of 100,000 vehicles per day for high traffic volume roadways. The Protocol also recommends that the length of the roadway should be at least 10,000 feet (5,000 feet for each link) to ensure pollutant capture (SMAQMD 2011).

Similar to the construction scenario as summarized in Section 3.2.4.3, air dispersion modeling methodology was based on generally accepted modeling practices of SCAQMD (SCAQMD 2018). Air dispersion modeling was performed using the EPA's AERMOD Version 19191 modeling system (computer software) with the Lakes Environmental Software implementation/user interface, AERMOD View Version 9.8.1. The HRA followed OEHHA 2015 guidelines (OEHHA 2015) and SCAQMD guidance to calculate the health risk impacts at all proximate receptors as further discussed below. The dispersion modeling included the use of standard regulatory default options. AERMOD parameters were selected consistent with the SCAQMD and EPA guidance and identified as representative of the Project site and Project activities. Principal parameters of this modeling are presented in Table 3.2-8.

Table 3.2-8. American Meteorological Society/Environmental Protection Agency Regulatory Model Principle Parameters

Parameter	Details
Meteorological Data	AERMOD-specific meteorological data for the Pico Rivera air monitoring station (PICO) was used for the dispersion modeling. A 5-year meteorological data set from 2010 through 2012 and 2015 through 2016 was obtained from the SCAQMD in a preprocessed format suitable for use in AERMOD.
Urban versus Rural Option	Urban dispersion option was selected due to the developed nature of the project area and per SCAQMD guidelines.
Terrain Characteristics	The elevation of the site is 144 feet above sea level and the surrounding area is predominantly flat.
Elevation Data	Digital elevation data were imported into AERMOD and elevations were assigned to receptors and emission sources, as necessary. Digital elevation data were obtained through the AERMOD View in the United States Geological Survey's National Elevation Dataset format with a resolution of 1/3 degree (approximately 10 meters), consistent with the SCAQMD guidance (SCAQMD 2018).
Source Release Characterizations	Vehicles traveling on I-5 were modeled as a line of alternating volume sources for each direction of the freeway with a release height of 5 meters, plume height and width of 7.5 meters, and 10 feet was added to the freeway width to account for the wake of moving vehicles, to represent vehicles traveling northbound and southbound.

Note: See Appendix C.

Regarding receptors, the roadway scenario placed receptors at 20 meter spacing on the Project site where the residential land uses are proposed. Similar to the construction scenario as summarized in Section 3.2.4.3, the health risk calculations were performed using the HARP2 ADMRT (dated 19121). AERMOD was run with all sources emitting unit emissions (1 gram per second) to obtain the necessary input values for HARP2. The line of volume sources were modeled with 1 gram per second evenly partitioned across each volume source. The ground-level concentration plot files were then used to estimate the long-term cancer health risk to an individual, and the noncancerous chronic and acute health indices.

Cancer risk is defined as the increase in probability (chance) of an individual developing cancer due to exposure to a carcinogenic compound, typically expressed as the increased chances in one million. Maximum Individual Cancer Risk is the estimated probability of a maximally exposed individual potentially contracting cancer as a result of exposure to TACs over a period of 30 years, operational lifetime, for residential receptor locations. For the roadway HRA, the TAC exposure period was assumed to be from third trimester to 30 years for all receptor locations. The mandatory exposure pathways were selected.

The SCAQMD has also established noncarcinogenic risk parameters for use in HRAs since some TACs increase noncancerous health risk due to long-term (chronic) exposures and some TACs increase noncancerous health risk due to short-term (acute) exposures. Noncarcinogenic risks are quantified by calculating a hazard index, expressed as the ratio between the ambient pollutant concentration and its toxicity or REL, which is a concentration at or below which health effects are not likely to occur. The chronic hazard index is the sum of the individual substance chronic hazard indices for all TACs affecting the same target organ system, similarly calculated for acute hazard index. A hazard index less of than one (1.0) means that adverse health effects are not expected.

The exposure duration for a resident from third trimester to 30 years is more conservative than a student ages 14 through 15 at a high school; therefore, the calculated Residential Maximum Individual Cancer Risk, the Residential Chronic Hazard Index, and the Residential Acute Hazard Index are the worst-case scenario for a resident and student.

3.2.4.5 Project Design Features

The Project would include energy-saving and sustainability goals to optimize building performance and enhance interior environments to promote health and well-being, and would be designed to achieve Leadership in Energy and Environmental Design (LEED) Gold or Platinum certification. To reduce construction and operational emissions to the extent feasible, the Project would incorporate the following project design features (PDFs) into the new facility (**PDF-AQ/GHG-1**):

- UVA and UVB-resistant windows and glass/glazing throughout the project
- Maximally-filtered mechanical ventilation systems in all structures
- Connection to City of Commerce's Community Choice Provider Energy Purchasing Program
- Solar-path driven design of pool and window locations to reduce need for cooling and heating
- Low-vapor flooring, wall-coating, and paint materials throughout the project
- Light Emitting Diode (LED) and low-energy light fixtures and bulbs throughout the project
- Low petroleum-content paving throughout the project
- Energy provided by Photo-voltaic cells, where possible.
- Managed cooling systems provided by ventilation, where and when seasonally possible.
- Highly insulated roof membranes and structures
- Electric car chargers
- Maximum shade for residential windows and retail spaces, provided by trees, awnings, and louvers, to reduce energy usage (designed according to solar patterns)
- Reclaimed water usage in landscaping and outdoor space irrigation
- Low-water usage and native planting throughout the landscaping
- Turf versus living grass in high foot-traffic areas of youth sports complex and Veterans Park

The Project would include various construction dust control strategies as a PDF. Compliance with these dust control measures would be identified on grading plan approvals. The following dust control strategies are proposed (**PDF-AQ-1**):

a. During clearing, grading, earthmoving, excavation, or transportation of cut or fill materials, water trucks or sprinkler systems shall be used to prevent dust from leaving the site and to create a crust after each day's activities cease.

b. During construction, water trucks or sprinkler systems shall be used to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this would include wetting down such areas later in the morning, after work is completed for the day, and whenever winds exceed 15 miles per hour during active operations. Watering of active disturbance areas, including active grading areas and unpaved roads, would occur approximately every two hours of active operations, approximately three times per work day (at a minimum).

c. Speeds on unpaved roads shall be reduced to less than 15 miles per hour.

d. All grading and excavation operations shall be halted when wind speeds exceed 25 miles per hour.

e. Dirt and debris spilled onto paved surfaces at the project site and on the adjacent roadways shall be swept, vacuumed, and/or washed at the end of each workday.

f. All trucks hauling dirt, sand, soil, or other loose material to and from the construction site shall be covered and/or a minimum 2 feet of freeboard shall be maintained.

The following PDFs were included to reduce the impact of emissions from the nearby I-5 freeway on future residents of the Project.

PDF-HR-1 The applicant or its successor shall install high-efficiency return air filters on all heating, ventilation, and air conditioning (HVAC) systems serving the project. The air filtration system shall reduce at least 90% of particulate matter emissions, such as can be achieved with a Minimum Efficiency Reporting Value 13 (MERV 13) air filtration system installed on return vents in residential units. The property management for the project shall maintain the air filtration system on any HVAC system installed for the specified residential units in accordance with the manufacturer's recommendations for the life of the project.

PDF-HR-2 The applicant or its successor shall locate air intake vents on the residential buildings such that they do not face the I-5 freeway and are as far from I-5 freeway as practicable.

PDF-HR-3 A City-approved, ASHRAE certified specialist shall verify the implementation of the installation of high-efficiency air filtration systems on return vents to reduce ambient particulate matter concentrations prior to occupancy of the residential units. On-going maintenance of the installed filtration systems shall be the responsibility of the applicant or its successor. The City may enforce that the systems are in accordance with the manufacturer's recommendations for the life of the project.

3.2.5 Impacts Analysis

Threshold A: Would the project conflict with or obstruct implementation of the applicable air quality plan?

As previously discussed, the Project site is located within the SCAB under the jurisdiction of the SCAQMD, which is the local agency responsible for administration and enforcement of air quality regulations for the area. The SCAQMD has established criteria for determining consistency with the AQMP, currently the 2016 AQMP, in Chapter 12, Sections 12.2 and 12.3, in the SCAQMD CEQA Air Quality Handbook (SCAQMD 1993). The criteria are as follows (SCAQMD 1993):

- **Consistency Criterion No. 1:** The proposed 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 proposed project will not exceed the assumptions in the AQMP or increments based on the year of project buildout and phase.

Consistency Criterion No. 1

Threshold B evaluates the Project's potential impacts in regards to State CEQA Guidelines Appendix G Threshold 2 (the Project's potential to violate any air quality standard or contribute substantially to an existing or projected air quality violation impact analysis). As discussed in Threshold B, the Project would exceed the SCAQMD significance threshold for NO_x prior to mitigation. With mitigation, the Project would not exceed any of the SCAQMD significance thresholds during construction or operation. Therefore, the Project would not result in an increase in the frequency or severity of existing air quality violations. Therefore, the Project would not conflict with Consistency Criterion No. 1 of the SCAQMD CEQA Air Quality Handbook.

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 2016 AQMP also accommodates planned growth in the SCAB. Projects are considered consistent with, and would not conflict with or obstruct implementation of, the 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 2016), which is based on general plans for cities and counties in the SCAB, for the development of the AQMP emissions inventory (SCAQMD 2017).[8] The SCAG 2016 RTP/SCS, and associated Regional Growth Forecast, are generally consistent with the local plans; therefore, the 2016 AQMP is generally consistent with local government plans. The City's General Plan Land Use Map designates the Veterans Memorial Park as Public Facilities and the vacant lot as Commercial

[8] Information necessary to produce the emission inventory for the SCAB is obtained from the SCAQMD and other governmental agencies, including CARB, Caltrans, and SCAG. Each of these agencies is responsible for collecting data (e.g., industry growth factors, socioeconomic projections, travel activity levels, emission factors, emission speciation profile, and emissions) and developing methodologies (e.g., model and demographic forecast improvements) required to generate a comprehensive emissions inventory. SCAG incorporates these data into their Travel Demand Model for estimating/projecting vehicle miles traveled (VMT) and driving speeds. SCAG's socioeconomic and transportation activities projections in their 2016 RTP/SCS are integrated in the 2016 AQMP (SCAQMD 2017).

Manufacturing (City of Commerce 2009). Upon approval of the Project, the land use designation of the Project site would change from Public Facilities (PF) and Commercial Manufacturing (C/M1), to Public Open Space, Commercial Retail, and Residential with the corresponding Specific Plan zone. As such, the Project would not be consistent with the existing zoning and general plan.

It was determined the proposed Project would generate a residential population of 2,550 persons, 850 units, and 390 jobs. According to SCAG's 2016 RTP/SCS, the City is expected to have a population of 13,000 in 2020 and 13,400 in 2035, for an annual growth rate of 26 persons. The number of households is anticipated to grow by 100 between 2020 and 2035 (6 per year) and employment is expected to be 46,900 in 2020 and 48,200 in 2035 (86 per year). However, the City's 2018 population has exceeded the 2020 projected population by 67 persons, the City's 2018 households is below the 2020 projected households by 16 households, and the City's 2017 employment has exceeded the 2020 projected employment by 6,592 jobs. As such, the Project's designed population, housing, and employment exceeds the annual growth projections for the City.

As the proposed Project would contribute to local population and employment growth and associated VMT that is not anticipated for the Project site in the existing General Plan, the proposed Project is not accounted for in the state implementation plan (SIP) and the regional air quality strategy (RAQS), and the proposed Project potentially would not be consistent with local air quality plans. The impact would be eliminated once the SCAQMD completes a future update to the RAQS, which would be based on updated SCAG population and growth projections for the region. Mitigation measure M-AQ-1 is provided to ensure population growth and vehicle trips generated from the proposed Project are provided to SCAG for incorporation into the future RAQS update. This update will likely occur following Project approval; therefore, at this time the impact is considered potentially significant.

Summary

As described previously, the Project would not result in an increase in the frequency and severity of existing air quality violations and would not conflict with Consistency Criterion No. 1. However, the Project would not be consistent with the General Plan and growth projections of the RTP/SCS. Thus, the Project would conflict with Consistency Criterion No. 2. Therefore, impacts related to the Project's potential to conflict with or obstruct implementation of the applicable air quality plan would be potentially significant.

As shown in Table 3.2-14 (under Section 3.2.8 below), construction emissions would be reduced to below SCAQMD's thresholds with the implementation of mitigation measure **MM-AQ-1**. However, the Project would exceed the growth projections within the SCAG RTP/SCS and SCAQMD AQMP, and therefore, impacts would be **significant and unavoidable**.

Threshold B: Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Construction Emissions

Construction of the Project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment, rock crushing, rock popping, soil disturbance, and VOC off-gassing) and off-site sources (i.e., on-road haul trucks, vendor 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 emission levels can only be approximately estimated with a corresponding uncertainty in precise ambient air quality impacts.

As discussed in Section 3.2.4.1, Construction Emissions, criteria air pollutant emissions associated with temporary construction activity were quantified using CalEEMod. 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 each year of construction (2020 through 2024). Construction schedule assumptions, including phase type, duration, and sequencing, were based on information provided by the Project applicant and is intended to represent a reasonable scenario based on the best information available. Default values provided in CalEEMod were used where detailed Project information was not available.

Implementation of the Project would generate air pollutant emissions from entrained dust, off-road equipment, vehicle emissions, architectural coatings, and asphalt pavement application. 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. The Project would implement various dust control strategies (project design feature **PDF-AQ-1**) and would be required to comply with SCAQMD Rule 403 to control dust emissions generated during the grading activities. Proposed construction practices that would be employed to reduce fugitive dust emissions include watering of the active sites and unpaved roads three times per day depending on weather conditions and restricting vehicle speed on unpaved roads to 15 miles per hour. Internal combustion engines used by construction equipment, 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's Rule 1113 (Architectural Coatings).

Table 3.2-9 presents the estimated maximum daily construction emissions generated during construction of the Project. The values shown are the maximum summer or winter daily emissions results from CalEEMod and include estimated emissions from rock crushing and popping activities, which were estimated outside of CalEEMod. Details of the emission calculations are provided in Appendix B.

Table 3.2-9. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions - Unmitigated

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	pounds per day					
2020	9.81	131.50	69.84	0.26	8.57	4.91
2021	9.21	121.69	69.18	0.26	12.14	6.60
2022	7.53	85.73	62.36	0.20	15.10	7.02
2023	41.18	36.18	58.49	0.20	14.43	4.41
2024	41.12	1.73	8.57	0.02	2.45	0.71
Maximum Daily Emissions	**41.18**	**131.50**	**69.84**	**0.26**	**15.10**	**7.02**
SCAQMD Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold Exceeded?	**No**	**Yes**	**No**	**No**	**No**	**No**

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; SCAQMD = South Coast Air Quality Management District.
See Appendix B for complete results.
The values shown are the maximum summer or winter daily emissions results from CalEEMod. These emissions reflect CalEEMod "mitigated" output, which accounts for compliance with SCAQMD Rule 1113 (Architectural Coatings) and implementation of the Project's fugitive dust control strategies, including watering of the Project site and unpaved roads three times per day, and restricting vehicle speed on unpaved roads to 15 miles per hour.

Maximum daily emissions of NO_x, CO, and SO_x emissions would occur during the demolition phase in 2020 as a result of off-road equipment operation and on-road vendor trucks and haul trucks. The site preparation phase would result in the greatest emissions of PM_{10} and $PM_{2.5}$. The overlap of the building construction phase and

the architectural coatings phases in 2023 would produce the maximum daily VOC emissions. As shown in Table 3.2-9, daily construction emissions would not exceed the SCAQMD significance thresholds for VOC, CO, SO_x, PM_{10}, or $PM_{2.5}$ during construction in all construction years. However, the daily construction emissions would exceed the SCAQMD significance thresholds for NO_x in 2020 and 2021.

Implementation of mitigation measure **MM-AQ-2** would result in mitigated construction emissions summarized in Table 3.2-14 (under Section 3.2.8 below). The values shown are the maximum summer or winter daily emissions results from CalEEMod. Details of the emission calculations are provided in Appendix B. As shown in Table 3.2-14, emissions of NO_x would be reduced to below the significance threshold with the incorporation of mitigation measure **MM-AQ-2**. Thus, construction-generated impacts after mitigation are considered **less than significant with mitigation incorporated**.

Operational Emissions

Emissions from the operational phase of the existing Veterans Memorial Park were estimated using CalEEMod Version 2016.3.2. Operational year 2019 was assumed consistent with the current site. Detailed calculation assumptions are presented in Section 3.2.4.2.

The proposed Project would include the construction of 850 residential units, 165,000 square feet of commercial uses, a 77,050-square-foot community center, a 5,000-square-foot museum, and approximately 4.75 acres of parks and open space. Operation of the Project would generate VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from mobile sources, including vehicle trips from residents, customers, employees, and delivery trips; area sources, including the use of consumer products, architectural coatings for repainting, and landscape maintenance equipment; and energy sources, including combustion of fuels used for space and water heating and cooking appliances. As discussed in Section 3.2.4.2, Operational Emissions, pollutant emissions associated with long-term operations were quantified using CalEEMod. Project-generated mobile source emissions were estimated in CalEEMod based on Project-specific trip rates. CalEEMod default values were used to estimate emissions from the Project area and energy sources.

Table 3.2-10 presents the maximum daily area, energy, and mobile source emissions associated with operation (year 2024) of the Project and for the existing Veterans Memorial Park. The values shown are the maximum summer or winter daily emissions results from CalEEMod. Details of the emission calculations are provided in Appendix B.

Table 3.2-10. Estimated Maximum Daily Operational Criteria Air Pollutant Emissions - Unmitigated

Emission Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	pounds per day					
Existing Site						
Area	1.48	0.00	0.02	0.00	0.00	0.00
Energy	0.03	0.31	0.26	0.00	0.02	0.02
Mobile	4.24	18.23	46.97	0.13	9.99	2.78
Total	**5.75**	**18.54**	**47.25**	**0.13**	**10.01**	**2.80**
Proposed Project						
Area	26.48	0.81	70.23	0.00	0.39	0.39
Energy	0.59	5.22	3.20	0.03	0.41	0.41
Mobile	14.68	61.68	141.46	0.53	44.78	12.25
Total	**41.75**	**67.71**	**214.89**	**0.56**	**45.58**	**13.05**

Table 3.2-10. Estimated Maximum Daily Operational Criteria Air Pollutant Emissions - Unmitigated

Emission Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	pounds per day					
Net Total (Project minus Existing Site)	36.00	49.17	167.64	0.43	35.57	10.25
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Threshold Exceeded?	No	No	No	No	No	No

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; SCAQMD = South Coast Air Quality Management District; PDF = project design feature.
See Appendix B for complete results.
Totals may not sum due to rounding.
The values shown are the maximum summer or winter daily emissions results from CalEEMod. These emissions reflect CalEEMod "mitigated" output and operational year 2024, which accounts for compliance with SCAQMD Rule 1113 (Architectural Coatings) and implementation of the Project's project design feature PDF-AQ/GHG-1.

As shown in Table 3.2-10, the combined daily area, energy, and mobile source emissions would not exceed the SCAQMD operational thresholds for NO_x, VOC, CO, SO_x, PM_{10}, and $PM_{2.5}$.

Air pollution 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. Based on these considerations, Project-level thresholds of significance for criteria pollutants are relevant in the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality.

In considering cumulative impacts from 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. If a Project's emissions would exceed the SCAQMD significance thresholds, it would be considered to have a cumulatively considerable contribution to nonattainment status in the SCAB. The basis for analyzing the Project's cumulatively considerable contribution is if the Project's contribution accounts for a significant proportion of the cumulative total emissions (i.e., it represents a "cumulatively considerable contribution" to the cumulative air quality impact) and consistency with the SCAQMD 2016 AQMP, which addresses the cumulative emissions in the SCAB.

As discussed in Section 3.2.1.4.1, South Coast Air Basin Attainment Designation, 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 $PM_{2.5}$. The nonattainment status is the result of 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. Construction and operation of the Project would generate VOC and NO_x emissions (which are precursors to O_3) and emissions of PM_{10} and $PM_{2.5}$. As indicated in Table 3.2-9, Project-generated construction emissions would exceed the SCAQMD emission-based significance thresholds for NO_x. As discussed in the analysis of the Project's potential to conflict with or obstruct implementation of the applicable air quality plan (Threshold A), the Project would conflict with the SCAQMD 2016 AQMP.

Cumulative localized impacts would potentially occur if a construction project were to occur concurrently with another off-site project. Construction schedules for potential future projects near the Project site are currently unknown; therefore, potential construction impacts associated with two or more simultaneous projects would be considered speculative. However, future projects would be subject to CEQA and would require air quality analysis and, where necessary, mitigation if the Project would exceed SCAQMD thresholds. Criteria air pollutant emissions

associated with construction activity of future projects would be reduced through implementation of control measures required by the SCAQMD. Cumulative PM_{10} and $PM_{2.5}$ emissions would be reduced because all future projects would be subject to SCAQMD Rule 403 (Fugitive Dust), which sets forth general and specific requirements for all construction sites in the SCAQMD.

Based on the Project-generated construction emissions of NO_x, the Project would result in a cumulatively considerable increase in emissions of nonattainment pollutants. Impacts would be potentially significant, and thus, require mitigation measure **MM-AQ-2**. As such, impacts are considered **less than significant with mitigation incorporated**.

Threshold C: Would the project expose sensitive receptors to substantial pollutant concentrations?

Localized Significance Thresholds Analysis

As discussed in Section 3.2.1.3, Sensitive Receptors, sensitive receptors are those individuals more susceptible to the effects of air pollution than the population at large. People most likely to be affected by air pollution include children, the elderly, and people with cardiovascular and chronic respiratory diseases. According to the SCAQMD, sensitive receptors include residences, schools, playgrounds, childcare centers, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes (SCAQMD 1993). The closest off-site sensitive receptors to the Project site include residences adjacent to the western Project site boundary.

An LST analysis has been prepared to determine potential impacts to nearby sensitive receptors during construction of the Project. As indicated in the discussion of the thresholds of significance (Section 3.2.3), the SCAQMD also recommends the evaluation of localized NO_2, CO, PM_{10}, and $PM_{2.5}$ impacts as a result of construction activities to sensitive receptors in the immediate vicinity of the Project site. The impacts were analyzed using methods consistent with those in the SCAQMD's *Final Localized Significance Threshold Methodology* (2009). According to the *Final Localized Significance Threshold Methodology*, "off-site mobile emissions from the Project should not be included in the emissions compared to the LSTs" (SCAQMD 2009). Hauling of soils and construction materials associated with Project construction are not expected to cause substantial air quality impacts to sensitive receptors along off-site roadways. Localized emissions from the trucks would be relatively brief in nature and would cease once the trucks pass through the main streets.

Construction activities associated with the Project would result in temporary sources of on-site fugitive dust and construction equipment emissions. As discussed above, off-site emissions from vendor trucks, haul trucks, and worker vehicle trips are not included in the LST analysis. The maximum allowable daily emissions that would satisfy the SCAQMD localized significance criteria for SRA 5 are presented in Table 3.2-11 and compared to the maximum daily on-site construction emissions generated during the Project.

Table 3.2-11. Localized Significance Thresholds Analysis for Project Construction - Unmitigated

Maximum On-Site Emissions	NO_2	CO	PM_{10}	$PM_{2.5}$
	Pounds per Day			
Construction Emissions	94.00	59.61	9.10	5.84
SCAQMD LST	*172*	*1,480*	*14*	*7*
LST Exceeded?	No	No	No	No

Source: SCAQMD 2009.
Notes: NO_2 = nitrogen dioxide; CO = carbon monoxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; SCAQMD = South Coast Air Quality Management District; LST = localized significance threshold.
See Appendix B for complete results.

Localized significance thresholds are shown for a 5-acre project sites corresponding to a distance to a sensitive receptor of 25 meters.
These estimates implementation of the Project's fugitive dust control strategies, including watering of the Project site and unpaved roads three times per day, and restricting vehicle speed on unpaved roads to 15 miles per hour.

Diesel equipment would be subject to the CARB air toxic control measures for in-use off-road diesel fleets, which would minimize DPM emissions, as shown in Table 3.2-11, construction activities would not generate emissions in excess of site-specific LSTs; therefore, localized construction impacts during construction of the Project would be **less than significant**. No mitigation is required.

Valley Fever

As discussed above in Section 3.2.1.2.2, valley fever is not highly endemic to the County, and within the County, the incidence rate in the Project site is below the County average and the statewide average. Furthermore, the soils tested which will be removed during the remediation phase did not show Coccidioides immitis spores. Construction of the Project would comply with SCAQMD Rule 403 (Fugitive Dust), which 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. In addition, the Project would implement various dust control strategies as included in project design feature **PDF-AQ-1**. The nearest sensitive-receptor land use (existing residence) is located adjacent to the western Project boundary. Based on the low incidence rate of *coccidioidomycosis* on the Project site and in the County, and with the Project's implementation of dust control strategies, it is not anticipated that earth-moving activities during Project construction would result in exposure of nearby sensitive receptors to valley fever. Therefore, the Project would have a **less-than-significant** impact with respect to valley fever exposure for sensitive receptors. No mitigation is required.

Health Impacts of Carbon Monoxide

Mobile source impacts occur on two scales of motion. Regionally, Project-related travel would add to regional trip generation and increase the vehicle miles traveled within the local airshed and the SCAB. Locally, Project-generated traffic would be added to the City's roadway system near the Project site. 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. 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.

Projects contributing to adverse traffic impacts may result in the formation of CO hotspots. To verify that the Project would not cause or contribute to a violation of the CO standard, a screening evaluation of the potential for CO hotspots was conducted. The potential for CO hotspots is evaluated based on the results of the TIA (Gibson 2020) and the California Department of Transportation Institute of Transportation (Caltrans) Studies *Transportation Project-Level Carbon Monoxide Protocol* (CO Protocol; Caltrans 1997) was followed. For projects located within an area designated as attainment or unclassified under the CAAQS or NAAQS, the CO Protocol identifies screening criteria for consideration. The first screening criteria focuses on projects that are likely to worsen air quality, which would occur if: a) the project significantly increases the percentage of vehicles operating in cold start mode (greater than 2%), b) the project significantly increases traffic volumes (greater than 5%), and/or c) the project worsens traffic flow. In addition to consideration of whether the project would worsen air quality, CO hotspots are typically evaluated when (1) the level of service (LOS) of an intersection or roadway decreases to LOS E or worse; (2) signalization and/or channelization is added to an intersection; and (3) sensitive receptors such as residences, schools, and hospitals are located in the vicinity of the affected intersection or roadway segment.

To verify that the Project would not cause or contribute to a violation of the CO standard, a screening evaluation of the potential for CO hotspots was conducted based on the TIA (Gibson 2020) results and the Caltrans Institute of Transportation Studies *Transportation Project-Level Carbon Monoxide Protocol* (CO Protocol; Caltrans 1997).

The proposed Project's TIA evaluated 27 intersections. As determined by the TIA, in the existing and future scenarios, no intersections would cause an intersection or roadway to decrease to LOS E or worse after mitigation is incorporated. Therefore, the Project would not result in a CO hotspot and would result in a **less than significant** impact. No mitigation is required.

Health Impacts of Toxic Air Contaminants

Construction Health Risk

As discussed in Section 3.2.4.3, a construction HRA was performed to estimate the Maximum Individual Cancer Risk and the Chronic Hazard Index for residential receptors as a result of Project construction. Results of the construction HRA are presented in Table 3.2-12.

Table 3.2-12. Construction Health Risk Assessment Results – Unmitigated

Impact Parameter	Units	Project Impact	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	Per Million	110	10	**Potentially Significant**
Chronic Hazard Index – Residential	Index Value	0.12	1.0	Less than Significant

Source: SCAQMD 2015.
Note: CEQA = California Environmental Quality Act.
See Appendix C.

As shown in Table 3.2-12, Project construction activities would result in a Residential Maximum Individual Cancer Risk of 110 in 1 million, which exceeds the significance threshold of 10 in 1 million. Project construction would result in a Residential Chronic Hazard Index of 0.12, which is below the 1.0 significance threshold. The Project construction TAC health risk impacts would be potentially significant. The HRA results after incorporation of mitigation measure **MM-AQ-2** are presented in Table 3.2-15 (under Section 3.2.8 below). Implementation of mitigation measure **MM-AQ-2** would reduce emissions from construction to levels below SCAQMD thresholds. Thus, site-specific impacts during construction would be **less than significant with mitigation incorporated**.

Roadway Health Risk

As discussed in Section 3.2.4.4, a HRA was performed to estimate the Maximum Individual Cancer Risk and Chronic Hazard Index for residential receptors as a result of emissions from the I-5 freeway on future sensitive receptors of the Project. The Project will include project design features **PDF-HR-1**, **PDF-HR-2**, and **PDF-HR-3** to reduce the impact of emissions from the nearby I-5 freeway on future residents of the Project. The US EPA reported that the MERV 13 filters remove 90% of particles ranging from 1 to 10 microns (EPA 2018). For this analysis, Dudek assumed a 90% particulate matter reduction for the air filters. The National Human Activity Pattern Survey (NHAPS) was conducted in support by the US EPA to study where people spend their time. The results of the NHAPS showed that on average people spend 87% of their time in enclosed buildings and 6% of their time in enclosed vehicles (Kleipeis et. al. 2001). This assessment of risk with mitigation includes the accounting for time spent indoors as identified in the NHAPS and the time spent away from home as

recommended by OEHHA (OEHHA 2015). Accounting for the actual time spent indoors and exposure related to the residents within the Project provides a more realistic exposure scenario from TAC emissions from the I-5 freeway. Results of the roadway HRA are presented in Table 3.2-13.

Table 3.2-13. Roadway Health Risk Assessment Results

Impact Parameter	Units	Impact Level	CEQA Threshold
Maximum Individual Cancer Risk – Residential	Per Million	3.11	10
Chronic Hazard Index – Residential	Index Value	0.0009	1.0

Source: SCAQMD 2015.
Notes: CEQA = California Environmental Quality Act.
See Appendix C.

As shown in Table 3.2-13, the DPM emissions from the I-5 freeway would result in a Residential Maximum Individual Cancer Risk of 3.11 in 1 million and a Residential Chronic Hazard Index of 0.0009 which includes project design features **PDF-HR-1**, **PDF-HR-2**, and **PDF-HR-3**. These impact levels would be less than the SCAQMD significance threshold. As such, impacts are **less than significant**. No mitigation is required.

Health Effects of Other Criteria Air Pollutants

Construction and operation of the Project would result in emissions that would exceed the SCAQMD threshold for NO_x. Project construction and operation would not exceed SCAQMD thresholds for VOC, CO, SO_x, PM_{10}, or $PM_{2.5}$.

VOCs and NO_x are precursors to O_3, for which the SCAB is 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 VOCs 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. Because operation of the Project would not exceed SCAQMD threshold for NO_x or VOC, implementation of the Project could minimally contribute to regional O_3 concentrations and the associated health effects.

Construction and operation of the Project would contribute to exceedances of the NAAQS and CAAQS for NO_2. Health effects that result from NO_2 and NO_x include respiratory irritation, which could be experienced by nearby receptors during the periods of heaviest use of off-road construction equipment. However, Project construction would be relatively short term, and off-road construction equipment would be operating at various portions of the site and would not be concentrated in one portion of the site at any one time. In addition, existing NO_2 concentrations in the area are well below the NAAQS and CAAQS standards. Operation of the Project would not require use of any stationary sources (e.g., diesel generators and boilers) that would create substantial, localized NO_x impacts. However, due to exceedances in construction and operation-generated emissions of NO_x, the Project could result in potential health effects associated with NO_2 and NO_x.

CO tends to be a localized impact associated with congested intersections. The associated potential for CO hotspots were discussed previously and are determined to be a less-than-significant impact. Thus, the Project's CO emissions would not contribute to significant health effects associated with this pollutant.

Construction and operation of the Project would also not exceed thresholds for PM_{10} or $PM_{2.5}$ and would not contribute to exceedances of the NAAQS and CAAQS for particulate matter or would obstruct the SCAB from coming into attainment for these pollutants. The Project would also not result in substantial DPM emissions during construction and operation, and therefore, would not result in significant health effects related to DPM exposure. Additionally, the Project would implement dust control strategies and be required to comply with SCAQMD Rule 403, which limits the amount of fugitive dust generated during construction. Due to the minimal contribution of particulate matter during construction and operation, the Project is not anticipated to result in health effects associated with PM_{10} or $PM_{2.5}$.

In summary, because construction of the proposed Project could result in exceedances of the SCAQMD significance thresholds for NO_x, the potential health effects associated with criteria air pollutants, specifically O_3, are considered potentially significant. Notably, 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.

In summary, with the implementation of mitigation measure **MM-AQ-2**, impacts are considered **less than significant with mitigation incorporated**.

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

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

Odors would be potentially generated from vehicles and equipment exhaust emissions during construction of the Project. Potential odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment, architectural coatings, and asphalt pavement application. Such odors would disperse rapidly from the Project site and generally occur at magnitudes that would not affect substantial numbers of people. Therefore, impacts associated with odors during construction would be **less than significant**. No mitigation is required.

Land uses and industrial operations associated with odor complaints include agricultural uses, wastewater treatment plants, food-processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding (SCAQMD 1993). The Project would not include land uses that generate odors as discussed above during operation. Therefore, Project operations would result in an odor impact that is **less than significant**. No mitigation is required.

3.2.6 Cumulative Impacts

Cumulative impacts were discussed in detail under Threshold B in Section 3.2.5. Maximum daily emissions of NO_x, CO, and SO_x emissions would occur during the demolition phase in 2020 as a result of off-road equipment operation and on-road vendor trucks and haul trucks. The site preparation phase would result in the greatest emissions of PM_{10} and $PM_{2.5}$. The overlap of the building construction phase and the architectural coatings phases in 2023 would produce the maximum daily VOC emissions. As shown in Table 3.2-9, daily construction emissions would not exceed the SCAQMD significance thresholds for VOC, CO, SO_x, PM_{10}, or $PM_{2.5}$ during

construction in all construction years. However, the daily construction emissions would exceed the SCAQMD significance thresholds for NO_x in 2020 and 2021. Operational emissions of the Project would be less than all SCAQMD significance thresholds. However, as the NO_x emissions would exceed during 2020 and 2021 the Project would have a potentially significant cumulative impact during construction and mitigation is required. As such, with the implementation of mitigation measure **MM-AQ-2**, cumulative impacts are considered **less than significant with mitigation incorporated.**

3.2.7 Mitigation Measures

To reduce potential impacts to air quality, the following mitigation measures shall be implemented:

MM-AQ-1 Prior to SCAG's next update to the Regional Housing Needs Assessment, the City shall prepare a revised population, employment and housing forecast for SCAG that reflects anticipated growth generated from the proposed Project. The updated forecast provided to SCAG shall be used to inform the SCAQMD's update to the Regional Air Quality Strategy and State Implementation Plan. The County shall prepare and submit a letter notifying the SCAQMD of this revised forecast for use in the future update to the RAQS and SIP as required.

MM-AQ-2 To reduce the potential for criteria air pollutants, specifically oxides of nitrogen (NOx), as a result of construction of the Project, the applicant shall:

Prior to the start of construction activities, the Project applicant, or its designee, shall ensure that all 75 horsepower or greater diesel-powered equipment are powered with California Air Resources Board (CARB)-certified Tier 4 Final engines, except where the Project applicant establishes to the satisfaction of the City of Murrieta that Tier 4 Final equipment is not available.

An exemption from these requirements may be granted by the City in the event that the City documents that equipment with the required tier is not reasonably available and corresponding reductions in criteria air pollutant emissions are achieved from other construction equipment. Before an exemption may be considered by the City, the applicant shall be required to demonstrate that two construction fleet owners/operators in the Los Angeles County were contacted and that those owners/operators confirmed Tier 4 Final equipment could not be located within Los Angeles County.

As discussed in under the evaluation of the Project's potential to result in a cumulatively considerable new increase of criteria pollutants, the Project would implement project design feature **PDF-AQ/GHG-1** to reduce construction and operational emissions to the extent feasible.

3.2.8 Level of Significance after Mitigation

The following discusses the level of impact after the implementation of mitigation measures **MM-AQ-1** and **MM-AQ-2**:

Threshold A:

As shown in Table 3.2-14, construction emissions would be reduced to below SCAQMD's thresholds with the implementation of mitigation measure **MM-AQ-1**. However, the Project would exceed the growth projections within the SCAG RTP/SCS and SCAQMD AQMP; thus, impacts would remain **significant and unavoidable**.

Threshold B:

Implementation of mitigation measure **MM-AQ-2** would result in mitigated construction emissions summarized in Table 3.2-14. The values shown are the maximum summer or winter daily emissions results from CalEEMod. Details of the emission calculations are provided in Appendix B.

Table 3.2-14. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions – Mitigated

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	pounds per day					
2020	3.03	60.83	77.27	0.26	5.07	1.60
2021	2.94	57.07	77.02	0.26	9.01	3.63
2022	5.90	32.23	71.43	0.20	13.79	4.60
2023	41.02	24.03	59.70	0.20	13.77	3.80
2024	40.97	0.64	8.60	0.02	2.39	0.65
Maximum Daily Emissions	**41.02**	**60.83**	**77.27**	**0.26**	**13.79**	**4.60**
SCAQMD Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; SCAQMD = South Coast Air Quality Management District.
See Appendix B for complete results.
The values shown are the maximum summer or winter daily emissions results from CalEEMod. These emissions reflect CalEEMod "mitigated" output, which accounts for compliance with SCAQMD Rule 1113 (Architectural Coatings) implementation of the Project's fugitive dust control strategies, including watering of the Project site and unpaved roads three times per day, and restricting vehicle speed on unpaved roads to 15 miles per hour, and implementation of Mitigation Measure **MM-AQ-1**, which requires equipment over 75 horsepower to meet specific engine emission standards (Tier 4 Final).

As shown in Table 3.2-14, emissions of NO_x would be reduced to below the significance threshold with the implementation of mitigation measure **MM-AQ-2**. Thus, construction-generated impacts after mitigation are **less than significant**.

Threshold C:

Implementation of mitigation measure **MM-AQ-2** would reduce Project construction-generated DPM missions to the extent feasible. The HRA results after the implementation of mitigation measure **MM-AQ-2** are presented in Table 3.2-15.

Table 3.2-15. Construction Health Risk Assessment Results – Mitigated

Impact Parameter	Units	Project Impact	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	Per Million	5.69	10	Less than significant
Chronic Hazard Index – Residential	Index Value	0.01	1.0	Less than Significant

Source: SCAQMD 2015.
Notes: CEQA = California Environmental Quality Act.
See Appendix C.

Implementation of mitigation measure **MM-AQ-2** would reduce emissions from construction to levels below SCAQMD thresholds. Thus, site-specific impacts during construction would be **less than significant** after mitigation.

Cumulative Impacts:

As discussed under Threshold B, above and as shown in Table 3.2-14, construction emissions would be less than the SCAQMD significance thresholds with the implementation of mitigation measure **MM-AQ-2**. Therefore, the Project would have a **less than cumulatively considerable impact** after mitigation.

3.2.9 References

13 CCR 2025. Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and Other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles.

13 CCR 2449–2449.3 and Appendix A. General Requirements for In-Use Off-Road Diesel-Fueled Fleets.14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

17 CCR 93000. Substances Identified as Toxic Air Contaminants. In Subchapter 7, Toxic Air Contaminants.

24 CCR Part 6. California Energy Code. Sacramento, California: California Building Standards Commission. March 2010. ISBN 978-1-58001-976-7. Effective January 1, 2011. Accessed August 2016. https://ww2.energy.ca.gov/2018publications/CEC-400-2018-020/CEC-400-2018-020-CMF.pdf.

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3.3 Biological Resources

This section describes the existing biological conditions of the Project site and vicinity, identifies regulatory requirements associated with biological resources, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Project.

Comments received in response to the Notice of Preparation (see Appendix A) did not include concerns regarding impacts to biological resources.

A desktop analysis and site reconnaissance survey was conducted to support the conclusions in this section. Other sources consulted are listed in Section 3.6.9 References.

3.3.1 Environmental Setting

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

Special Status Species

There are 30 special-status plant species and 45 special-status wildlife species with recorded occurrences in the U.S. Geologic Survey's Los Angeles, California 7.5-minute topographic quadrangle and surrounding eight quadrangles (CDFW 2019, CNPS 2019a). Eighteen species are listed under the federal and/or California endangered species acts, and two species are "Fully Protected" under Fish and Game Code Sections 3511, 4700, 5050 and 551. The Project is not located within any designated critical habitat (USFWS 2019).

Vegetation Communities

The Project site has been subject to previous site disturbance as a result of the previous landfill and construction of the Interstate 5 (I-5) freeway. The proposed Project is devoid of native habitat and it is located within an urban setting dominated by dense residential and commercial development and ornamental landscaping, which substantially limits its potential to support sensitive natural communities or riparian habitat.

Jurisdictional Wetlands

There are no jurisdictional wetlands or waters located on the Project site (USFWS 2019). Veterans Memorial Park, located in the western portion of the Project site, is developed and maintained. The eastern portion of the Project site was previously developed, and the structures on-site were removed between 1972 and 1994 (NETROnline 2019). The proposed Project is located adjacent to a series of earthen detention basins that are bordering the Rio Hondo, which is a concrete channel at this location. The channelization of the river occurred between 1952 and 1953, and the detention basin was constructed between 1953 and 1963 (NETROnline 2019).

3.3.2 Relevant Plans, Policies, and Ordinances

Federal

Federal Endangered Species Act

Under the federal Endangered Species Act of 1973 (ESA), the Secretary of the Interior and the Secretary of Commerce jointly have the authority to list a species as threatened or endangered (16 USC 1533(c)). Pursuant to the requirements of the ESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally listed threatened or endangered species may be present in the planning area, and determine whether the proposed project would have a potentially significant impact on such species. In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under the ESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC 1536(3)(4)). The United States Fish and Wildlife Services (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service are responsible for implementation of the federal ESA.

This legislation is intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend and provide programs for the conservation of those species, thus preventing extinction of plants and wildlife. Under provisions of Section 9 (16 USC 1538(a)(1)(B)) of ESA, it is unlawful to "take" any listed species. "Take" is defined in Section 3 (16 USC 1532(19) of ESA as, "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

The federal ESA 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. Incidental take is defined as "take that results from, but is not the purpose of, carrying out an otherwise lawful activity" (USFWS 2004). Upon development of a habitat conservation plan, USFWS can issue incidental take permits for listed species.

USFWS also publishes a list of candidate species. Species on this list receive special attention from federal agencies during environmental review, although they are not protected otherwise under the federal ESA. The candidate species are those for which USFWS has sufficient biological information to support a proposal to list as endangered or threatened.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 USC 703 et seq.) is a federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The number of bird species covered by the MBTA is extensive; the species are listed in Title 50 of the Code of Federal Regulations (CFR), Part 10.13. The regulatory definition of "migratory bird" is broad and includes any mutation or hybrid of a listed species, and also includes any part, egg, or nest of such birds (50 CFR 10.12). Migratory birds are not necessarily federally listed endangered or threatened birds under the ESA.

The MBTA prohibits the take of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, "take" is defined as pursue, hunt, shoot, wound, kill trap, capture, or collect, or any attempt to carry out these activities (16 USC 703 et seq.). Additionally, Executive Order 13186, "Responsibilities of Federal Agencies to Protect Migratory Birds," requires that any project with federal involvement address impacts of federal actions on migratory birds with the purpose

of promoting conservation of migratory bird populations (66 Federal Register (FR) 3853–3856). The Executive Order requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect these species. Currently, birds are considered to be nesting under the MBTA only when there are eggs or chicks, which are dependent on the nest.

Federal Wetland Regulation

Federal wetland regulation applicable to the MWMP is guided by the Clean Water Act (CWA). The purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all waters of the United States. Permitting for projects that propose dredge and fill activities in waters of the United States (including wetlands) is overseen by USACE under Section 404 of the CWA. Projects are typically permitted on an individual basis or are covered under one of several approved general or nationwide permits. In addition, under Section 401 of the CWA, an applicant for a federal permit for an activity that may result in a discharge to a water body must obtain certification from the state that the proposed activity will comply with state water quality standards and water quality objectives. Section 401 provides the Regional Water Quality Control Board (RWQCB) with regulatory authority to certify or deny the proposed activity. A Section 401 certification must be obtained from the RWQCB prior to issuance of a 404 Permit by USACE.

U.S. Army Corps of Engineers

Pursuant to Section 404 of the CWA, USACE regulates the discharge of dredged and/or fill material into "waters of the United States." The term "wetlands" (a subset of waters) is defined in 33 CFR 328.3(b) as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." In the absence of wetlands, the limits of USACE jurisdiction in non-tidal waters, such as intermittent streams, extend to the "ordinary high water mark," which is defined in 33 CFR 328.3(e).

State

California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires identification of a project's potentially significant impacts on sensitive biological resources and feasible mitigation measures and alternatives that could avoid or reduce significant impacts. CEQA Guidelines Section 15380(b)(1) defines 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 California Code of Regulations 15000 et seq.). A rare animal or plant is defined in CEQA Guidelines Section 15380(b)(2) as a species that, although not presently 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). CEQA also requires identification of a project's potentially significant impacts on riparian habitats (such as wetlands, bays, estuaries, and marshes) and other sensitive natural communities, including habitats occupied by endangered, rare, and threatened species.

California Endangered Species Act

The California Endangered Species Act (CESA) establishes state policy to conserve, protect, restore, and enhance threatened or endangered species and their habitats. Under the CESA, CDFW is responsible for maintaining a list of threatened species and endangered species (California Fish and Game Code [CFGC] Section 2070). CDFW administers CESA (CFGC Section 2050 et seq.), which prohibits the "take" of plant and animal species designated by the Fish and Game Commission as endangered or threatened in the State of California. Under California Fish and Game Code Section 86, take is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA Section 2053(a) 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 Sections 2080 through 2085 address the taking of threatened, endangered, or candidate species. CFGC Section 2080 states, "No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the Commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided in this chapter, the Native Plant Protection Act (CFGC Sections 1900–1913), or the California Desert Native Plants Act (Food and Agricultural Code, Section 80001)."

CDFW also maintains a list of candidate species, which are species that CDFW has formally noticed as under review for addition to the threatened or endangered species list. CDFW also maintains lists of Species of Special Concern, which serve as watch lists. Pursuant to the requirements of the CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present in the area, and determine whether the proposed project would have a potentially significant impact on such species. CDFW encourages informal consultation on any proposed project that may impact a candidate species.

California Fish and Game Code

Under the California Fish and Game Code, CDFW provides protection from "take" for a variety of species, including fully protected species. "Fully protected" is a legal protective designation administered by CDFW intended to conserve wildlife species that risk extinction within California. Lists have been created for birds, mammals, fish, amphibians, and reptiles.

According to CFGC Sections 3511 and 4700, which regulate birds and mammals, respectively, a "fully protected" species may not be taken or possessed without a permit from the Fish and Game Commission, and "incidental takes" of these species are not authorized.

According to Section 3503, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 states that it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds of prey) or to take, possess or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto. Finally, Section 3513 states that is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

For the purposes of the state regulations, CDFW Regulation 681.2(a) for CFGC Sections 3503 and 3503.5 currently defines an active nest as one that is under construction, preparing for use, or in use for egg laying. This definition includes existing nests that are being modified. For example, if a hawk is adding to or maintaining an existing stick nest in a transmission tower, then it is considered active and is covered under these the CFGC sections.

Regional Water Quality Control Board

The intent of the Porter–Cologne Water Quality Control Act is to protect water quality and the beneficial uses of water, and it applies to both surface water and groundwater. Under this law, the State Water Resources Control Board develops statewide water quality plans, and the Regional Water Quality Control Boards (RWQCBs) develop basin plans that identify beneficial uses, water quality objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of both statewide and basin plans. Waters regulated under the Porter–Cologne Water Quality Control Act include isolated waters that are no longer regulated by USACE.

Local

City of Commerce General Plan – Resource Management Element

The City's early development resulted in exploitation of natural resources, which were not guided or governed by local decision-making. The following policies focus on those remaining "natural resources" that will continue to be critical to the City's economic well-being and the health of its residents.

- Resource Management Policy 1.1: The city of Commerce will do its part in the conservation and protection of air, water, energy, and land in the Southern California region.
- Resource Management Policy 1.2: The city of Commerce will cooperate, to the degree necessary, with federal, state, and county agencies, and surrounding cities, in the maintenance and improvement in the quality of local groundwater.
- Resource Management Policy 1.4: The city of Commerce will encourage the conservation of water resources in residential, commercial, and industrial developments through the use of drought-tolerant plant materials and water saving irrigation systems.
- Resource Management Policy 4.4: The city of Commerce will review existing landscaping standards for public and private developments so as to increase the green space throughout the city.
- Resource Management Policy 4.5: The city of Commerce will require that at least five percent of the site area of all new commercial and industrial developments be landscaped.
- Resource Management Policy 4.1: The city of Commerce will encourage the preservation of the existing plant resources in the city.
- Resource Management Policy 4.2: The city of Commerce will explore code enforcement measures to ensure that landscaping is well maintained.
- Resource Management Policy 4.3: The city of Commerce will implement a definitive street tree program that, at a minimum, calls for landscaping along major rights-of-way and within industrial and commercial developments.

City of Commerce Municipal Code

The City of Commerce Municipal Code Section 12.06, City Trees, provides for the preservation and protection of the City's trees. The intent of the Tree Policy is to recognize and underscore the importance of trees and the urban forest of the City, and to preserve the trees of the city for future generations and safeguard the public from

dangerous conditions from the City's urban forest. The Tree Policy provides guidelines for planting, maintenance, and removal of street trees located in the public rights-of-way, open space, and median islands. The policy is intended for use by City staff, citizens, private contractors for tree-related decisions in the public right-of-way, open space, and median islands within the City.

3.3.3 Thresholds of Significance

The significance criteria used to evaluate the Project impacts to biological resources are based on Appendix G of the State CEQA Guidelines. Through the analysis in the Initial Study (see Appendix A), it was determined that the proposed Project would not conflict with the provisions of an adopted Habitat Conservation Plan, natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (Threshold F). Accordingly, this issue is not further analyzed in the EIR. Based on the remaining thresholds, a significant impact related to biological resources would occur if the Project would:

A. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
B. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
C. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
D. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
E. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

3.3.4 Methodology

A desktop analysis and site reconnaissance survey was conducted in order to confirm the preliminary conclusions outlined in the Initial Study (Appendix A).

3.3.5 Impacts Analysis

Threshold A: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

The proposed Project is devoid of native habitat and it is located within an urban setting dominated by dense residential and commercial development and ornamental landscaping, which substantially limits its potential to support special-status plant wildlife species. Veterans Memorial Park, located in the western portion of the Project site, is developed and maintained. The eastern portion of the Project site was previously developed, and the structures on-site were removed between 1972 and 1994 (NETROnline 2019), which has altered the soils and removed the native vegetation, which substantially limits its potential to support special-status plants. However, one special-status plant, southern tarplant (*Centromadia pungens* ssp. *laevis*), has a moderate potential to occur within the Project site because it is known to occur

in highly disturbed areas and there are recent records of the species occurring six miles to the north-northeast, adjacent to the Rio Hondo. Southern tarplant has a California Rare Plant Rank of 1B.1, which is defined as a species that are rare, threatened, or endangered in California and elsewhere (CNPS 2019). Therefore, impacts are potentially significant. However, with the implementation of mitigation measure **MM-BIO-1**, impacts would be **less than significant with mitigation incorporated**.

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

The Project site has been subject to previous site disturbance as a result of the previous landfill and construction of the I-5 freeway. The proposed Project is devoid of native habitat and it is located within an urban setting dominated by dense residential and commercial development and ornamental landscaping, which substantially limits its potential to support sensitive natural communities or riparian habitat. Veterans Memorial Park, located in the western portion of the Project site, is developed and maintained. The eastern portion of the Project site was previously developed, and the structures on-site were removed between 1972 and 1994 (NETROnline 2019), which has altered the soils and removed the native vegetation, so no riparian or other sensitive natural communities are present. Therefore, impacts to riparian habitat or other sensitive natural communities would be **less than significant**. No mitigation is required.

Threshold C: Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

There are no jurisdictional wetlands or waters located on the Project site (USFWS 2019). The proposed Project is located adjacent to a series of earthen detention basins that are bordering the Rio Hondo, which is a concrete channel at this location. The Rio Hondo is a waters of the U.S., waters of the State, and California Department of Fish and Wildlife regulated stream. The detention basins would only be waters of the State, since stormwater control features excavated or constructed in upland are exempted from the Clean Water Act and the features are not streams or lakes regulated under California Fish and Game Code 1600-1616.

Direct impacts to the Rio Hondo and detention basins are not expected to occur during construction of the proposed Project. Potential temporary indirect impacts to jurisdictional waters in the Project area would primarily result from construction activities and would include impacts from the generation of fugitive dust and the introduction of chemical pollutants (including herbicides). Excessive dust can decrease the vigor and productivity of vegetation through effects on light, penetration, photosynthesis, respiration, transpiration, increased penetration of phytotoxic gaseous pollutants, and increased incidence of pests and diseases. Erosion and chemical pollution (releases of fuel, oil, lubricants, paints, release agents, and other construction materials) may affect wetlands/jurisdictional waters. The release of chemical pollutants can reduce the water quality downstream and degrade adjacent habitats. However, during construction, erosion-control measures would be implemented as part of the Storm Water Pollution Prevention Plan (SWPPP) for the Project. Prior to the start of construction activities, the Contractor is required to file a Permit Registration Document with the State Water Resources Control Board in order to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with the Construction and Land Disturbance Activities (Order No 2009-009-DWQ, NPDES No. CAS000002) or the latest approved general permit. This permit is required for earthwork that result in the disturbance of one acre or more of total land area. The required SWPPP will mandate the implementation of best management practices to reduce or eliminate construction-related pollutants in the runoff, including sediment.

Therefore, direct impacts and temporary indirect impacts would be **less than significant** due to compliance with regulations. No mitigation is required.

Threshold D: Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The trees and shrubs in the Project site provide nesting habitat for bird species protected under the Migratory Bird Treaty Act (MBTA; 16 USC 703-712) and California Fish and Game Code Sections 3503.5, 3503, and 3513. Trimming, pruning, and/or removal of trees and shrubs may occur as a result of construction of the Project, and could disrupt breeding activity. There would be no direct temporary impacts; however, there may be a potential for a direct permanent impact to occur to nesting birds (i.e., direct impacts to individuals, active nests, eggs, or young), particularly during the general nesting season of February 1 through August 31. Construction activities that could result in direct impacts to nesting birds include vegetation and tree removal during grading activities. Therefore, would be potentially significant. However, with the implementation of mitigation measures **MM-BIO-2** and **MM-BIO-3**, impacts would be **less than significant with mitigation incorporated**.

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

The City has an adopted Tree Policy that provides guidelines for the protection and preservation of trees planted within the City's rights-of-way and at City facilities (Municipal Code Section 12.06, City Trees). The Project considers the removal of trees within Veterans Memorial Park, an existing City facility. The City can remove City trees if a Project cannot be redesigned to not impact the trees. If the Project can be redesigned, but the non-removal alternative is not chosen, then the following procedures will be followed, per the Tree Policy:

- The City Arborist will inspect the tree and prepare a written determination that the tree needs to be removed.
- The City shall attach a Removal Notice to the trees that a proposed to be removed and notices shall be sent to the property owners within 150 feet of the trees. If no appeals are filed within five days of the posting of the notice, then the trees can be removed.
- If an appeal is submitted, it shall be heard by the Planning Commission.

No explicit compensation is stated in the Tree Policy; however, the Project would install trees as part of the Project design. Based on the City's policies, impacts involving removal of trees on the Project site would be **less than significant**. No mitigation is required.

3.3.6 Cumulative Impacts

The proposed Project would not have any direct or indirect impacts on special-status wildlife species. However, the Project would have a small potential to impact a special-status plant species that has as moderate potential to occur on-site, southern tarplant. Impacts would be reduced to below a level of significance with implementation of mitigation. Any other cumulative projects in the area with a potential to impact special-status plant species would also be required to mitigate accordingly.

The proposed Project is devoid of native habitat and it is located within an urban setting dominated by dense residential and commercial development and ornamental landscaping, which substantially limits its potential to support sensitive natural communities or riparian habitat.

No federally (ACOE) protected wetlands would be impacted because no ACOE jurisdictional wetlands or waters occur on-site.

Projects that would occur on previously developed land or in a highly urbanized area would have less potential to significantly impact biological resources; however, there is a potential for nesting birds to be present in ornamental landscaping or on existing buildings. The combined construction of projects within the vicinity of the proposed Project could deprive some species of a significant amount of habitable space. However, it is anticipated that species that are potentially affected by related projects would also be subject to the same requirements of CEQA as the Project. These determinations would be made on a case-by-case basis and the effects of cumulative development on nesting birds would be mitigated to the extent feasible in accordance with CEQA and other applicable legal requirements.

A cumulative effect to regional planning to protect biological resources would occur if the reasonably foreseeable cumulative projects conflict with one or more local policies or ordinances protecting biological resources. The City is almost entirely built out with only a few vacant parcels and pockets of native and/or naturalized vegetation remaining. All cumulative projects would be subject to review for compliance with all applicable local and regional biological plans, policies, and ordinances. Cumulative projects that would occur on previously undeveloped land would be required to identify and mitigate any potentially significant impacts to biological resources.

Therefore the Project would not contribute to a cumulative impact to special-status species, sensitive vegetation communities, federally protected wetlands, or migratory birds. The Project would also not result in a cumulatively considerable impact resulting from conflicts with local plans or policies. With the implementation of mitigation measures **MM-BIO-1**, **MM-BIO-2**, and **MM-BIO-3**, cumulative impacts associated with biological resources would be **less than significant with mitigation incorporated.**

3.3.7 Mitigation Measures

The following mitigation measures would reduce impacts to below a level of significance.

MM-BIO-1 **Rare Plant Surveys.** Prior to initiation of construction activities, focused surveys shall be conducted in suitable habitat within the proposed Project footprint. Focused surveys shall be conducted by a qualified biologist at the appropriate conditions and time of year (April to September), when blooming and fruiting has been confirmed in reference populations in the region. Focused surveys for special-status plant species shall be conducted by a qualified biologist according to: the CNPS Botanical Survey Guidelines (CNPS 2001); Protocols for Surveying and Evaluating Impacts to Special Status Native Populations and Natural Communities (CDFG 2009); and USFWS General Rare Plant Survey Guidelines (Cypher 2002).

MM-BIO-2 **Rare Plant Habitat Compensation.** If rare plants are found and avoidance is not feasible, then one of the following options shall be implemented:

On-site Preservation. If the Project can be modified to minimize impacts to rare plants, then the Project shall compensate the loss of the species and associated habitat through on-site restoration, creation,

and preservation of a minimum of an equal amount of acreage of what is being impacted by the Project (1:1). The preserved portion of the site shall be designated as open space preserve and placed within a protective easement for conservation purposes, such as a restrictive covenant or conservation easement. Signage and fencing shall be provided at perimeter locations. Fencing design shall be developed to promote safety of life and property, prevent unauthorized access by pedestrians and vehicles into sensitive areas, and allow limited passage for wildlife species in the local area.

Offsite land Acquisition and Preservation. If the Project cannot be modified to avoid or minimize impacts to rare plants, then the Project, then off-site land with similar habitat in the range of the species shall be identified and purchased at 2:1 of the acreage of what is being impacted by the Project. The purchase lands shall designated as an open space preserve and placed within a protective easement for conservation purposes, such as a restrictive covenant or conservation easement. Signage and fencing shall be provided at perimeter locations. Fencing design shall be developed to promote safety of life and property, prevent unauthorized access by pedestrians and vehicles into sensitive areas, and allow limited passage for wildlife species in the local area.

Prepare and Implement Plan for Salvage, Relocation, and/or Propagation of Special-Status Plant Species. A qualified botanist will prepare a plan before the start of ground-disturbing activities to address monitoring, salvage, relocation, and propagation of special-status plant species. The relocation or propagation of plants and seeds will be performed at a suitable mitigation site approved by the lead agency, and as appropriate per species. Documentation will include provisions that address the techniques, locations, and procedures required for the successful establishment of the plant populations. The plan will include provisions for performance that address survivability requirements, maintenance, monitoring, implementation, and the annual reporting requirements.

MM-BIO-3 **Nesting Bird Surveys.** Ground disturbance activities and vegetation removal will be completed outside the avian breeding season (between September 1 and January 31).

If ground disturbance activities (including clearing and grubbing) are scheduled to occur between February 1 and August 31, a qualified biologist will conduct a nesting bird survey within 72 hours of ground disturbance activities. The survey shall consist of full coverage of the proposed Project footprint and up to a 300-foot buffer (500-feet for suitable raptor habitat). The specific survey buffer will be determined in the field by the Project biologist and will take into account the species nesting in the area, the habitat present, and where access is permitted. If no active nests are found, no additional measures are required.

If active nests are found, the nest locations shall be mapped by the qualified biologist. The nesting bird species will be documented and, to the degree feasible, the nesting stage (e.g., incubation of eggs, feeding of young, near fledging) will be determined. The biologist shall establish a no-disturbance buffer around each active nest. The buffer will be determined by the qualified biologist based on the biology of the species present and surrounding habitat (typically a starting point of 300 feet for most birds and 500 feet for raptors, but may be reduced as approved by the biologist). No construction or ground disturbance activities shall be conducted within the buffer until the biologist has determined the nest is no longer active (i.e., no eggs or young) and has informed the construction supervisor that activities may resume.

3.3.8 Level of Significance After Mitigation

With the implementation of mitigation measures **MM-BIO-1**, **MM-BIO-2**, and **MM-BIO-3**, impacts would be **less than significant**.

3.3.9 References

CDFG (California Department of Fish and Game). 2009. "Protocols for Surveying and Evaluating Impacts to Special Status Native Populations and Natural Communities." Accessed December 2019. https://nrm.dfg.ca.gov/ FileHandler.ashx?DocumentID=18959&inline.

CDFW (California Department of Fish and Wildlife). 2019. California Natural Diversity Database, RareFind 5 web-viewer. Accessed December 2019. https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data.

CNPS (California Native Plant Society). 2001. CNPS Botanical Survey Guidelines. Accessed December 2019. https://cnps.org/wp-content/ uploads/2018/03/cnps_survey_guidelines.pdf.

CNPS. 2019. Inventory of Rare and Endangered Plants, web-viewer. Accessed December 2019. http://www.rareplants.cnps.org/advanced.html.

NETROnline. 2019. Nationwide Environmental Title Research Historic Aerials, online viewer. Accessed December 2019. https://www.historicaerials.com/.

USFWS (U.S. Fish and Wildlife Service). 2019. Information for Planning and Consultation; online application. Accessed December 2019. https://ecos.fws.gov/ipac/.

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3.4 Cultural Resources

This section describes the existing conditions of the Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Project.

Comments received in response to the Notice of Preparation (see Appendix A) included instructions for complying with Assembly Bill 52 and Senate Bill 18 (tribal consultation processes), and recommendations for cultural resources assessments.

Information contained in this section is based on the results of a California Historical Resources Information System (CHRIS) records search; coordination with the California Native American Heritage Commission (NAHC); a pedestrian survey of the Project site by a qualified architectural historian; building development and archival research; development of an appropriate historic context for the Project site; and recordation and evaluation of one resource over 45 years old (the Veterans Memorial Park) for historical significance and integrity in consideration of National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), and City of Commerce designation criteria and integrity requirements. Additionally, the analysis is based, in part, on a review of existing resources and applicable laws, regulations, and guidelines. Other sources consulted are listed in Section 3.4.9 References.

3.4.1 Environmental Setting

This section describes the existing conditions of the Project site, including its environmental, cultural, and ethnographic setting, and identifies and evaluates the existing built environment resources within the Project site in consideration of historical significance and integrity.

Cultural Setting

Prehistoric Overview

Evidence for continuous human occupation in Southern California spans the last 10,000 years. Various attempts to parse out variability in archaeological assemblages over this broad period have led to the development of several cultural chronologies; some of these are based on geologic time, most are based on temporal trends in archaeological assemblages, and others are interpretive reconstructions. To be more inclusive, this research employs a common set of generalized terms used to describe chronological trends in assemblage composition: Paleoindian (pre-5500 BC), Archaic (8000 BC–AD 500), Late Prehistoric (AD 500–1769), and Ethnohistoric (post-AD 1769).

Paleoindian Period (pre-5500 BC)

Evidence for Paleoindian occupation in the region is tenuous. Our knowledge of associated cultural pattern(s) is informed by a relatively sparse body of data that has been collected from within an area extending from coastal San Diego, through the Mojave Desert, and beyond. One of the earliest dated archaeological assemblages in the region is located in coastal Southern California (though contemporaneous sites are present in the Channel Islands) derives from SDI-4669/W-12 in La Jolla. A human burial from SDI-4669 was radiocarbon dated to 9,590–9,920 years before present (95.4% probability) (Hector 2006). The burial is part of a larger site complex that contained more than 29 human burials associated with an assemblage that fits the Archaic profile (i.e., large amounts of ground stone, battered cobbles, and expedient flake tools). In contrast, typical Paleoindian assemblages include large stemmed projectile points, high proportions of formal lithic tools, bifacial lithic reduction strategies, and

relatively small proportions of ground stone tools. Prime examples of this pattern are sites that were studied by Emma Lou Davis (1978) on Naval Air Weapons Station China Lake near Ridgecrest, California. These sites contained fluted and unfluted stemmed points and large numbers of formal flake tools (e.g., shaped scrapers, blades). Other typical Paleoindian sites include the Komodo site (MNO-679)—a multi-component fluted point site, and MNO-680—a single component Great Basined Stemmed point site (see Basgall et al. 2002). At MNO-679 and -680, ground stone tools were rare while finely made projectile points were common.

Warren et al. (2004) claimed that a biface manufacturing tradition present at the Harris site complex (SDI-149) is representative of typical Paleoindian occupation in the region that possibly dates between 10,365 and 8,200 BC (Warren et al. 2004). Termed San Dieguito (see also Rogers 1945), assemblages at the Harris site are qualitatively distinct from most others in region because the site has large numbers of finely made bifaces (including projectile points), formal flake tools, a biface reduction trajectory, and relatively small amounts of processing tools (see also Warren 1968). Despite the unique assemblage composition, the definition of San Dieguito as a separate cultural tradition is hotly debated. Gallegos (1987) suggested that the San Dieguito pattern is simply an inland manifestation of a broader economic pattern. Gallegos's interpretation of San Dieguito has been widely accepted in recent years, in part because of the difficulty in distinguishing San Dieguito components from other assemblage constituents. In other words, it is easier to ignore San Dieguito as a distinct socioeconomic pattern than it is to draw it out of mixed assemblages.

The large number of finished bifaces (i.e., projectile points and non-projectile blades), along with large numbers of formal flake tools at the Harris site complex, is very different than nearly all other assemblages throughout the region, regardless of age. Warren et al. (2004) made this point, tabulating basic assemblage constituents for key early Holocene sites. Producing finely made bifaces and formal flake tools implies that relatively large amounts of time were spent for tool manufacture. Such a strategy contrasts with the expedient flake-based tools and cobble-core reduction strategy that typifies non-San Dieguito Archaic sites. It can be inferred from the uniquely high degree of San Dieguito assemblage formality that the Harris site complex represents a distinct economic strategy from non-San Dieguito assemblages.

San Dieguito sites are rare in the inland valleys, with one possible candidate, RIV-2798/H, located on the shore of Lake Elsinore. Excavations at Locus B at RIV-2798/H produced a toolkit consisting predominately of flaked stone tools, including crescents, points, and bifaces, and lesser amounts of groundstone tools, among other items (Grenda 1997). A calibrated and reservoir-corrected radiocarbon date from a shell produced a date of 6630 BC. Grenda (1997) suggested this site represents seasonal exploitation of lacustrine resources and small game and resembles coastal San Dieguito assemblages and spatial patterning.

If San Dieguito truly represents a distinct socioeconomic strategy from the non-San Dieguito Archaic processing regime, its rarity implies that it was not only short-lived, but that it was not as economically successful as the Archaic strategy. Such a conclusion would fit with other trends in Southern California deserts, where hunting-related tools were replaced by processing tools during the early Holocene (see Basgall and Hall 1990).

Archaic Period (8000 BC – AD 500)

The more than 2,500-year overlap between the presumed age of Paleoindian occupations and the Archaic period highlights the difficulty in defining a cultural chronology in Southern California. If San Dieguito is the only recognized Paleoindian component in the coastal Southern California, then the dominance of hunting tools implies that it derives from Great Basin adaptive strategies and is not necessarily a local adaptation. Warren et al. (2004) admitted as much, citing strong desert connections with San Dieguito. Thus, the Archaic pattern is the earliest local socioeconomic adaptation in the region (see Hale 2001, 2009).

The Archaic pattern, which has also been termed the Millingstone Horizon (among others), is relatively easy to define with assemblages that consist primarily of processing tools, such as millingstones, handstones, battered cobbles, heavy crude scrapers, incipient flake-based tools, and cobble-core reduction. These assemblages occur in all environments across the region with little variability in tool composition. Low assemblage variability over time and space among Archaic sites has been equated with cultural conservatism (see Basgall and Hall 1990; Byrd and Reddy 2002; Warren 1968; Warren et al. 2004). Despite enormous amounts of archaeological work at Archaic sites, little change in assemblage composition occurred until the bow and arrow was adopted around AD 500, as well as ceramics at approximately the same time (Griset 1996; Hale 2009). Even then, assemblage formality remained low. After the bow was adopted, small arrow points appear in large quantities and already low amounts of formal flake tools are replaced by increasing amounts of expedient flake tools. Similarly, shaped millingstones and handstones decreased in proportion relative to expedient, unshaped ground stone tools (Hale 2009). Thus, the terminus of the Archaic period is equally as hard to define as its beginning because basic assemblage constituents and patterns of manufacturing investment remain stable, complemented only by the addition of the bow and ceramics.

Late Prehistoric Period (AD 500-1769)

The period of time following the Archaic and before Ethnohistoric times (AD 1769) is commonly referred to as the Late Prehistoric (Rogers 1945; Wallace 1955; Warren et al. 2004); however, several other subdivisions continue to be used to describe various shifts in assemblage composition. In general, this period is defined by the addition of arrow points and ceramics, as well as the widespread use of bedrock mortars. The fundamental Late Prehistoric assemblage is very similar to the Archaic pattern, but includes arrow points and large quantities of fine debitage from producing arrow points, ceramics, and cremations. The appearance of mortars and pestles is difficult to place in time because most mortars are on bedrock surfaces. Some argue that the Ethnohistoric intensive acorn economy extends as far back as AD 500 (Bean and Shipek 1978). However, there is no substantial evidence that reliance on acorns, and the accompanying use of mortars and pestles, occurred before AD 1400. Millingstones and handstones persisted in higher frequencies than mortars and pestles until the last 500 years (Basgall and Hall 1990); even then, weighing the economic significance of millingstone-handstone versus mortar-pestle technology is tenuous due to incomplete information on archaeological assemblages.

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; Geiger and Meighan 1976; Harrington 1934; Laylander 2000; Sparkman 1908; White 1963). The principal intent of these researchers was to record the precontact, culturally specific practices, ideologies, and languages that had survived the destabilizing effects of missionization and colonialism. This research, often understood as “salvage ethnography,” was driven by the understanding that traditional knowledge was being lost due to the impacts of modernization and cultural assimilation. Alfred Kroeber applied his “memory culture” approach (Lightfoot 2005: 32) by recording languages and oral histories within the region. Ethnographic research by Dubois, Kroeber, Harrington, Spier, and others during the early twentieth century seemed to indicate that traditional cultural practices and beliefs survived among local Native American communities.

It is important to note that even though there were many informants for these early ethnographies who were able to provide information from personal experiences about native life before the Europeans, a significantly large proportion of these informants were born after 1850 (Heizer and Nissen 1973); therefore, the documentation of pre-contact, aboriginal culture was being increasingly supplied by individuals born in California after considerable contact with Europeans. As Robert F. Heizer (1978) stated, this is an important issue to note when examining these ethnographies, since considerable culture change had undoubtedly occurred by 1850 among the Native American survivors of California.

Based on ethnographic information, it is believed that at least 88 different languages were spoken from Baja California Sur to the southern Oregon state border at the time of Spanish contact (Johnson and Lorenz 2006, p. 34). The distribution of recorded Native American languages has been dispersed as a geographic mosaic across California through six primary language families (Golla 2007).

Victor Golla has contended that one can interpret the amount of variability within specific language groups as being associated with the relative "time depth" of the speaking populations (Golla 2007: 80) A large amount of variation within the language of a group represents a greater time depth then a group's language with less internal diversity. One method that he has employed is by drawing comparisons with historically documented changes in Germanic and Romantic language groups. Golla has observed that the "absolute chronology of the internal diversification within a language family" can be correlated with archaeological dates (2007:71). This type of interpretation is modeled on concepts of genetic drift and gene flows that are associated with migration and population isolation in the biological sciences.

The tribes of this area have traditionally spoken Takic languages that may be assigned to the larger Uto–Aztecan family (Golla 2007, p. 74). These groups include the Gabrielino (alternately Gabrieleño), Cahuilla, and Serrano. Golla has interpreted the amount of internal diversity within these language-speaking communities to reflect a time depth of approximately 2,000 years. Other researchers have contended that Takic may have diverged from Uto–Aztecan ca. 2600 BC–AD 1, which was later followed by the diversification within the Takic speaking tribes, occurring approximately 1500 BC–AD 1000 (Laylander 2000).

Gabrielino (Gabrieleño)/Tongva

The archaeological record indicates that Project site and vicinity was occupied by the Gabrieleño, who arrived in the Los Angeles Basin around 500 B.C. Surrounding cultural groups included the Chumash and Tataviam to the northwest, the Serrano and Cahuilla to the northeast, and the Juaneño and Luiseño to the southeast.

The name "Gabrieliño" or "Gabrieleño" denotes those people who were administered by the Spanish from the San Gabriel Mission, which included people from the Gabrieleño area proper as well as other social groups (Bean and Smith 1978; Kroeber 1925). Therefore, in the post-Contact period, the name does not necessarily identify a specific ethnic or tribal group. The names by which Native Americans in southern California identified themselves have, in some cases, been lost. Many modern Gabrieleño identify themselves as the Tongva (King 1994), within which there are a number of regional bands. Though the names "Tongva" or "Gabrieleño" are the most common names used by modern Native American groups, and are recognized by the Native American Heritage Commission, there are groups within the region that self-identify differently, such as the Gabrielino Band of Mission Indians - Kizh Nation. In order to be inclusive of the majority of tribal entities within the region, the name "Tongva" or "Gabrieleño" are used within this report.

Tongva lands encompassed the greater Los Angeles Basin and three Channel Islands, San Clemente, San Nicolas, and Santa Catalina. The Tongva established large, permanent villages in the fertile lowlands along rivers and streams, and in sheltered areas along the coast, stretching from the foothills of the San Gabriel Mountains to the Pacific Ocean. A total tribal population has been estimated of at least 5,000 (Bean and Smith 1978), but recent ethnohistoric work suggests a number approaching 10,000 (O'Neil 2002). Houses constructed by

the Tongva were large, circular, domed structures made of willow poles thatched with tule that could hold up to 50 people (Bean and Smith 1978). Other structures served as sweathouses, menstrual huts, ceremonial enclosures, and probably communal granaries. Cleared fields for races and games, such as lacrosse and pole throwing, were created adjacent to Tongva villages (McCawley 1996). Archaeological sites composed of villages with various sized structures have been identified.

The largest, and best documented, ethnographic Tongva village in the vicinity was that of *Yanga* (also known as Yaangna, Janga, and Yabit), which was in the vicinity of the downtown Los Angeles (McCawley 1996:56-57; NEA and King 2004). This village was reportedly first 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 Gabrieleno 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 Gabrieleno territory.

Father Juan Crespi 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 environment surrounding the Tongva included mountains, foothills, valleys, deserts, riparian, estuarine, and open and rocky coastal eco-niches. Like most native Californians, acorns (the processing of which was established by the early Intermediate Period) were the staple food source. 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).

Tools and implements used by the Tongva to gather and collect food resources included the bow and arrow, traps, nets, blinds, throwing sticks and slings, spears, harpoons, and hooks. Trade between the mainland and the Channel Islands Groups was conducted using plank canoes as well as tule balsa canoes. These canoes were also used for general fishing and travel (McCawley 1996). The collected food resources were processed food with hammerstones and anvils, mortars and pestles, manos and metates, strainers, leaching baskets and bowls, knives, bone saws, and wooden drying racks. Catalina Island steatite was used to make ollas and cooking vessels (Blackburn 1963; Kroeber 1925; McCawley 1996).

The Chinigchinich cult, centered on the last of a series of heroic mythological figures, was the basis of religious life at the time of Spanish contact. The Chinigchinich cult not only provided laws and institutions, but it also taught people how to dance, which was the primary religious act for this society. 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. This cult may be the result of a mixture of native and Christian belief systems and practices (McCawley 1996).

Inhumation of deceased Tongva was the more common method of burial on the Channel Islands while neighboring mainland coast people performed cremation (Harrington 1942; McCawley 1996). Cremation ashes have been found 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). Supporting this finding in the archaeological record, ethnographic descriptions have provided an elaborate mourning ceremony. Offerings varied with the sex and status of the deceased (Johnston 1962; McCawley 1996; Reid 1926). At the behest of the Spanish missionaries, cremation essentially ceased during the post-Contact period (McCawley 1996).

Historic Period Overview

Post-Contact history for the State of California is generally divided into three periods: the Spanish Period (1769–1821), Mexican Period (1821–1848), and American Period (1846–present). Although Spanish, Russian, and British explorers visited the area for brief periods between 1529 and 1769, the Spanish Period in California begins with the establishment in 1769 of a settlement at San Diego and the founding of Mission San Diego de Alcalá, the first of 21 missions constructed between 1769 and 1823. Independence from Spain in 1821 marks the beginning of the Mexican Period, and the signing of the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican–American War, signals the beginning of the American Period when California became a territory of the United States.

Spanish Period

Spanish explorers made sailing expeditions along the coast of southern California between the mid-1500s and mid-1700s. In search of the legendary Northwest Passage, Juan Rodríquez Cabríllo stopped in 1542 at present-day San Diego Bay. With his crew, Cabríllo explored the shorelines of present Catalina Island as well as San Pedro and Santa Monica Bays. Much of the present California and Oregon coastline was mapped and recorded in the next half-century by Spanish naval officer Sebastián Vizcaíno. Vizcaíno's crew also landed on Santa Catalina Island and at San Pedro and Santa Monica Bays, giving each location its long-standing name. The Spanish crown laid claim to California based on the surveys conducted by Cabríllo and Vizcaíno (Bancroft 1885; Gumprecht 1999).

More than 200 years passed before Spain began the colonization and inland exploration of Alta California. The 1769 overland expedition by Captain Gaspar de Portolá marks the beginning of California's Historic period, occurring just after the King of Spain installed the Franciscan Order to direct religious and colonization matters in assigned territories of the Americas. With a band of 64 soldiers, missionaries, Baja (lower) California Native

Americans, and Mexican civilians, Portolá established the Presidio of San Diego, a fortified military outpost, as the first Spanish settlement in Alta California. In July of 1769, while Portolá was exploring southern California, Franciscan Fr. Junípero Serra founded Mission San Diego de Alcalá at Presidio Hill, the first of the 21 missions that would be established in Alta California by the Spanish and the Franciscan Order between 1769 and 1823.

The Portolá expedition first reached the present-day boundaries of Los Angeles in August 1769, thereby becoming the first Europeans to visit the area. Father Crespi named "the campsite by the river Nuestra Señora la Reina de los Angeles de la Porciúncula" or "Our Lady the Queen of the Angels of the Porciúncula." Two years later, Friar Junípero Serra returned to the valley to establish a Catholic mission, the Mission San Gabriel Arcángel, on September 8, 1771 (Kyle 2002). In 1795 Fr. Fermin Lasuen ordered a new report on possible mission sites, and the Francisco Reyes Rancho was ultimately chosen as the new mission site, with Mission San Fernando Rey de España being formally founded in 1797 (Perkins 1957). Shortly thereafter, many of the local Gabrielino and Tataviam people were removed from their homeland, relocated to the mission, and their native lifeways taken away.

Mexican Period

A major emphasis during the Spanish Period in California was the construction of missions and associated presidios to integrate the Native American population into Christianity and communal enterprise. Incentives were also provided to bring settlers to pueblos or towns, but just three pueblos were established during the Spanish Period, only two of which were successful and remain as California cities (San José and Los Angeles). Several factors kept growth within Alta California to a minimum, including the threat of foreign invasion, political dissatisfaction, and unrest among the indigenous population. After more than a decade of intermittent rebellion and warfare, New Spain (Mexico and the California territory) won independence from Spain in 1821. In 1822, the Mexican legislative body in California ended isolationist policies designed to protect the Spanish monopoly on trade, and decreed California ports open to foreign merchants (Dallas 1955).

Extensive land grants were established in the interior during the Mexican Period, in part to increase the population inland from the more settled coastal areas where the Spanish had first concentrated their colonization efforts.

During the supremacy of the ranchos (1834–1848), landowners largely focused on the cattle industry and devoted large tracts to grazing. Cattle hides became a primary southern California export, providing a commodity to trade for goods from the east and other areas in the United States and Mexico. The number of nonnative inhabitants increased during this period because of the influx of explorers, trappers, and ranchers associated with the land grants. The rising California population contributed to the introduction and rise of diseases foreign to the Native American population, who had no associated immunities.

American Period

War in 1846 between Mexico and the United States precipitated the Battle of Chino, a clash between resident Californios and Americans in the San Bernardino area. The Mexican-American War ended with the Treaty of Guadalupe Hidalgo in 1848, ushering California into its American Period.

California officially became a state with the Compromise of 1850, which also designated Utah and New Mexico (with present-day Arizona) as U.S. Territories (Waugh 2003). Horticulture and livestock, based primarily on cattle as the currency and staple of the rancho system, continued to dominate the southern California economy through 1850s. The Gold Rush began in 1848, and with the influx of people seeking gold, cattle were no longer desired mainly for their hides but also as a source of meat and other goods. During the 1850s cattle boom, rancho vaqueros

drove large herds from southern to northern California to feed that region's burgeoning mining and commercial boom. Cattle were at first driven along major trails or roads such as the Gila Trail or Southern Overland Trail, then were transported by trains when available. The cattle boom ended for southern California as neighbor states and territories drove herds to northern California at reduced prices. Operation of the huge ranchos became increasingly difficult, and droughts severely reduced their productivity (Cleland 2005).

Historical Overview of the City of Commerce

Throughout the early history of Commerce, its economy was focused around the farming industry, with valuable Rancho lands being leased to farmers for agricultural use. The Anaheim Telegraph Road (now Telegraph Road) located between Los Angeles and Anaheim and Whittier Road (now Whittier Boulevard) became the two most important thoroughfares in the region. On April 15, 1874, Southern Pacific Railroad opened a line connecting Los Angles and Downey, originally it passed by Commerce with a station located at Vinvale. On August 12, 1888, a new rail line opened between Los Angeles and San Diego by the Atchison, Topeka, and Santa Fe. That line included Commerce's first stop located at Telegraph Road in 1900. Originally, the stop was nothing more than an 8-by-10-foot shed, but by 1912 an "umbrella passenger shed" was constructed by the Santa Fe Railroad. The railroad industry continued to grow in Commerce with an increase of lines and companies. The City's population continued to rise as new agricultural communities replaced the cattle-raising Spanish ranchos from the decades prior. In 1900, the population in the City of Los Angeles and the county had risen to 102,479 and 170,298 from 5,614 and 15,309 just 30 years prior (Elliott 1991).

With the growth of the railroad in Commerce, it brought to the City more industrial work as well. One of the first industrial manufacturing plants to be established was a brickyard, the Simons Co. Plant No. 3, which opened in 1905. The brickyard was bounded on one side by the Santa Fe rail line, allowing for easy transportation of the brick once it was manufactured. At the start of World War I in 1914, Commerce began the period as a region of rural truck farms and a few railroad lines. By the end of the war, the City had evolved into a rail and transportation hub and a center for heavy industry close to Los Angeles. Along with the Atchison, Topeka, and Santa Fe rail line, the Los Angeles and Salt Lake Railroad (later the Union Pacific) and Pacific Electric Railway's Whittier Line both ran through what would eventually become the City's downtown area. Industry continued to grow with the railroad with the opening of the Samson Tire and Rubber Co, in 1917, the Goodyear Tire and Rubber Co. plant in 1919, and the Samson Tire and Rubber Co.'s Assyrian-style plant in 1929. During the 1910s and 1920s, the fuel oil in the Los Angeles area was thought to be the cheapest on the west coast along with providing the cheapest electric power, the only adequate supply of fresh water, and laws providing for cheap labor (Elliott 1991).

Nationally tire production continued to increase with the rise of the automotive industry. This was especially true in Los Angeles, despite Akron Ohio being the national center for the rubber business the Commerce area was a strong contender. In January 1929, Adolph Schleicher, founder of the Samson Tire & Rubber Company, broke ground on an $8 million rubber manufacturing plant. The land was within Union Pacific's 900-acre industrial tract purchased in 1922 in the Commerce area. The exterior of the building was designed to be modeled after Sargon II, king of Assyria's royal palace from 722-705 B.C. and boasted a momentous ground breaking event. Almost immediately after the construction of the Samson plant, the Great Depression hit the United States and the need for tire became slightly more than half the 1928 peak in 1932. Despite the economic downturn development continued with the construction of the Chrysler Corp. automotive manufacturing plant in 1932. Rosewood Park had been divided into lots in 1929, but little was built during this time (Elliott 1991).

Despite hosting multiple large-scale industrial plants, Commerce remained agricultural until the late 1930s. At the start of World War II Commerce remained a center of manufacturing with the rubber factories and car manufacturers gearing up to produce war items. By 1943, 10.6 percent of all government supplies and factory contracts had been awarded in

California. On July 24, 1943 the Pacific Tube Co. plant, which was constructed in the Commerce area through an 80-day effort, sent its first shipment of seamless steel tubes to the war effort. Throughout the 1940s and especially after the end of World War II, the greater Los Angeles area underwent rapid suburbanization. New freeways provided improved access to the Commerce area and encouraged the development of many warehouses and distribution centers. Along with this new access came a residential development boom, with more than 50 percent of the nearly 3,000 swelling units in Commerce being constructed pre-1950, the largest amount from the 1940s. Suburban housing tracts and commercial centers soon replaced the rural farming land and as a result, the newly formed residential communities of Rosewood Park and Bandini formed neighborhood organizations to protect their interests (Elliott 1991).

In 1950 a group of cooperate leaders proposed to incorporate the City of Commerce in order to prevent neighboring cities from annexing industrial land for tax revenue. On January 12, 1960, voters approved the incorporation of the City and elected Council members and their first mayor, Mayor Quigley, soon after. Throughout the 1960s, residential development continued and the City gained community services such as libraries, parks, a police force, fire department, a larger post office, recreational facilities, an aquatics center, and more schools. In the 1970s and 1980s, Commerce was able to successfully rezone their industrial areas into lucrative commercial uses. The most notable example was the reuse of the former Samson Tire & Rubber plant into the Citadel outlet mall. The City continues to utilize their established railroad network, benefiting greatly from the expansion in international trade through the ports of Long Beach and Los Angeles and remains a viable commercial area in Los Angeles County (Elliott 1991).

Development History of Veterans Memorial Park

Prior to the development of Veterans Memorial Park, the Zindell Avenue and Gage Avenue area of the City had been used as agricultural land bordering the Rio Hondo watershed, beginning as early as the 1920s. The area began to industrialize in the 1940s, due to the installation of the Southern Pacific Transportation Company Railroad Line, just south of Slauson Avenue, which prompted the accretion of a dense industrial area along the railroad right-of-way. Beginning in the 1940s the properties around the future park site were being developed into large-scale warehouses, however, the future park site was being used as a dumping grounds on the banks of the Rio Hondo (LAT 1965b; NETR 2019; UCSB 2019).

After incorporation in January 1960, the City's proposed "model city" program was put into action, and included construction plans for new parks, schools, libraries, and a free city bus system. Some of the first City departments to be established included a Parks and Recreation Commission. In 1961, the commission adopted an $869,000 budget and set to work establishing city parks. The first city park, called "Rosewood Park," was established as a City of Commerce park at Commerce Way and Jillson Street in 1961. A small park had served the unincorporated community at this location prior to this, but did not have equipment, recreation buildings, programming, or staff. In 1961, architects Hunter & Benedict, AIA, designed the Aquatorium facility at Rosewood Park.. The City opened East Los Angeles Park (now Bristow Park) in 1961 and accompanying library in 1966, then acquired Camp Commerce, a 4-acre camp in the Angeles National Forest and land for Bandini Park in 1962 (Elliott 1991; LAT 1961, 1962, 1971c).

The last park of the group to be developed was Veterans Memorial Park. In late 1961, the City budget included the purchase of the dump site on Zindell Avenue in the southeast portion of the city. Clearing and grading the 5-acre site began in 1962 and an additional five acres was added when the City purchased more land from Pacific Electric Railway/ Southern Pacific. Architects were announced as Anthony & Langford of Los Angeles, who also worked on other Commerce-area civic projects such as the Rosewood Park Activities Building addition and the interior of City Hall. The proposed park was originally going to be named "Southeast Commerce Park," but renamed Quigley Park, for then-mayor Maurice Quigley in 1964. With all 10 acres purchased and ready for development, in 1965 the City began contracting for storm drain work, grubbing, and grading at the future park site. Grading began in 1965, and construction began in 1967 (Figure 1) (Elliott 1991; LAT 1962, 1963a, 1963b, 1963c, 1963d, 1964, 1965b).

Figure 1. Under construction, circa 1965-1968, (City of Commerce Local History Digital Resources Collection)

Most of the park was completed and open by 1969, including the baseball stadium. The baseball stadium was used for high school and adult local baseball leagues. The stadium featured night lighting, underground dugouts, showers, locker rooms, and a 100-foot-tall scoreboard, visible from the nearby freeway. The final building to be completed was the gymnasium, which opened in 1971 (Figure 2). Immediately after the gymnasium opened, the park had an official dedication ceremony. In all, the park cost nearly $2 million to complete (Elliott 1991; LAT 1965a, 1965b, 1971a, 1971b; City of Commerce Permits).

Figure 2. Recreation Building, opened 1971, (City of Commerce Local History Digital Resources Collection)

In 1974, the City changed the name of Quigley Park after former mayor Maurice Quigley resigned from city council and plead guilty to bribery charges. Though the idea of a name change floated for a couple years, after the park sign burned down in 1976, the city finally took action and officially renamed the park Veterans Memorial Park to honor Vietnam War veterans. Between 1982 and 1983, playground equipment was added to the park, and in the mid-2000s, the outdoor tennis courts were converted to basketball courts. Highlights in the park's history include hosting several international teams at the baseball stadium. Around 2017, the Recreation Building was cordoned off and park services moved to two temporary office trailers due to structural concerns with the building (LAT 1974, 1976, 1986).

Architectural Styles

Several recognizable architectural styles were identified at Veterans Memorial Park. The Recreation Building in particular, while visually striking, seems to be a combination of Brutalism with several New Formalism character-defining features. The baseball stadium complex, on the other hand, trends more to the broader Mid Century Modernism-style architecture. All styles and character defining features are described below.

Brutalism (1955-1975)

Brutalism, coined in the mid-1950s, involved the use of *béton brut* (French for raw concrete). This style typically refers to monumental concrete forms and bulky massed buildings. Brutalism favors the exposure of building materials, in particular rough concrete and structural supports. The Brutalist architectural style is characterized by its use of raw building materials in a very direct and imposing way, emphasizing bulky forms and sharp angles with limited visible glass surfaces Windows in general are usually deeply recessed and comparatively small in relation to the building scale. Brutalism became a popular style of architecture for educational buildings, particularly university buildings, but was relatively rare for corporate and single-family residential projects. It was also favored for civic projects, high-rise apartments, and shopping centers, as the style emulated strength, functionality, and an appreciation for material simplicity

Key character-defining features of Brutalism include the following (Fung 2011; Docomomo 2019a; Lowder 2013; McAlester 2015; Mindel 2016):

- Heavily textured exposed aggregate concrete.
- Board forms easily visible
- Not used in intimate scale
- Deeply recessed windows
- Geometric forms created in an asymmetric composition
- Poured concrete often rounded forms utilized
- Often together with public plaza

New Formalism (1950s-1975)

New Formalism, also called "neo-Palladianism," architectural style was developed in the mid-1950s in response to the sterility and lack of classical reference in International Style architecture. New Formalist buildings tend to embrace Classical architectural precedents, such as building proportion, monumental scale, highly stylized classical columns and entablatures, and the use of a colonnade as a compositional device. However, as twentieth century architecture, the style also relies heavily on modern materials such as glass curtain walls, steel framing and

concrete to create umbrella shells, waffle slabs and folded plates. The style is most often used for institutional or civic buildings, and uses a variety of materials to reference Classicism and express monumentality.

Character defining features include (Docomomo 2019b; Fung 2011):

- Some reference to Classicism, such as use of evenly spaced columns, arches, and highly stylized classical columns and entablatures
- Level rooflines, with building often being defined at the top by a heavy, projecting roof slab
- Symmetrical elevations
- Monumental scale
- Formal landscape; often use of pools, fountains, sculpture within a central plaza
- Use of traditionally rich materials, such as travertine, marble, and granite or man-made materials that mimic their luxurious qualities

Mid-Century Modern (1933-1965)

Mid-century Modern style is reflective of International and Bauhaus styles popular in Europe in the early 20th century. This style and its living designers (e.g., Mies Van der Rohe and Gropius) were disrupted by WWII and moved to the United States. During WWII, the United States established itself as a burgeoning manufacturing and industrial leader, with incredible demand for modern buildings to reflect modern products in the mid-20th century. As a result, many industrial buildings are often "decorated boxes"—plain buildings with applied ornament to suit the era and appear more modern without detracting from the importance of the activity inside the building. Following WWII, the United States had a focus on forward thinking, which sparked architectural movements like Mid-Century Modern. Practitioners of the style were focused on the most cutting-edge materials and techniques. Architects throughout Southern California implemented the design aesthetics made famous by early Modernists like Richard Neutra and Frank Lloyd Wright, who created a variety of modern architectural forms. Like other buildings of this era, Mid-century Modern buildings had to be quickly assembled, and use modern materials that could be mass-produced. Both residences and offices designed in this style expressed its structure and materials, displayed large expanses of glass, and had an open interior plan.

Character defining features include (McAlester 2015; Morgan 2004):

- One- to two-stories in height
- Low, boxy, horizontal proportions
- Simple geometric forms with a lack of exterior decoration
- Commonly asymmetrical
- Flat roofed without coping at roof line; flat roofs hidden behind parapets or cantilevered canopies
- Expressed post-and-beam construction in wood or steel
- Exterior walls are flat with smooth sheathing and typically display whites, buffs, and pale pastel colors
- Mass-produced materials
- Simple windows (metal or wood) flush-mounted and clerestory
- Industrially plain doors
- Large window groupings

Architects

Anthony and Langford Architects (1950-c. 1997)

Tolbert Virgil Anthony II, who also went by Tony Anthony, was born on November 2, 1922 in Texas. Anthony earned his architectural degree from USC after attending the University of Kansas. In 1950, Anthony co-founded the firm Anthony and Langford Architects originally based out of Whittier, California with V. Wallace Langford and E. Roger Wilner. Vern Wallace Langford was born on March 29, 1921 in Sioux City, Iowa. Archival information was not available on the early lives of Langford and Wilner. The firm Anthony and Langford Architects designed city halls, libraries, community centers, schools, and fire stations for the cities of Los Angeles, Whittier, Huntington Beach, Seal Beach, Norwalk, El Monte, Santa Fe Springs, Garden Grove, Compton, Lakewood, Glendora, Westminster, City of Commerce, and City of Industry. The firm was also responsible for designing office complexes for such corporations as Purex, Hughes Aircraft, Rockwell International, and Western Gear. The firm was based out of Whittier for 20 years before moving to Huntington Beach in 1969. Anthony won several awards including the Los Angeles Beautiful Award in 1958 for St. Francis of Rome Archdiocese in Azusa and a Huntington Beach Beautiful Award for the Golden View Elementary School in 1971. The firm continued to win awards throughout its existence including AIA awards for the Purex Building in Lakewood in 1961, White Oak School in La Virgenes School District in 1969, McCallum Theater in 1985, the La Mirada Civic Theater, and the Norris Community Theater in Rolling Hills Estates. The exact date of the Anthony and Langford Architects firm's closure is unknown but by 1988, Anthony is documented to be working on projects alone such as Los Angeles Fire Station No. 29 on Wilshire Boulevard. Despite the archival research suggesting Anthony working on his own, the firm name continues to be associated with projects throughout the early 1990s. Anthony died on November 27, 1997 at his home in Oakland at the age of 75 (USFC 1930; AIA 1967; LAT 1988; Oliver 1997; Find A Grave 2019).

The following is a partial list of known works for Anthony and Langford:

- Gallatin District Elementary School, Downey, 1954
- The Good Shepard Lutheran Church, Downey, 1956
- City of Downey Recreational Facility, Downey, 1957
- St. Frances of Rome Parish, Azusa, 1958
- Downey Municipal Library, Downey, 1958
- General Mills Headquarters, Anaheim, 1959
- Monterey Park Library, Monterey Park, 1959
- City of El Monte, City Hall, El Monte, 1960
- Board of Education building, La Habra school district, 1960
- City of Montclair Civic Center and recreational facilities, Montclair, 1960
- Purex Corp. International Headquarters, Lakewood Center, California, 1961
- Sante Fe Springs Civic Center Library, Santa Fe Springs, 1961
- Montclair Library, Montclair, 1963
- Glendora Fire Station No. 2, Glendora, 1963
- Expansion of the Rosewood Park Activities Building, Commerce, 1963
- City of Commerce Corporation Yard, 1965
- La Mirada City Hall, La Mirada, 1965

- Glendora Civic Center, Glendora, 1965
- Reservoir-Darby Park fire station and community center, Inglewood, 1969
- Fire Station 30, Cerritos, 1970
- City of La Mirada Civic Theatre, 1970
- City of Montclair, Maintenance Yard, 1970
- Thousand Pines, American Baptist Camp and Conference Center, Crestline, 1970
- Continental Park master plan, El Segundo, 1971
- Las Virgenes Unified School District Business Maintenance and Warehouse Facility, 1971
- Bellflower Civic Center, Bellflower, 1971
- Fairlawn and Miller Schools, Santa Maria, 1972
- Castle Rock Park, Diamond Bar, 1974
- Pico Rivera Senior Citizens Center, Pico Rivera, 1976
- Community Meeting Center and H. Louis Lake Senior Citizens Center, Garden Grove, 1976
- City of Brea, Maintenance Center, 1977
- Continental Park office and industrial complex, El Segundo, 1978
- City of Tustin, Corporation Yard, 1978
- City of El Segundo, Maintenance Yard, 1982
- Hughes Aircraft Co.'s Ground Systems Group Sunny Hills Expansion, Fullerton, 1985
- City of Santa Ana, Maintenance Center/Corporation Yard, 1987
- El Toro Water District Maintenance Center/Corporation Yard, 1987
- City of Fullerton, Basque Maintenance Yard, 1988
- The McCallum Theatre, College of the Desert, Palm Desert, 1988

Historical Aerial Review of Project Site

Historic aerial photographs of the Project site were available from Nationwide Environmental Title Research (NETR) LLC maps for the years 1952, 1953, 1963, 1972, 1994, 2003, 2004, 2005, 2009, 2010, 2012, 2014, and 2016. Additional historic aerial photographs of the subject property were available from University of California Santa Barbara (UCSB) Map and Imagery Laboratory's FrameFinder application for the years 1928, 1938, 1947, 1949, 1952, 1956, 1960, 1968, 1970, 1976, 1977, 1981, 1982, 1983, 1988, and 1994. The earliest available photograph of the subject properties from 1928 depict the area as small farming tracts, aligned along the Rio Hondo watershed, which had not yet been channeled. The area remains mainly agricultural fields on the banks of the Rio Hondo until the 1947 aerials when the Southern Pacific Transportation Co Rail Line appears south of Slauson Avenue, and single-family residential subdivisions appear along Zindell Avenue, Kuhl Drive, Greenwood Avenue, Gage Avenue, and Watcher Street appear. Between 1947 and 1952 aerials images, the surrounding neighborhoods become more densely populated with single family residential subdivisions, and further west along Slauson Avenue, multiple large, industrial properties emerge in 1952, a drive in theater appears for the first time along Gage Avenue. Interstate 5 (I-5) also appears east of the future park site for the first time in the 1952 aerial photograph, as well as the concrete Rio Hondo flood control channel, which realigns the watershed, allowing more dense development along its edges. Between the 1952 and 1956 aerial photographs, a large industrial property, the Langendorf Bread Company, appears beside the Project area, bound by Gage Avenue, Zindell Avenue, Slauson Avenue, and the empty parcel beside the Rio Hondo Channel (NETR 2019; UCSB 2019).

Between 1956 and 1960, a property appears on the 7316 Gage Avenue parcel. This property appears as a single, square-plan warehouse-type building, with a parking lot on the northeast side of the building, outletting via a long driveway/alley from Zindell Avenue. Also, west of the future Veterans Memorial Park Site, another industrial building and yard appears at the end of Greenwood Avenue, also along the edge of the Rio Hondo Channel area. The Veterans Memorial Park property, immediately west, appears to be a partially prepared surface at this point in time, cleared of vegetation and debris. In 1963, some grading and paving appears at the park site, but no buildings or structures (NETR 2019; UCSB 2019).

In the next available photograph from 1968, Zindell Avenue appears to have been widened, the entry driveway circle and parking lot have been prepared and paved and the foundation of the baseball field complex and concession stand/restroom building appear to have been laid out. By 1970, all of the main buildings and structures of the park appear to have been completed: the three picnic shelters, the recreation building, the concession stand/restroom, the splash pad, the garbage/utility yard, and the baseball field complex including the bleachers, shade structure, surrounding fence, diamond, field and scoreboard. The sports fields immediately southeast of the recreation building appear unfinished and still under construction. All construction appears to have been completed by the next available photograph from 1972 (NETR 2019; UCSB 2019).

There are few changes to the subject properties after 1972. Between 1982 and 1983, the swing and playground apparatuses were added to a paved around immediately east of the Recreation Building. Between 1983 and 1988, an industrial property northeast of the Langendorf Bread Company building and north of the 7316 Gage Avenue property appears to have been demolished and replaced with a hotel (now a Best Western property). Between 1988 and 1994, both the industrial property along Greenwood Avenue, and the subject property at 7316 Gage Avenue appear to have been demolished, and left as vacant lots. Between 1994 and 2003 the vacant lot along Greenwood Avenue has been converted to single and multi-family residential subdivisions. The lot northeast of Veterans Memorial Park, however, remains undeveloped. Between 2004 and 2005 the tennis courts beside the Recreation Building appear to have been converted to basketball courts. Between 2005 and 2009, shade structures appear over the swing and playground apparatus. Between 2016 and 2017 the Recreation Building appears to have been gated off and temporary trailer are set up in the entry circle drive (NETR 2019; UCSB 2019).

CHRIS Records Search

On November 14, 2019, Dudek completed a CHRIS records search of the Project site and a 0.5-mile search radius at the South Central Coastal Information Center (SCCIC), located on the campus of California State University, Fullerton. This search included mapped prehistoric, historical, and built-environment resources; Department of Parks and Recreation (DPR) site records; technical reports; archival resources; and ethnographic references. The confidential records search results are on file with the City.

Previously Conducted Cultural Resources Studies

Results of the cultural resources records search indicated that 11 previous cultural resource studies have been conducted within 0.5-mile of the Project site between 1976 and 2013. Of these, one study overlaps the Project site (LA-03102). Table 1, below, summarizes all 11 previous cultural resources studies followed by a brief summary of the study within the Project site boundary.

Table 1. Previously Conducted Cultural Resources Studies within 0.5-Mile of the Project Site

SCCIC Report Number	Authors	Year	Title	Proximity to Project Site
LA-00358	Stickel, Gary E	1976	An Archaeological and Paleontological Resource Survey of the Los Angeles River, Rio Hondo River and the Whittier Narrows Flood Control Basin, Los Angeles, California	Outside
LA-02748	White, Laura S	1992	An Archaeological Assessment of a 4.7-acre Parcel Located at 6370 Greenwood Avenue in the City of Bell Gardens, Los Angeles County	Outside
LA-02882	McKenna, Jeanette	1993	Cultural Resources Investigations, Site Inventory, and Evaluations, the Cajon Pipeline Project Corridor, Los Angeles and San Bernadino Counties, California	Outside
LA-02970	Chamberlaine, Pat and Jean Rivers-Council	1992	Cajon Pipeline Project Draft Environmental Impact Statement Environmental Impact Report	Outside
LA-03102	McCawley, William, John Romani, and Dana Slawson	1994	The Los Angeles County Drainage Area Subsequent Environmental Impact Report	Within
LA-06961	Duke, Curt and Judith Marvin	2002	Cultural Resource Assessment AT&T Wireless Services Facility No. D493C Los Angeles County, California	Outside
LA-04082	Romani, John F	1982	Archaeological Survey Report for the I-5 Transitway	Outside
LA-04209	Allen, Kathleen C	1998	Cultural Resource Assessment for the Esteban E. Torres Rio Hondo Recycled Water Project, Los Angeles County, California	Outside
LA-05765	Caltrans District 7	1977	Historic Property Survey 07-la-5 Santa Ana Freeway (southbound) Pm 8.3/11.6 Lakewood Boulevard to Washington Boulevard	Outside
LA-09934	Bonner, Wayne H	2008	Cultural Resources Records Search and Site Visit Results for T-Mobile Candidate LA33314A (Queen Pole Tweedy Ln./Brookpark), Intersection of Brookpark Road and Tweedy Lane, Downey, Los Angeles County, California	Outside
LA-10562	Webb, Lois M. and Gene Huey	1978	Historic Property Survey of Santa Ana Freeway from Route 605 to Washington Blvd. northbound & from Washington Blvd. to Garfield Southbound	Outside
LA-12305	Bonner, Wayne and Crawford, Kathleen	2013	Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate LA02041A (LA041 City of Commerce 3) 7400 East Slauson Avenue, Commerce, California	Outside

LA-03102

In 1994, McCauley et.al. published an Environmental Impact Report in support of the Los Angeles County Drainage Area Improvement Project. The project alignment ran parallel to the Rio Hondo Channel and extended outwards at Zindell Avenue, intersecting the southeast boundary of the proposed Project site. On cultural resources, McCauley et.al. noted a likelihood of subsurface deposits along the western bank of the Rio Hondo, especially south of Telegraph Road as related to reports identifying the general vicinity as the possible location of Rancheria Chokiishnga, a historic-period Gabrieleno settlement. The exact location of this reported site is unknown. Similarly, McCauley et.al. identifies the western bank of the Rio Hondo as the possible location of La Jaboneria, a long-lost soap factory established by historical figure, Lemuel Carpenter. Despite the historical reports, no record searches conducted in support of LA-03102 identified prehistoric or historic resources within the current proposed Project site.

Previously Recorded Cultural Resources

The CHRIS records search indicates that four cultural resources have been previously recorded within 0.5-mile of the Project site, none of which intersect or are adjacent to the Project site. All of the previously recorded cultural resources within the records search area consist of built environment resources.

Table 2. Previously Recorded Cultural Resources Within a 0.5-Mile Radius of the Project Site

Primary (P-19-)	Trinomial (CA-LAN-)	Resource Age and Type	Resource Description	NRHP Eligibility	Recording Events	Proximity to Project Site
176918	—	Historic: Single-family property	Casa de Rancho San Antonio	OHP Property Number - 027594; CHL - CHL 984	1989 (S. Elder)	Outside
188773	—	Historic: Bridge	Pacific Electric Railroad Rio Hondo Bridge; Southern Pacific Rio Hondo Bridge (North)	7R Identified in Reconnaissance Level Survey: Not evaluated	1994 (Dana Slawson, Greenwood & Associates)	Outside
188983	—	Historic: Public Utility Structure; Engineering Structure	LA Dept of Water & Power Boudler Lines North & South; LADWP Boulder Lines 1 & 2; Boulder Dam-Los Angeles 287.5 kV Transmission Line	2B: Determined eligible for NR as an individual property and as a contributor to an eligible district in a federal regulatory process. Listed in the CR	1999 (Stephen Van Wormer, KEA); 2008 (Noah M. Stewart, (Caltrans District 7); 2018 (Jessica B. Feldman, ICF)	Outside
190301	—	Historic: Commercial Building	Gehr Industries; T-Mobile West LLC	6Z: Found ineligible for NR, CR or Local designation through survey evaluation	2013 (K.A. Crawford, Michael Brandman Associates)	Outside

Native American Coordination

NAHC Sacred Lands File Search

Dudek contacted the NAHC on November 12, 2019, and requested a review of the SLF. The NAHC replied via email on November 26, 2019, stating that the results of the SLF search were negative. The NAHC also suggested contacting an five Native American individuals and/or tribal organizations who may have direct knowledge of cultural resources in or near the Project site. No informal tribal consultation was initiated by Dudek for the proposed Project. This coordination was conducted for informational purposes only and does not constitute formal government-to-government consultation as specified by Assembly Bill (AB) 52 and Senate Bill (SB) 18. AB 52 and SB 18 consultation efforts conducted by the City of Commerce are discussed in the following paragraphs. Documentation of Dudek's coordination with the NAHC is provided in Appendix D.

Assembly Bill 52 Consultation

The Project is subject to compliance with AB 52 (PRC 21074), which requires consideration of impacts to TCRs as part of the CEQA process, and that the lead agency notify California Native American Tribal representatives (that have requested notification) who are traditionally or culturally affiliated with the geographic area of the proposed Project. All NAHC-listed California Native American Tribal representatives that have requested Project notification pursuant to AB 52 were sent letters by the City on October 16, 2019. The letters contained a Project description, outline of AB 52 timing, request for consultation, and contact information for the appropriate lead agency representative. Documents related to AB 52 consultation are on file with the City of Commerce.

Senate Bill 18 Consultation

According to SB 18, the City has a responsibility to initiate consultation with tribes/groups listed on the California NAHC's official SB 18 contact list for amendment of a General Plan. SB 18 requires the City to send a letter to each contact on the NAHC's SB 18 list, extending an invitation for consultation. Tribes will have 90 days from receipt of the letter to request consultation. The City must also send a notice to all contacts 45 days prior to adopting the amended General Plan, as well as a third notice 10 days prior to any public hearing regarding the General Plan amendment. The City sent notification of the proposed Project to all California Native American tribal representatives that have requested Project notifications pursuant to SB 18 and that are on file with the NAHC as being traditionally or culturally affiliated with the geographic area on October 16, 2019. These notification letters included a Project description and inquired if the tribe would like to consult on the proposed Project. Documents related to SB 18 consultation are on file with the City of Commerce

Identified Resources within the Project Site

Dudek identified one built environment resource over 45 years old requiring recordation and evaluation for historical significance: the Veterans Memorial Park located at 6364 Zindell Avenue (Table 3). The locations and spatial relationships of all buildings and structures at Veterans Memorial Park are documented in Figure 3 of Appendix D and correspond to the names and building numbers identified in Table 3. State of California Department of Parks and Recreation Series 523 (DPR) forms for the Park are located in Appendix D.

Table 3. Identified Features of the Veterans Memorial Park (6364 Zindell Avenue)

Building Number, Building Name	Engineer/ Architect/ Contractor; Year Constructed	Description	Alterations
Buildings and Structures Over 45 Years Old			
1. Picnic Shelter Structure 1 	Architects: Anthony & Langford; Contractors: Bill Morris Builders; 1968	The west-most of 3 shelters. It is a circular plan, open air structure, with an exaggerated witch's hat roof clad with composition shingles with a circular vent and metal cap in the peak. The roof is supported by concrete pylons and framed with Glu-Lam support beams under a wood board subroof. In the center of the shelter is a large, squared concrete cooking platform, capped with ceramic tiles.	No date: sinks removed from cooking platform
2. Picnic Shelter Structure 2 	Architects: Anthony & Langford; Contractors: Bill Morris Builders; 1968	Located between Shelter 1 and 3, it is a circular plan, open air structure, with an exaggerated witch's hat roof clad with composition shingles with a circular vent and metal cap in the peak. The roof is supported by concrete pylons and framed with Glu-Lam support beams under a wood board subroof. In the center of the shelter is a large, squared concrete cooking platform, capped with ceramic tiles.	No date: sinks removed from cooking platform
3. Picnic Shelter Structure 3 	Architects: Anthony & Langford; Contractors: Bill Morris Builders; 1968	The east-most of 3 shelters, it is a circular plan, open air structure, with an exaggerated witch's hat roof clad with composition shingles with a circular vent and metal cap in the peak. The roof is supported by concrete pylons and framed with Glu-Lam support beams under a wood board subroof. In the center of the shelter is a large, squared concrete cooking platform, capped with ceramic tiles.	No date: sinks removed from cooking platform

Table 3. Identified Features of the Veterans Memorial Park (6364 Zindell Avenue)

Building Number, Building Name	Engineer/ Architect/ Contractor; Year Constructed	Description	Alterations
4. Recreation Building  	Architects: Anthony & Langford; Contractors: W.E. Lyons Co.; 1971	The Recreation Building is a 37,000 sf 2-story building, designed with influences from both Brutalist and New Formalist styles of architecture. The building is constructed of pebble-dashed cast concrete, with modular, angled slabs and massive, squared concrete columns and pilasters holding up the widely overhanging flat roof with a sloping witches-hat detail parapet. Fenestration is off center along the main elevation and consists of a large black tinted plate glass window, recessed into the wall plane, with entry doors at the top of 6 concrete stairs. Other fenestration on the remaining elevations consist of partially subterranean metal fire doors. The northwest and southwest elevations were not visible during survey, but there were some fixed, dark-tinted plate glass window ribbons on the northwest elevation.	1975: (interior) Restoration of handball courts (Permit 225 75 APR 11 45B) 1979: Glued Laminate (Glu-Lam) beam repair (Permit 2495A) 1996: ADA improvements (Architect MIG Inc, Berkeley, CA) (Permit C-9600343) 1996: (interior) elevator platform and remodel (Permit C-9600328) 2017: Building abandoned and park services moved to temporary trailer offices.

Table 3. Identified Features of the Veterans Memorial Park (6364 Zindell Avenue)

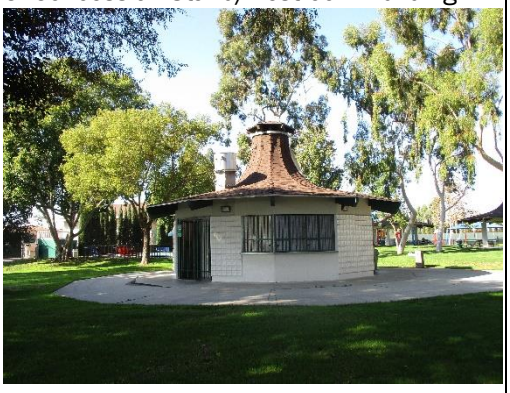
Building Number, Building Name	Engineer/ Architect/ Contractor; Year Constructed	Description	Alterations
5. Concession Stand/Restroom Building  	Architects: Anthony & Langford; Contractors: Bill Morris Builders; 1968	Located southeast of the picnic shelters and west of the baseball complex. It is a dodecagonal (12-sided) plan, 1-story building, with an exaggerated witch's hat roof clad with composition shingles, and capped with a vent. Glu-Lam structural beams project from under the roofline, like exposed rafter tails. The walls are constructed of and partially clad with smooth concrete, partially clad with beveled concrete tiles. Fenestration consists of entrances for two restrooms, the concession stand entrance, and the concessions stand window, all of which are enclosed by metal security bar gates. A large steel ventilation, HVAC unit is also on the roof of the building.	1972: Neon "Snack Bar" sign added, fabricated by Cox Neon Corp, Montebello (Permit C-9400304) No Date: snack bar sign removed.
6. Garbage/Utility Yard 	Architects: Anthony & Langford; Contractors: none noted; 1970	A one-story, 898 sf, nearly flat-roofed building and walled enclosure at the far northeast corner of the park. Both the building cladding and the wall enclosure are constructed of concrete scored in a grid pattern. Fenestration consists of a gated entrance to the yard located on the southwest elevation, and a large pair of metal double doors on the southeast elevation.	No observed alterations

Table 3. Identified Features of the Veterans Memorial Park (6364 Zindell Avenue)

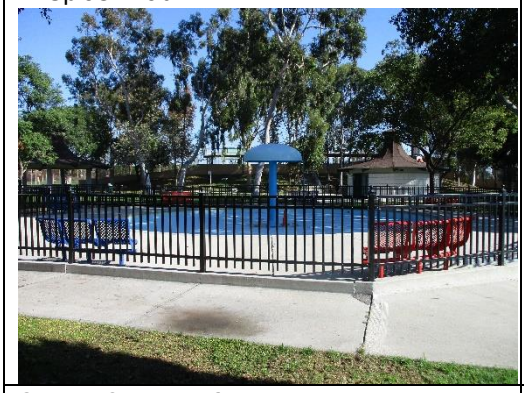
Building Number, Building Name	Engineer/ Architect/ Contractor; Year Constructed	Description	Alterations
7. Splash Pad 	Architects: Anthony & Langford; Contractors: none noted; 1969	The splash pad water feature consists of a circular plan, gated, paved area, in the center of which is a shallow (12-inch) basin, paved with small brick pavers in a herringbone pattern. At the center of the basin is a concrete drain and a metal mushroom-shaped fountain feature.	No date: seating and new fence added to the splash pad area
8. Park Sign and flagpole 	Architects: Anthony & Langford; Contractor: J. C. Lenore, 1966	The park sign consists of a beveled concrete slab with city and state seals, a memorial plaque, and "Veterans Memorial Park" in black lettering. The sign is surrounded by gardening pavers to create planters. The flagpole is a 50-foot standard metal pole, capped with a large, brass ball. Both are located in the landscaped roundabout at the entrance to the park, but are now both enclosed by the temporary park office	No date: vegetation planted
9. Baseball stadium complex 	Bleachers and Dugout: Architects: Anthony & Langford; 1969 Backstop and baseball field: Architects: none noted; Contractors: Morris Builders; 1969	The baseball stadium complex consists a bleacher/dugout/locker room structure, an announcer box, a U-plan shade structure, a backstop, the baseball diamond and field, and a scoreboard structure, all located at the east end of the park. The shade structure is constructed of steel I-beam supports and features a sloped corrugated metal roof. The bleacher structure are concrete and feature seven rows of metal and concrete benches, as well as	No observed alterations

Table 3. Identified Features of the Veterans Memorial Park (6364 Zindell Avenue)

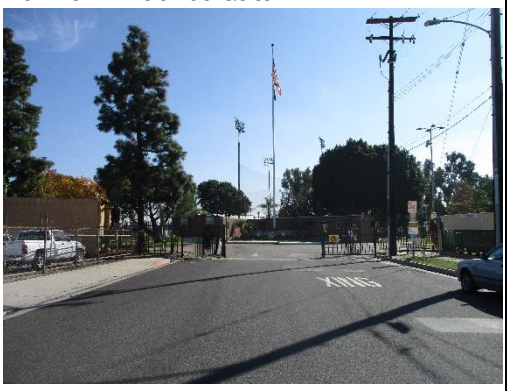
Building Number, Building Name	Engineer/ Architect/ Contractor; Year Constructed	Description	Alterations
 	Roof Shelter at Ballpark seating: Architects: Anthony & Langford; 1969 Scoreboard: Engineer James A. Lynch; Contractor: Heath & Co.; 1969	a low metal fence separating the playing field from the bleacher area. A chain link fence backstop also provides another barrier between the playing field and bleachers, extending above the roofline of the shade structure. . Behind the backstop is a concrete, metal screen, and glass announcer box, with a flat roof. Along the third and first base lines are partially subterranean dugout structures, with very slightly pitched front gabled, concrete roofs. Beside each dugout is a staircase entrance to fully subterranean locker rooms, which are under the bleacher structure. The field is lit by multiple lighting standards, and the field features an electronic scoreboard.	
10. Main Entrance Gate 	Architects: Anthony & Langford; Contractor: J. C. Lenore, 1966	The Entrance Gate consists of a rolling metal bar gate, roughly 9 feet in height, which retracts behind a concrete shed on the northeast side, and behind private presidency fences on the southwest side.	1993: demolition, remodel, and reconstruction of concrete block wall, 8' high (Permits C-9300365, C-9300524, C-9300555)

Table 3. Identified Features of the Veterans Memorial Park (6364 Zindell Avenue)

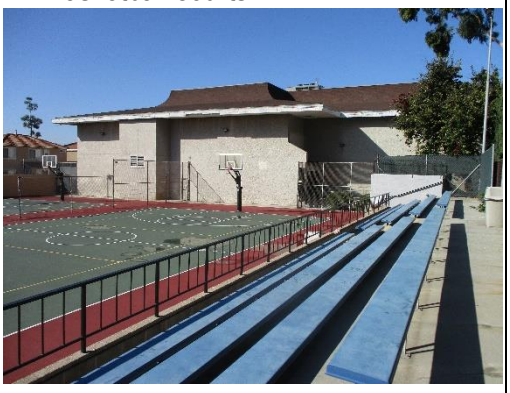
Building Number, Building Name	Engineer/ Architect/ Contractor; Year Constructed	Description	Alterations
14. Basketball Courts 	Architects: Anthony & Langford;	These courts originally consisted of two tennis courts and a raised, concrete bleacher platform on the northeast side. The courts are fully paved and painted, and enclosed by chain-link fence, concrete wall, the Recreation Building, and the bleacher structure. The bleacher structure is a raised concrete masonry unit platform with four rows of plastic benches. Concrete stairs lead up to and away from the bleacher seating and connect the area to the Recreation Building and the rest of the park	1994: demolition, remodel, and reconstruction of concrete block wall behind Recreation Building and basketball courts (Permit C-9400304) Circa 2004-2005: tennis courts converted to basketball courts
Buildings and Structures Less Than 45 Years Old			
11. Playground Equipment and Shade Structure 	Architects unknown; circa 1982-1983	The playground equipment appears in a small paved area that was previously lawn between 1982 and 1983 according to aerial imagery. In 2007 a metal and fabric shade structure was erected over the equipment, measuring 35 x 40 x 12 foot tall	2007: Shade Structure, manufactured by Shade America of Dallas TX, added (Permit C-070041) No date: original equipment likely replaced

Table 3. Identified Features of the Veterans Memorial Park (6364 Zindell Avenue)

Building Number, Building Name	Engineer/ Architect/ Contractor; Year Constructed	Description	Alterations
12. Swing Apparatus and Shade Structure 	Architects unknown; circa 1982-1983	The swing apparatus appears in a small paved area that was previously lawn between 1982 and 1983 according to aerial imagery. In 2007 a metal and fabric shade structure was erected over the equipment, measuring 20 x 30 x 10	2007: Shade Structure, manufactured by Shade America of Dallas TX, added (Permit C-070045) No date: original equipment likely replaced
13. Park Office (Temporary) 	Architects unknown; 2017	Two temporary, prefabricated trailers arranged in an L-shaped plan office building.	No observed alterations

3.4.2 Relevant Plans, Policies, and Ordinances

Federal

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

National Register of Historic Places

While there is no federal nexus for this Project, the subject property was evaluated in consideration of NRHP designation criteria. The NRHP is the United States' official list of districts, sites, buildings, structures, and objects worthy of preservation. Overseen by the National Park Service, under the U.S. Department of the Interior, the NRHP was authorized under the National Historic Preservation Act, as amended. Its listings encompass all National Historic Landmarks, as well as historic areas administered by the National Park Service.

NRHP guidelines for the evaluation of historic significance were developed to be flexible and to recognize the accomplishments of all who have made significant contributions to the nation's history and heritage. Its criteria are

designed to guide state and local governments, federal agencies, and others in evaluating potential entries in the NRHP. For a property to be listed in or determined eligible for listing, it must be demonstrated to possess integrity and to meet at least one of the following criteria:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

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.

Integrity is defined in NRHP guidance, "How to Apply the National Register Criteria," as "the ability of a property to convey its significance. To be listed in the NRHP, a property must not only be shown to be significant under the NRHP criteria, but it also must have integrity" (NPS 1990). NRHP guidance further asserts that properties be completed at least 50 years ago to be considered for eligibility. Properties completed fewer than 50 years before evaluation must be proven to be "exceptionally important" (criteria consideration to be considered for listing.

State

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

California Register of Historical Resources

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

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

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

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

California Environmental Quality Act

As described further below, the following CEQA statutes and CEQA Guidelines are of relevance to the analysis of archaeological, historic, and tribal cultural resources:

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

More specifically, under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource" (California Public Resources Code Section 21084.1; CEQA Guidelines Section 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 California Public Resources Code Section 5024.1(q)), it is a "historical resource" and is presumed to be historically or culturally significant for purposes of CEQA (California Public Resources Code Section 21084.1; CEQA Guidelines Section 15064.5(a)). The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption (California Public Resources Code Section 21084.1; CEQA Guidelines Section 15064.5(a)).

A "substantial adverse change in the significance of an historical resource" reflecting a significant effect under CEQA means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (CEQA Guidelines

Section 15064.5(b)(1); California Public Resources Code Section 5020.1(q)). In turn, CEQA Guidelines section 15064.5(b)(2) states 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 California Register of Historical Resources; 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 Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
3. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

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

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

California Public Resources Code 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 (California Public Resources Code section 21083.2(a); CEQA Guidelines Section 15064.5(c)(4)). However, if a non-unique archaeological resource qualifies as tribal cultural resource (California Public Resources Code Section 21074(c), 21083.2(h)), further consideration of significant impacts is required. CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. As described below, these procedures are detailed in California Public Resources Code Section 5097.98.

California Health and Safety Code Section 7050.5

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. California Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery,

no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains can occur until the county coroner has examined the remains (Health and Safety Code Section 7050.5(b)). PRC Section 5097.98 also outlines the process to be followed in the event that remains are discovered. If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the NAHC within 24 hours (Health and Safety Code Section 7050.5(c)). The NAHC will notify the "most likely descendant." With the permission of the landowner, the most likely descendant may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the most likely descendant by the NAHC. The most likely descendant may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

Local

This study was completed in consideration of all sections of the city of Commerce, California - Code of Ordinances related to Historic Landmark and Historic District Designation (Chapters 19.17 and 19.39). Sections most relevant to this study are provided below.

Chapter 19.17 - Historic Landmark/District

9.17.010 - Intent and purpose.

The regulations and procedures outlined in this Chapter 19.17 are established to recognize and preserve the history of the city of Commerce and Southern California. This chapter provides for the identification and designation of historic places, buildings, works of art, neighborhoods, and other objects of historic or cultural interest within the city. (Ord 544 § 1(part), 2000).

19.17.020 - Designation procedure.

Designation of a historic landmark or district shall follow the procedures outlined in Chapter 19.39, Division 14 of this Title 19. (Ord 544 § 1(part), 2000).

Chapter 19.37 - Administration of the Zoning Ordinance
Division 14. - Historic Landmark/District Designation

19.39.930 - Intent and purpose.

This Division 14 is established to recognize and preserve the history of the city of Commerce and Southern California by providing for the identification and designation of historic places, buildings, works of art, neighborhoods, and other objects of historic or cultural interest. (Ord. 544 § 1(part), 2000).

19.39.960 - Findings.

In acting to approve designation of a historic landmark or district, the city council shall make one or more of the following findings:

A. That the resource exemplifies or reflects special elements of the city's or region's cultural, social, economic, political, aesthetic, engineering, or architectural history; or
B. That the resource is identified with persons or events of significant local, state, or national history; or

C. That the resource has characteristics of a style, type, method of construction or is an example of indigenous materials or craftsmanship; or

D. That the resource represents a notable aesthetic work of a builder, architect, or designer. (Ord. 544 § 1(part), 2000).

3.4.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to cultural resources are based on Appendix G of the State CEQA Guidelines. Through the analysis in the Initial Study (see Appendix A), it was determined that the proposed Project could have a potentially significant impact to cultural resources. Accordingly, all of the thresholds are further analyzed in the EIR. According to Appendix G of the State CEQA Guidelines, a significant impact related to cultural resources would occur if the Project would:

A. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.

B. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.

C. Disturb any human remains, including those interred outside of dedicated cemeteries.

3.4.4 Methodology

Survey

Built Environment Survey

Dudek's Architectural Historian, Kate Kaiser, MSHP, conducted a pedestrian survey of the Project area, including the Veterans Memorial Park (6364 Zindell Avenue) property on December 9, 2019. The 7316 Gage Avenue portion of the Project site contains no built environment resources and was not surveyed by the architectural historian. The pedestrian survey entailed walking all portions of the exterior of the Veterans Memorial Park property and documenting each building, structure, and related park furniture with notes and photographs, specifically noting character-defining features, spatial relationships, paths of circulation, observed alterations, and examining any historic landscape features on the property.

Archaeological Survey

The Project includes properties associated with 6364 Zindell Avenue, Veterans Memorial Park within Assessor's Parcel Numbers (APNs) 6357-018-900, 6357-019-905, and 6357-019-904. This portion of the Project site operated as a landfill site between 1941 and 1954 and is underlain by approximately 11 to 28 feet of waste material. By 1963, the site was capped by a layer of fill soil and was redeveloped into Veterans Memorial Park in 1972.

The Project also includes a parcel immediately adjacent to Veterans Memorial Park to the northeast, located at 7316 Gage Avenue within APN 6357-018-005. This parcel is currently vacant. A review of records associated with this property identified this location as the former Gage Avenue Dump and operated as such between 1950 and 1954. In 1958, an approximately 52,160 square-foot rectangular commercial building and railroad spur was constructed over the landfill within this location. The commercial building was demolished in 1992 due to safety concerns. The parcel also once was used as a dump for construction debris associated with the development of the I-5 freeway. Further, a hazards analysis conducted for the subject parcel stated that the cover soil ranges from 3 to 5 feet in thickness and the average waste from previous landfill activities is approximately 15-16 feet thick below the fill layer. In addition, an 8,000 gallon diesel

underground storage tank (UST) was installed at the site in 1975 and removed in 1989. As such, the soils within this parcel will undergo remediation for potential contamination.

Based on the information provided above, any surficial or subsurface archaeological resources that are or may have been within the Project site have been disturbed, displaced, and/or destroyed as a result of past activities within the site. Therefore, an archaeological survey was not completed.

Building Development and Archival Research

Building development and archival research was conducted for the Project site in an effort to establish a thorough and accurate historic context for the significance evaluations, and to confirm the building development history of the Project site and associated parcels.

City of Commerce Department of Buildings and Safety

Dudek visited the City of Commerce Department of Buildings and Safety on December 9, 2019 in order to request permits for the subject properties at 6364 Zindell Avenue and 7316 Gage Avenue. Dudek reviewed all available permits and all information obtained from the City of Commerce Department of Buildings and Safety was used in preparation of the historic context and significance evaluations.

City of Commerce Public Library

Dudek visited the City of Commerce Public Library on December 9, 2019. A reference librarian was consulted for information specific to the subject properties and general information about the history of the City of Commerce. Dudek also consulted the library's online archival image collection for all photographs pertaining to the subject properties. All information obtained from the City of Commerce Public Library was used in preparation of the historic context.

Historical Newspaper Search

Dudek reviewed historical newspapers covering the City of Commerce and overall County of Los Angeles in an effort to understand the development of the Project site. All information obtained from the historical newspaper search was incorporated into the historic context.

3.4.5 Impacts Analysis

Threshold A: Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Significance Evaluation for the Veterans Memorial Park

In order to determine if the proposed Project will impact historical resources under CEQA, the Veterans Memorial Park was evaluated for historical significance and integrity in consideration of NRHP, CRHR, and City of Commerce designation criteria and integrity requirements.

NRHP/CRHR Statement of Significance

The property located at 6364 Zindell Avenue and known as the Veterans Memorial Park does not meet any of the criteria for listing in the NRHP or CRHR, either individually or as part of an existing historic district, as demonstrated below.

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

Archival research did not find any associations with events that have made a significant contribution to the broad patterns of our history. While the park was constructed and developed during the early period of development for the City of Commerce, it was the last of the four city parks constructed during this period of Commerce's history and was one of the parks originally envisioned under the "model city" program put into effect shortly after the City's incorporation in 1960. Despite its original planning, however, Veterans Memorial Park did not make a more significant contribution to the history of the city than the other city parks. With the exception of the baseball stadium, the recreational programming at Veterans Memorial Park was unremarkable compared to the other parks' programming, such as the Aquatorium at Rosewood Park. And though the baseball stadium was a novelty for such a small city, compared to neighboring cities the stadium size, amenities, and events hosted are unremarkable. The park has not hosted any events that could be considered significant in the broad patterns of the city, state, or nation's history. Furthermore, Commerce was one of many newly incorporated cities in the Greater Los Angeles area that supported the exponential post-war industrial growth and development that happened in Southern California in the 1950s and 1960s. Although the park property is broadly representative of the city's growth and need for additional recreational areas, it has no direct association with events that have made a significant contribution to the history of the City of Commerce, the State of California, or the Nation. Therefore, the property does not appear eligible under Criterion A of the NRHP or Criterion 1 of the CRHR.

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

Archival research did not indicate that people who have worked at this property are known to be historically significant figures at the national, state, or local level. As such, this property is not known to have any historical associations with people important in history. Therefore, the property does not appear eligible for the NRHP under Criterion B or CRHR under Criterion 2.

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

Veterans Memorial Park represents a modest example of a post-war era park and recreation complex that was designed by the firm of Anthony and Langford Architects and completed by 1971. The architecture firm of Anthony and Langford were popular choices for civic projects throughout the Greater Los Angeles area including projects in Commerce like the Rosewood Park Activities Building addition and the interior of Commerce City Hall. Despite their extensive work and success as an architecture firm, no evidence was found to suggest that they rise to the level of master architects in Los Angeles. Furthermore, the Veterans Memorial Park does not serve as a significant representation of the work of Anthony and Langford Architects. The firm was involved in many design projects that serve as better representations of their work than the recreation building at the Veterans Memorial Park, such as the Monterey Park Library (1959) and the La Mirada City Hall (1965). Furthermore, the park buildings and structures exhibit a mix of architectural styles, including Brutalism, Mid-Century Modern, and New Formalism. However, there is no single, cohesive architectural aesthetic throughout the park site, and it does not rise to the level of significance required for representing a specific architectural style, nor does it demonstrate high artistic values. For these reasons, the Veterans Memorial Park does not appear eligible for listing in the NRHP under Criterion C or CRHR under Criterion 3.

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

The property is not significant under Criterion D of the NRHP or Criterion 4 of the CRHR as a source, or likely source, of important historical information nor does it appear likely to yield important information about historic construction methods, materials or technologies.

City of Commerce Statement of Significance

For the reasons discussed under the NRHP and CRHR significance evaluations, the Veterans Memorial Park also fails to meet the local designation requirements under City of Commerce Criteria A, B, C, or D as an individual building or part of a district.

Integrity Discussion

While the Veterans Memorial Park retains a high level of integrity, it does not rise to the level of significance required for designation at the national, state or local levels.

Summary of Findings

No historical resources were identified within the Project site as a result of the CHRIS records search, SLF search, Native American outreach, extensive archival research, field survey, and property significance evaluation. The Veteran's Memorial Park located at 6364 Zindell Avenue does not appear eligible for NRHP, CRHR, or City designation due to a lack of significant historical associations and architectural merit. Therefore, the park is not considered an historical resource for the purposes of CEQA. Further, no potential indirect impacts to historical resources were identified. The Project will not cause a substantial adverse change in the significance of a historical resource, therefore the Project will have **a less than significant impact** on historical resources. No mitigation is required.

Threshold B: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Dudek conducted a CHRIS records search at the South Central Coastal Information Center (SCCIC) on November 14, 2019. The records search identified 11 previously conducted cultural resources technical investigations within the records search area. Of these, one study overlaps the Project site. Additionally, the SCCIC records indicate that four previously recorded cultural resources exist within the surrounding 0.5-mile search radius. All of the resource identified are built environment resources. No previously recorded prehistoric or historic-era archaeological resources were identified within the Project site or 0.5-mile records search radius. Additionally, Dudek contacted the NAHC on November 12, 2019 to request a search of the Sacred Lands File (SLF). Results of the SLF (received November 26, 2019) were negative.

Additionally, the parcels comprising the approximately 17.32-acre Project site were previously part of a construction borrow-pit type of landfill created for, and during, the construction of the I-5 freeway. As a result, the native soil was removed from the Project site and placed within the footprint of the I-5 freeway. The landfill operated between 1948 and 1954, before being covered and redeveloped. Moreover, the Veterans Memorial Park, which was constructed between 1965 and 1970, sits atop the landfill material from 1954 and the vacant lot to the east of Veterans Memorial Park, has been vacant since 1988.

Based on the results provided above, the potential of encountering and impacting unknown archaeological resources during Project implementation is low given the level of disturbance from the mid-twentieth century; however, it is always possible that unanticipated discoveries could be encountered during ground-disturbing activities associated with the

proposed Project. If such unanticipated discoveries were encountered, impacts to encountered resources could be potentially significant. However, with implementation of mitigation measure **MM-CUL-1**, which requires that all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for Archaeology, can evaluate the significance of the find, potentially significant impacts to archaeological resources would be reduced to less-than-significant levels. Therefore, impacts would be **less than significant with mitigation incorporated.**

Threshold C: Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

No prehistoric or historic burials were identified within the Project site as a result of the records searches. Additionally, the Project site is located within an urbanized area that has been subject to disturbance in the past as a result of former landfill operations. Moreover, the Project is not part of a dedicated cemetery and as such, the likelihood of disturbing human remains is low. In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are found, the Los Angeles County Coroner shall be notified within 24 hours of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined, within 2 working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the County Coroner determines that the remains are, or are believed to be, Native American, they shall notify the NAHC in Sacramento within 24 hours. In accordance with California PRC, Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descended from the deceased Native American. The most likely descendant shall complete their inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains. **MM-CUL-2** has been included to ensure impacts associated with human remains would be less than significant. Therefore, impacts would be **less than significant with mitigation incorporated.**

3.4.6 Cumulative Impacts

Cumulative impacts on cultural resources consider whether impacts of the proposed Project together with other related projects identified within the vicinity of the Project site, when taken as a whole, substantially diminish the number of historic or archeological resources within the same or similar context or property type. However, impacts to cultural resources, if any exist, tend to be site-specific.

As discussed above in this section, there are no known historical or archaeological resources on the Project site, and as such, the Project site is not part of an existing or known grouping or district of historical or archaeological resources that would be impacted as part of the cumulative impacts of other projects. However, for archaeological resources, past, present, and reasonably foreseeable cumulative projects may require extensive excavation in culturally sensitive areas, and thus, may result in adverse effects to known or previously unknown, inadvertently discovered archaeological resources.

Other individual projects occurring in the vicinity of the Project site likely involve buildings that are over 45 years in age, and as such, will likely require evaluations to determine if they are historical resources as defined by CEQA. Historical resources that are potentially affected by related projects would also be subject to the same requirements of CEQA as the proposed Project and any impacts would be mitigated, as applicable. These determinations would be made on a case-by-case basis, and the effects of cumulative development on historical and archaeological resources would be mitigated to the extent feasible in accordance with CEQA and other applicable legal requirements. Therefore, impacts on cultural resources are considered less than cumulatively considerable with mitigation incorporated (**MM-CUL-1** and **MM-CUL-2**). As such, the overall cumulative impacts are considered **less than significant with mitigation incorporated**.

3.4.7 Mitigation Measures

The following mitigation measure would reduce potential impacts to below a level of significance.

MM-CUL-1 If archaeological resources (i.e., sites, features, or artifacts) are exposed during construction activities for the proposed Project, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for Archaeology, can evaluate the significance of the find and determine whether or not additional study is warranted. The archaeologist shall be empowered to temporarily stop or redirect grading activities to allow removal of abundant or large artifacts. Depending upon the significance of the find under the California Environmental Quality Act (CEQA) (14 CCR 15064.5(f); PRC, Section 21082), the archaeologist may simply record the find and allow work to continue. If the discovery proves significant under CEQA, additional work, such as preparation of an archaeological treatment plan and data recovery, may be warranted. The archaeologist shall also be required to curate specimens in a repository with permanent retrievable storage and submit a written report to the lead agency for review and approval prior to occupancy of the first building on the site. Once approved, the final report will be filed with the South Central Coastal Information Center (SCCIC).

Once artifact analysis is completed, a final written report detailing the results of all research procedures and interpretation of the site shall be submitted to the lead agency for review and approval prior to occupancy of the first building on the site.

MM-CUL-2 In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are found within the Project site, the county coroner shall be immediately notified of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the county coroner has determined, within 2 working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the county coroner determines that the remains are, or are believed to be, Native American, he or she shall notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descendant (MLD) of the deceased Native American. The MLD shall complete his/her inspection within 48 hours of being granted access to the site. The designated MLD would then determine, in consultation with the property owner, the disposition of the human remains.

3.4.8 Level of Significance After Mitigation

With the implementation of mitigation measure **MM-HAZ-1**, impacts would be less than significant.

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3.5 Energy

This section describes the existing energy resources of the Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Project.

Comments received in response to the Notice of Preparation (see Appendix A) included concerns regarding impacts on energy resources including moving from the use of natural gas to electric appliances.

Information contained in this section is based on an evaluation of the Project area. Other documentation used in this analysis includes greenhouse gas emissions modeling used to estimate fuel consumption (Appendix B). Other sources consulted are listed in Section 3.5.9 References.

3.5.1 Environmental Setting

Electricity

According to the California Energy Commission, California used approximately 288,613 gigawatts per hour of electricity in 2017 (CEC 2018a). Electricity usage in California for differing land uses varies substantially by the type of uses in a building, type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building. Because of the state's energy efficiency standards and efficiency and conservation programs, California's per-capita energy use has remained stable for more than 30 years, while the national average has steadily increased (CEC 2018).

Electrical service in the County is provided by Southern California Edison (SCE). SCE was established in 1896 and serves the 15 counties and 180 cities within the Southern California region (SCE n.d.). For 2016, the largest proportion (34%) of the local electrical supply was generated from the burning of natural gas. Renewable energy sources, including wind, solar, and biomass/waste, account for 29%. Coal accounts for 4%, hydroelectric 15%, and nuclear 9%. The remaining portion (15%) comes from unspecified sources of power, which are not traceable to specific generation sources (CEC 2018b).

Natural Gas

One third of energy commodities consumed in California is natural gas and mainly falls into four sectors: residential, commercial, industrial, and electric power generation. In addition, natural gas is a viable alternative to petroleum for use in cars, trucks, and buses (CEC 2017). According to the U.S. Energy Information Administration, California used approximately 2.382 quadrillion British thermal units (BTU) of natural gas in 2015 (EIA 2017a). By sector, industrial uses utilized approximately 35.8% of the state's natural gas, followed by approximately 35.0% from electric power, approximately 17.5% from residential uses, approximately 10.3% from commercial uses, and approximately 1.5% from transportation uses (EIA 2017a).

Petroleum

According to the U.S. Energy Information Administration, California used approximately 651.1 million barrels of petroleum in 2015 (EIA 2017b). By sector, transportation uses utilize 85.7% of the state's petroleum, 11.1% from industrial uses, 2.4% from commercial uses, 0.8% from residential uses, and 0.01% for electric power generation (EIA 2017c). In California, petroleum fuels refined from crude oil are the dominant source of energy for transportation sources.

According to the U.S. Energy Information Administration, California used approximately 651.1 million barrels of petroleum in 2015 (EIA 2017d). This equates to a daily use of approximately 1.78 million barrels of petroleum. There are 42 U.S. gallons in a barrel, so California consumes approximately 74.8 million gallons of petroleum per day, adding up to an annual consumption of 27.3 billion gallons of petroleum. California has implemented policies to improve vehicle efficiency and to support use of alternative transportation, which are described in Section 3.5.2, Relevant Plans, Policies, and Ordinances.

3.5.2 Relevant Plans, Policies, and Ordinances

Federal

Federal Energy Policy and Conservation Act

In 1975, Congress enacted the Federal Energy Policy and Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the National Highway Traffic Safety Administration is responsible for establishing additional vehicle standards. In 2010, fuel economy standards were set at 27.5 miles per gallon (mpg) for new passenger cars and 23.5 mpg for new light trucks. Fuel economy is determined based on each manufacturer's average fuel economy for the fleet of vehicles available for sale in the United States.

Energy Independence and Security Act

The Energy Independence and Security Act of 2007 (December 2007), among other key measures, would do the following, which would aid in the reduction of national GHG emissions:

1. 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
2. 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
3. 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.

EPA and NHTSA Joint Rule for Vehicle Standards

On April 1, 2010, the EPA and the NHTSA announced a joint final rule to establish a national program consisting of new standards for light-duty vehicles model years 2012 through 2016. The joint rule is intended to reduce GHG emissions and improve fuel economy. The EPA promulgated the first-ever national GHG emissions standards under the Clean Air Act, and NHTSA promulgated Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act (EPA 2010). This final rule follows the EPA and Department of Transportation's joint proposal on September 15, 2009, and is the result of the President Obama's May 2009 announcement of a national program to reduce GHGs and improve fuel economy. The final rule became effective on July 6, 2010 (EPA and NHTSA 2010).

The EPA GHG standards require new passenger cars, light-duty trucks, and medium-duty passenger vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide (CO_2) per mile in model year 2016,

equivalent to 35.5 mpg if the automotive industry were to meet this CO_2 level through fuel economy improvements alone. The CAFE standards for passenger cars and light trucks will be phased in between 2012 and 2016, with the final standards equivalent to 37.8 mpg for passenger cars and 28.8 mpg for light trucks, resulting in an estimated combined average of 34.1 mpg. Together, these standards will cut GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program. The rules will simultaneously reduce GHG emissions, improve energy security, increase fuel savings, and provide clarity and predictability for manufacturers (EPA and NHTSA 2010).

In August 2012, the EPA and NHTSA approved a second round of GHG and CAFE standards for model years 2017 and beyond (EPA and NHTSA 2012). These standards will reduce motor vehicle GHG emissions to 163 grams of CO_2 per mile, which is equivalent to 54.5 mpg if this level were achieved solely through improvements in fuel efficiency, for cars and light-duty trucks by model year 2025. A portion of these improvements, however, will likely be made through improvements in air-conditioning leakage and through use of alternative refrigerants, which would not contribute to fuel economy. The first phase of the CAFE standards (for model years 2017 to 2021) are projected to require, on an average industry fleet-wide basis, a range from 40.3 to 41.0 mpg in model year 2021. The second phase of the CAFE program (for model years 2022 to 2025) is projected to require, on an average industry fleet-wide basis, a range from 48.7 to 49.7 mpg in model year 2025. The second phase of standards has not been finalized due to the statutory requirement that NHTSA set average fuel economy standards not more than five model years at a time. The regulations also include targeted incentives to encourage early adoption and introduction into the marketplace of advanced technologies to dramatically improve vehicle performance, including the following:

- Incentives for electric vehicles, plug-in hybrid electric vehicles, and fuel cell vehicles
- Incentives for hybrid technologies for large pickups and for other technologies that achieve high fuel economy levels on large pickups
- Incentives for natural gas vehicles
- Credits for technologies with potential to achieve real-world GHG reductions and fuel economy improvements that are not captured by the standards' test procedures

State

The following state regulations pertaining to utilities and service systems would apply to the proposed Project.

Protection of Underground Infrastructure

California Government Code Section 4216 et seq. requires any entity performing excavating to contact a regional notification center (e.g., Underground Service Alert or Dig Alert) at least 2 days prior to excavation of any subsurface installations. Any utility provider seeking to begin a project that could damage underground infrastructure can call Underground Service Alert Southern California, the regional notification center for Southern California. Underground Service Alert will notify the utilities that may have buried lines within 1,000 feet of the project. Representatives of the utilities, once notified, are required to mark the specific locations of their facilities within the work area prior to the start of project activities.

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 establishes 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. The California Energy Commission (CEC) is required by law to adopt standards every 3 years that are cost effective for homeowners over the 30-year lifespan of a building. These standards are updated to consider and incorporate new energy efficient technologies and construction methods. 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 2016 Title 24 building energy efficiency standards, which became effective January 1, 2017, will further reduce energy used and associated GHG emissions. In general, single-family homes built to the 2016 standards are anticipated to use about 28% less energy for lighting, heating, cooling, ventilation, and water heating than those built to the 2013 standards, and nonresidential buildings built to the 2016 standards will use an estimated 5% less energy than those built to the 2013 standards (CEC 2016a).

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 CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential and state-owned buildings and schools and hospitals. The CALGreen 2016 standards will become effective January 1, 2017. The mandatory standards require the following (24 CCR Part 11):

- Mandatory reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings
- Mandatory reduction in outdoor water use through compliance with a local water efficient landscaping ordinance or the California Department of Water Resources' Model Water Efficient Landscape Ordinance
- 65% of construction and demolition waste must be diverted from landfills
- Mandatory inspections of energy systems to ensure optimal working efficiency
- Inclusion of electric vehicle charging stations or designated spaces capable of supporting future charging stations
- Low-pollutant emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring, and particle boards

The CALGreen standards also include voluntary efficiency measures that are provided at two separate tiers and implemented at the discretion of local agencies and applicants. CALGreen's Tier 1 standards call for a 15% improvement in energy requirements; stricter water conservation, 65% diversion of construction and demolition waste, 10% recycled content in building materials, 20% permeable paving, 20% cement reduction, and cool/solar-reflective roofs. CALGreen's more rigorous Tier 2 standards call for a 30% improvement in energy requirements, stricter water conservation, 75% diversion of construction and demolition waste, 15% recycled content in building materials, 30% permeable paving, 25% cement reduction, and cool/solar-reflective roofs.

The California Public Utilities Commission, CEC, and CARB also have a shared, established goal of achieving zero net energy (ZNE) for new construction in California. The key policy timelines include: (1) all new residential construction in California will be ZNE by 2020 and (2) all new commercial construction in California will be ZNE by 2030.[1]

Assembly Bill 1493

In a response to the transportation sector accounting for more than half of California's CO_2 emissions, Assembly Bill (AB) 1493 (Pavley) was enacted in July 2002. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles that are primarily used for noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. When fully phased in, the near-term (2009–2012) standards will result in a reduction of about 22% in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term (2013–2016) standards will result in a reduction of about 30%.

Renewable Energy Sources

Established in 2002 under Senate Bill (SB) 1078, and accelerated by SB 107 (2006) and SB 2 (2011), California's Renewables Portfolio Standard obligates investor-owned utilities, energy service providers, and community choice aggregators to procure 33% of their electricity from renewable energy sources by 2020. Eligible renewable resources are defined in the 2013 RPS to include biodiesel; biomass; hydroelectric and small hydro (30 megawatts or less); Los Angeles Aqueduct hydro power plants; digester gas; fuel cells; geothermal, landfill gas; municipal solid waste; ocean thermal, ocean wave, and tidal current technologies; renewable derived biogas; multifuel facilities using renewable fuels; solar photovoltaic; solar thermal electric; wind; and other renewables that may be defined later. Governor Jerry Brown signed SB 350 on October 7, 2015, which expands the RPS by establishing a goal of 50% of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, SB 350 includes the goal to double the energy efficiency savings in electricity and natural gas final end uses (such as heating, cooling, lighting, or class of energy uses upon which an energy efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the CPUC, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal. SB 350 also provides for the transformation of the California Independent System Operator into a regional organization to promote the development of regional electricity transmission markets in the western states and to improve the access of consumers served by the California Independent System Operator to those markets, pursuant to a specified process.

Local

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. With respect to air quality planning, GHG emissions, and other regional issues, SCAG has prepared the 2016 RTP/SCS (SCAG 2016). Specifically,

[1] See, e.g., CPUC, California's Zero Net Energy Policies and Initiatives, September 18, 2013, accessed at http://www.cpuc.ca.gov/NR/rdonlyres/C27FC108-A1FD-4D67-AA59- 7EA82011B257/0/3.pdf. It is expected that achievement of the zero net energy goal will occur via revisions to the Title 24 standards.

the 2016 RTP/SCS links the goals of sustaining mobility with the goals of fostering economic development, enhancing the environment, reducing energy consumption, promoting transportation-friendly development patterns, and encouraging all residents affected by socioeconomic, geographic, and commercial limitations to be provided with fair access. See Section 3.2, Air Quality, for additional discussion on SCAG.

City of Commerce 2020 General Plan

The Air Quality Element of the City's 2020 General Plan (City of Commerce 2008) includes the goals and policies that result in co-benefits with reducing GHG emissions. The Air Quality Element of the City's General Plan is discussed in Section 3.2.2.3.3. The Transportation Element includes issues and policies that result in benefits with reducing GHG emissions, these applicable issues and policies are as follows:

Issue: Alternative Modes of Travel

Policy 3.1 The city of Commerce will continue to encourage the use of alternate transportation modes (e.g., shuttles, etc.).

Policy 3.2 The city of Commerce will continue to provide residents, employees, and visitors with a local public transit system.

Policy 3.5 The city of Commerce will encourage the maintenance and improvement of "pedestrian-safe" oriented facilities to ensure safe pedestrian movement.

Policy 3.8 The city of Commerce will continue to implement the city's transportation demand management (TDM) measures to improve the efficiency of the city's circulation network.

Policy 3.9 The city of Commerce will require major employers to adopt TDM plans pursuant to the city's adopted TDM ordinance.

3.5.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to energy resources are based on Appendix G of the State CEQA Guidelines. Through the analysis in the Initial Study (see Appendix A), it was determined that the proposed Project could have a potentially significant impact to energy resources. Accordingly, all of the thresholds are further analyzed in the EIR. According to Appendix G of the State CEQA Guidelines, a significant impact related to energy resources would occur if the Project would:

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

3.5.4 Methodology

The analysis contained in this section is based on an evaluation of the Project area, as well as greenhouse gas emissions modeling conducted to estimate fuel consumption (Appendix B).

3.5.5 Impacts Analysis

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

The electricity and natural gas used for construction of the proposed Project would be temporary and would be substantially less than that required for Project operation and would have a negligible contribution to the Project's overall energy consumption. Additionally, although natural gas and electricity usage would increase due to the implementation of the Project, the Project's energy efficiency would go beyond code compliance and would increase through the LEED certification program or equivalent standards. 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 VMT over time.

Construction

Electricity

Temporary electric power for as-necessary lighting and electronic equipment such as computers inside temporary construction trailers would be provided by SCE. The electricity used for such activities would be temporary and would be substantially less than that required for Project operation and would have a negligible contribution to the Project's overall energy consumption.

Natural Gas

Natural gas is not anticipated to be required during construction of the proposed Project. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed below under the "petroleum" subsection. Any minor amounts of natural gas that may be consumed as a result of Project construction would be substantially less than that required for Project operation and would have a negligible contribution to the Project's overall energy consumption.

Petroleum

Heavy-duty construction equipment associated with demolition and construction activities for construction would rely on diesel fuel, as would haul trucks involved in removing the materials from demolition and excavation. Construction workers would travel to and from the Project site throughout the duration of construction. It is assumed in this analysis that construction workers would travel to and from the site in gasoline-powered passenger vehicles.

Heavy-duty construction equipment of various types would be used during each phase of Project construction. Appendix B lists the assumed equipment usage for each phase of construction.

Fuel consumption from construction equipment was estimated by converting the total carbon dioxide (CO_2) emissions from each construction phase to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. Construction is estimated to occur in the years 2020–2024 based on the construction phasing schedule. 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 2019). The estimated diesel fuel usage from construction equipment is shown in Table 3.5-1.

Table 3.5-1. Construction Equipment Diesel Demand

Phase	Pieces of Equipment	Equipment CO_2 (MT)	kg/CO_2/Gallon	Gallons
Demolition	21	1259.84	10.21	123,392.62
Site Preparation	21	484.57	10.21	47,460.66
Grading	21	484.58	10.21	47,460.90
Building Construction	9	509.88	10.21	49,938.89
Paving	6	35.05	10.21	3,432.62
Architectural Coating	1	4.47	10.21	437.63
			Total	272,123.32

Sources: Pieces of equipment and equipment CO_2 (Appendix B); kg/CO_2/Gallon (The Climate Registry 2019).
Notes: CO_2 = carbon dioxide; MT = metric ton; kg = kilogram.

Fuel consumption from worker and vendor trips are estimated by converting the total CO_2 emissions from each construction phase to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. Worker vehicles are assumed to be gasoline and vendor/hauling vehicles are assumed to be diesel.

Calculations for total worker, vendor, and haul truck fuel consumption are provided in Tables 3.5-2, 3.5-3, and 3.5-4.

Table 3.5-2. Construction Worker Gasoline Demand

Phase	Trips	Vehicle MT CO_2	kg/CO_2/ Gallon	Gallons
Demolition	4,160	21.02	8.78	2,394.48
Site Preparation	1,800	8.90	8.78	1,013.70
Grading	2,000	9.81	8.78	1,116.83
Building Construction	467,280	2,191.47	8.78	249,597.45
Paving	560	2.57	8.78	293.15
Architectural Coating	7,420	33.68	8.78	3,836.09
			Total	258,251.71

Sources: Trips and vehicle CO_2 (Appendix B); kg/CO_2/Gallon (The Climate Registry 2019).
Notes: MT = metric ton; CO_2 = carbon dioxide; kg = kilogram.

Table 3.5-3. Construction Vendor Diesel Demand

Phase	Trips	Vehicle MT CO_2	kg/CO_2/Gallon	Gallons
Demolition	0	0.00	10.21	0.00
Site Preparation	0	0.00	10.21	0.00
Grading	0	0.00	10.21	0.00
Building Construction	119,680	1,440.86	10.21	141,122.26
Paving	0	0.00	10.21	0.00
Architectural Coating	0	0.00	10.21	0.00
			Total	141,122.26

Sources: Trips and vehicle CO_2 (Appendix B); kg/CO_2/Gallon (The Climate Registry 2019).
Notes: MT = metric ton; CO_2 = carbon dioxide; kg = kilogram.

Table 3.5-4. Construction Haul Truck Diesel Demand

Phase	Trips	Vehicle MT CO_2	kg/CO_2/Gallon	Gallons
Demolition	49,440	1898.52	10.21	185,946.68
Site Preparation	0	0.00	10.21	0.00
Grading	10,626	403.85	10.21	39,554.56
Building Construction	0	0.00	10.21	0.00
Paving	0	0.00	10.21	0.00
Architectural Coating	0	0.00	10.21	0.00
			Total	225,501.24

Sources: Trips and vehicle CO_2 (Appendix B); kg/CO_2/Gallon (The Climate Registry 2019).
Notes: MT = metric ton; CO_2 = carbon dioxide; kg = kilogram.

In summary, construction of the Project is conservatively anticipated to consume 258,252 gallons of gasoline and 638,747 gallons of diesel, which would last approximately 43 months. By comparison, Countywide total petroleum use by vehicles is expected to be 4.7 billion gallons per year by 2020 (CARB 2019). Based on these assumptions, approximately 69 billion gallons of petroleum would be consumed in California over the course of the Project's construction phase based on the California daily petroleum consumption estimate of approximately 52.9 million gallons per day (EIA 2017d).

Summary

The electricity and natural gas used for construction of the Project would be temporary and would be substantially less than that required for Project operation and would have a negligible contribution to the Project's overall energy consumption. Construction is anticipated to consume 258,252 gallons of gasoline and 638,747 gallons of diesel. This would be a fraction of petroleum that would be consumed in California and Countywide over the course of the construction period. Therefore, impacts to energy resources during construction would be **less than significant**. No mitigation is required.

Operation

Electricity

The operation of the Project buildout would require electricity for multiple purposes, including cooling, lighting, appliances, and various equipment. Additionally, the supply, conveyance, treatment, and distribution of water would indirectly result in electricity usage. Electricity consumption associated with Project operation is based on the California Emissions Estimator Model (CalEEMod) outputs presented in Appendix B.

CalEEMod default values for energy consumption for each land use were applied for the Project analysis. The energy use from non-residential land uses is calculated in CalEEMod based on the California Commercial End-Use Survey database. Energy use in buildings (both natural gas and electricity) is divided by the program into end use categories subject to Title 24 requirements (end uses associated with the building envelope, such as the HVAC system, water heating system, and integrated lighting) and those not subject to Title 24 requirements (such as appliances, electronics, and miscellaneous "plug-in" uses).

Title 24 of the California Code of Regulations serves to enhance and regulate California's building standards. The most recent amendments to Title 24, Part 6, referred to as the 2019 standards, became effective on January 1,

2020. According to these estimations, the proposed Project would consume approximately 8,345,654 kWh per year during operation (Appendix B). The existing Veterans Memorial Park was estimated to use approximately 731,568 kWh per year. Therefore, the net electricity demand for the Project during operation would be approximately 7,614,086 kWh per year. The electricity demand in 2018 was 67,856,281,249 kWh (67,856 GWh) for the County (CEC 2019a). As such, the Project would have a negligible impact on demand for the County and SCE.

Natural Gas

The operation would require natural gas for various purposes, including water heating and natural gas appliances. Natural gas consumption associated with operation is based on the CalEEMod outputs Appendix B.

CalEEMod default values for energy consumption for each land use were applied for the Project analysis. The energy use from non-residential land uses is calculated in CalEEMod based on the California Commercial End-Use Survey database. The program uses data collected during the Residential Appliance Saturation Survey to develop energy intensity values (electricity and natural gas usage per square foot per year) for residential buildings. Energy use in buildings (both natural gas and electricity) is divided by the program into end use categories subject to Title 24 requirements (end uses associated with the building envelope, such as the HVAC system, water heating system, and integrated lighting) and those not subject to Title 24 requirements (such as appliances, electronics, and miscellaneous "plug-in" uses).

Title 24 of the California Code of Regulations serves to enhance and regulate California's building standards. The most recent amendments to Title 24, Part 6, referred to as the 2019 standards, became effective on January 1, 2020. According to these estimations, the proposed Project would consume approximately 20,128,740 kilo-British Thermal Units (kBtu) per year. The existing Veterans Memorial Park was estimated to consume approximately 1,166,440 kBtu per year. Therefore, the net natural gas demand for the Project during operation would be approximately 18,962,300 kBtu per year. The natural gas consumption in 2018 was 292,144,664,200 kBtu for the County (CEC 2018).

Petroleum

During operations, the majority of fuel consumption resulting from the Project would involve the use of motor vehicles traveling to and from the Project site, as well as fuels used for alternative modes of transportation that may be used by students and employees.

Petroleum fuel consumption associated with motor vehicles traveling to and from the Project site is a function of the vehicle miles traveled (VMT) as a result of Project operation. As shown in Appendix B (CalEEMod outputs and as discussed in Section 3.2, Air Quality; and 3.7, Greenhouse Gas Emissions), the annual net new VMT attributable to the proposed Project is expected to be 16,395,870 VMT. Similar to the construction worker and vendor trips, fuel consumption from worker and vendor trips are estimated by converting the total CO_2 emissions from operation of the Project to gallons using the conversion factors for CO2 to gallons of gasoline or diesel. Based on the annual fleet mix provided in CalEEMod, 93.3% of the fleet range from light-duty to medium-duty vehicles and motorcycles are assumed to run on gasoline. The remaining 6.6% of vehicles represent medium-heavy duty to heavy-duty vehicles and buses and are assumed to run on diesel.

Calculations for annual mobile source fuel consumption are provided in Tables 3.5-5 (gasoline) and 3.5-6 (diesel).

Table 3.5-5. Annual Mobile Source Gasoline Demand

	Vehicle MT CO_2	kg/CO_2/Gallon	Gallons
Existing	1,470.07	8.78	167,434.04
Operation	7,548.41	8.78	859,727.94
		Net Total	692,293.89

Sources: Trips and vehicle CO_2 (Appendix B); kg/CO_2/Gallon (The Climate Registry 2019).
Notes: MT = metric ton; CO_2 = carbon dioxide; kg = kilogram

Table 3.5-6. Annual Mobile Source Diesel Demand

	Vehicle MT CO_2	kg/CO_2/Gallon	Gallons
Existing	119.52	10.21	11,705.79
Operation	613.68	10.21	60,106.01
		Net Total	48,400.23

Sources: Trips and vehicle CO_2 (Appendix B; kg/CO_2/Gallon (The Climate Registry 2019).
Notes: MT = metric ton; CO_2 = carbon dioxide; kg = kilogram

By comparison, California as a whole consumes approximately 19.3 billion gallons of petroleum per year (CEC 2016b). Countywide total petroleum use by vehicles is expected to be 4.3 billion gallons per year by 2024 (CARB 2019).

Summary

Statewide emission reduction measures proposed in the CARB-adopted amendments to the Pavley regulations include measures aimed at reducing GHG emissions associated with transportation. These amendments are part of California's commitment to a nationwide program to reduce new passenger vehicle GHGs from 2012 through 2016. Pavley regulations reduced GHG emissions from California passenger vehicles by about 22% in 2012. It is expected that Pavley regulations will reduce GHG emissions from California passenger vehicles by about 30% in 2016, all the while improving fuel efficiency and reducing motorists' costs. As such, vehicle trips associated with the Project are expected to use less petroleum due to advances in fuel economy over time.

CARB has adopted a new approach to passenger vehicles—cars and light trucks—by combining the control of smog-causing pollutants and GHG emissions into a single coordinated package of standards. The new approach also includes efforts to support and accelerate the numbers of plug-in hybrids and zero-emission vehicles in California (CARB 2017).

The proposed Project would create additional electricity and natural gas demand by adding recreational and commercial facilities. New facilities associated with the proposed Project would be subject to the State Building Energy Efficiency Standards, embodied in Title 24 of the California Code of Regulations. The efficiency standards apply to new construction of nonresidential buildings and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting.

To meet the prerequisite energy performance design standards for LEED certification, the Project would be required to meet minimum energy performance standards, energy commissioning requirements, energy metering, and refrigerant management (including the elimination of chlorofluorocarbon-based refrigerants in new heating, ventilating, air-conditioning, and refrigeration systems (USGBC 2017)). It should be noted that these energy-efficiency measures are required prerequisites under the LEED certification system; however, the proposed Project could exceed the LEED standards to achieve additional credits under the LEED certification program, which would result in additional on-site electricity use reductions.

In summary, although natural gas and electricity usage would increase due to the implementation of the Project, the Project's energy efficiency would go beyond code compliance and would be increased through the LEED certification program or equivalent standards. 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 VMT over time. Therefore, impacts to energy resources during operation would be **less than significant**. No mitigation is required.

Threshold B: Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The proposed Project would be subject to and would comply with, at a minimum, the 2016 California Building Code Title 24 (24 CCR, Part 6). Additionally, the proposed Project would go beyond the requirements of the 2016 California Building Code Title 24 requirements because new facilities would be designed to meet LEED Gold or Platinum certifications. The proposed Project would not conflict with existing energy standards and regulations. The electricity and natural gas used for construction of the Project would be temporary and would be substantially less than that required for Project operation and would have a negligible contribution to the Project's overall energy consumption. Additionally, despite creating additional electricity and natural gas demand by adding recreational space and a general increase in the number of visitors, the proposed Project would increase energy efficiency through the LEED certification program or equivalent standards.

Construction

The electricity and natural gas used for construction of the Project would be temporary and would be substantially less than that required for Project operation and would have a negligible contribution to the Project's overall energy consumption. Construction is anticipated to consume 258,252 gallons of gasoline and 638,747 gallons of diesel. This would be a fraction of petroleum that would be consumed in California and Countywide over the course of the construction period. Therefore, construction would have a **less-than-significant** impact with regards to regional energy supplies. No mitigation is required.

Operation

As discussed under the previous thresholds, the proposed Project would result in an increased demand for electricity, natural gas, and petroleum. Design features would reduce the Project's energy consumption by what is required by the 2019 California Building Code Title 24 standards because new facilities would be designed to meet LEED Gold and Silver certification.

The proposed Project would create additional electricity and natural gas demand by adding recreational space and a general increase in the number of visitors. New facilities associated with the proposed Project would be subject to the State Building Energy Efficiency Standards, embodied in Title 24 of the California Code of Regulations. The efficiency standards apply to new construction of both residential and nonresidential buildings and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting.

One of the goals of this Project is to achieve LEED Gold or Platinum certifications. LEED requires at least 10% improvement in energy efficiency over Title 24 requirements (VCA Green 2015). As such, the proposed Project would exceed California code requirements for energy efficiency. To meet the prerequisite energy performance design standards for LEED certification, the Project would be required to meet minimum energy performance standards, energy commissioning requirements, energy metering, and refrigerant management (including the elimination of chlorofluorocarbon-based refrigerants in new heating, ventilating, air-conditioning, and refrigeration systems (USGBC

2017)). It should be noted that these energy-efficiency measures are required prerequisites under the LEED certification system; however, the proposed Project could exceed the LEED standards to achieve additional credits under the LEED certification program, which would result in additional on-site electricity use reductions.

In addition, it is expected that the Pavley regulations will reduce GHG emissions from California passenger vehicles by about 22% in 2012 and about 30% in 2016, all while improving fuel efficiency. By 2025, when the Advanced Clean Cars rules are fully implemented, one in seven new cars sold in California (1.4 million) will be non-polluting or nearly so, including plug-in hybrids, fully electric battery-powered cars, and hydrogen-powered fuel cell vehicles. Meanwhile, gasoline- and diesel-powered passenger vehicles would grow ever cleaner and more efficient. A variety of new technologies, from direct fuel injection to lower rolling resistance tires, will also cut pollution and create more energy-efficient vehicles (CARB 2011). As such, petroleum usage associated with operation of the proposed Project is anticipated to decrease due to a reduction in vehicle miles traveled in the region and due to advances in fuel economy over time. Therefore, impacts related to regional energy supplies and capacity during Project operation would be **less than significant**. No mitigation is required.

3.5.6 Cumulative Impacts

Cumulative projects that could exacerbate the proposed Project's impacts include any projects that could result in wasteful, inefficient, or unnecessary use of energy. However, the Project would not result in wasteful, inefficient, or unnecessary use of energy in large part due to the short-term and temporary nature of the construction period, and because there is no alternative location to obtain the necessary construction materials that would result in the use of less petroleum. Additionally, the operational activity would be minimized through energy reduction strategies pursuant to the Project's aim for Gold or Platinum LEED certifications, as described in Section 3.2.4.5. Finally, the Project would also incorporate Project design feature **PDF-AQ/GHG-1** (see Section 3.2 Air Quality) which would result in decreased energy use. Therefore, impacts to energy use would be **less than cumulatively considerable**. No mitigation is required.

3.5.7 Mitigation Measures

Impacts would be **less than significant**. No mitigation measures are required.

3.5.8 Level of Significance After Mitigation

Impacts would be **less than significant**.

3.5.9 References

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3.6 Geology and Soils

This section describes the existing geology and soils conditions of the Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to the implementation of the proposed Project.

No comments were received in response to the Notice of Preparation (see Appendix A) regarding impacts associated with geology and soils.

Information contained in this section is partly based on Sladden Engineering's *Geotechnical Investigation, Proposed Freezer Building, 7316 Gage Avenue, City of Commerce, California,* dated October 18, 2016, included as Appendix E of this EIR. Other documentation used in this analysis includes the California Geological Survey's (CGS) *Earthquake Zones of Required Investigation for the South Gate Quadrangle* (CGS 1999a) *and* the CGS's *Earthquake Zones of Required Investigation for the Whittier Quadrangle* (CGS 1999b). A museum records search for paleontological resources was also conducted for this study (Appendix E). Other sources consulted are listed in Section 3.6.9 References.

3.6.1 Environmental Setting

Topography

The Project site is 17.37-acre in size, with no prominent topographic highs or lows. Total topographic relief across the site is approximately 20 feet to the southwest, with an average elevation of 150 feet above mean sea level (CGS 1999a, 1999b). Vegetation on-site consists of landscaped trees, bushes, and lawns as well as unmaintained, natural vegetation within the undeveloped portions of the Project site.

Soils

A site-specific geotechnical evaluation of the vacant lot portion of the Project site (see Figure 2-1, Existing Site Conditions) determined through borings that fill soils are present up to 25 feet below ground surface (bgs). These fill soils consist of medium dense, fine to coarse grained, sands and silty sands, with various amounts of gravel and cobbles. Underlying the fill soils are native earth materials consisting of medium dense to very dense, fine to course grained, sandy clay, clayey sand, and sand layers (Appendix E). Similar to the native earth materials observed in the Geotechnical Report, Plate 3A, Areal Geology, of the *Bulletin No. 104, Planned Utilization of the Ground Water Basin of the Coastal Plain of Los Angeles County, Appendix A Ground Water Geology,* indicates that the Project site is underlain by Quaternary-age alluvium consisting of sand, silt, and clay, with some interbedded marine deposits (California DWR Southern District 1988). However, as described in Section 2, Project Description, native soil was removed from the Project site and placed within the footprint of the Interstate 5 (I-5) freeway, during construction of the freeway. The Project site was then refilled with artificial fill soils and debris. As such, artificial fill is expected to be present throughout the remainder of the site.

Seismicity and Faulting

The Project area is located in a seismically active region. Several large and well-known faults are located in the Project area, and movement along those faults, most notably the San Andreas Fault Zone, have greatly influenced the erosional and depositional history of the area. The closest fault to the Project area is the Elysian Park Thrust Fault. Other significant faults in the region include the Compton Thrust Fault, the Whittier section of the Elsinore Fault Zone, and the Newport-Inglewood Fault Zone (Appendix E), as described below.

The California Geological Survey (CGS 2018) classifies faults as:

- Holocene-active faults: faults that have moved during the past approximately 11,700 years (i.e., Holocene time). These faults exhibit signs of geologically recent movement, are most likely to experience movement in the near future, and are capable of surface rupture. These faults are considered "active faults."
- Pre-Holocene faults: faults that have not moved in the past 11,700 years but have moved in the past 2 million years (i.e., Quaternary time). These faults are considered "potentially active faults" and may be capable of surface rupture, but are less likely than Holocene-active faults to cause surface rupture. These faults are also capable of generating future earthquakes.
- Age-undetermined faults: faults where the recency of fault movement has not been determined. These faults are considered "inactive faults."

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

Most of the active faults in California are manifested as fault zones. Fault zones are defined as a region, varying in width from yards to miles that is bounded by major faults within which subordinate faults may be arranged variably or systematically. For example, the San Andreas Fault Zone is a region of crushed and broken rock, varying in width from a few hundred feet to a mile wide. Many smaller faults branch from and join the San Andreas Fault Zone (USGS 2016).

Major active faults in the Project region are listed in Table 3.6-1 and are described below. Distances from the Project site to individual faults represent the distance to the nearest fault segment within the respective fault zones.

San Andreas Fault

The northwest–southeast trending, right-lateral, strike-slip San Andreas Fault (Holocene-active) is the longest fault in California. Many areas along this fault zone have undergone numerous and destructive earthquakes in historical times. As a tectonic plate boundary, it may represent the single most significant earthquake fault zone in California (Los Angeles County 2014). This fault is located approximately 44 miles to the northeast of the Project site and is capable of producing a Mw 8.0 earthquake (CGS 2010, CIT 2013).

Elysian Park Thrust Fault

Blind or buried thrust faults are faults without a surface expression and are a significant source of seismic activity. These faults are typically broadly defined based on the analysis of seismic wave recordings of hundreds of small and large earthquakes in the southern California area. Due to the buried nature of these thrust faults, their existence is sometimes not known until an earthquake occurs along the fault.

The Elysian Park anticline (i.e., geologic fold in the strata) is thought to overlie the Elysian Park Thrust Fault (Holocene-active). This fault has been estimated to cause an earthquake every 500 to 1,300 years in the Mw 6.2 to 6.7 range (Geological Society of American Bulletin 2000). Previous studies of this fault indicate that the thrust fault is located less than 1.2 miles from the Project site and is capable of producing a Mw 6.4 earthquake (Appendix E); (CGS 2010).

Compton Thrust Fault

Similar to the Elysian Park Thrust Fault, the Compton Thrust Fault is considered a blind thrust fault representing a potentially serious seismic hazard to the greater Los Angeles region. Previous studies of this fault indicate that the fault is located approximately 5.4 miles from the Project site and is capable of producing a Mw 6.8 earthquake (Appendix E); (CGS 2010).

Whittier Fault

The east-west trending, right-lateral, predominately strike-slip Whittier section of the Elsinore Fault Zone (Holocene-active) extends for approximately 25 miles throughout Los Angeles County (CIT 2013). Historical earthquakes, including the 1987 Whittier earthquake, damaged approximately 50 businesses and 12 homes within the City (City of Commerce 2008). This fault is located approximately 6.2 miles east-northeast of the Project site and is capable of producing a Mw 6.8 earthquake (Appendix E); (CGS 2010).

Newport-Inglewood Fault

The northwest-southeast trending, right lateral, predominately strike slip Newport-Inglewood Fault (Holocene-active) has a discontinuous surface trace throughout the Los Angeles Basin, but can easily be noted by the existence of a chain of low hills extending from Culver City to Signal Hill (CIT 2013). Historically, the Newport-Inglewood Fault triggered the 1933 Long Beach Earthquake, which caused substantial damage in the City of Commerce. As such, while not located directly within the City, this fault poses the greatest threat to the City (City of Commerce 2008). This fault is located approximately 9.4 miles to the southwest of the Project site and is capable of producing a Mw 6.9 earthquake (Appendix E); (CGS 2010).

Table 3.6.1 Regional Faulting

Regional Faulting	Approximate Closest Distance to the Project Site	Fault Age	Maximum Event Magnitude (Mw) *
Elysian Park Thrust Fault	<1.2 miles	Holocene-active	6.4
Compton Thrust Fault	5.4 miles	Age-undetermined	6.8
Whittier Fault	6.2 miles	Holocene-active	6.8
Newport-Inglewood Fault	9.4 miles	Holocene-active	6.9
Raymond Fault	10.7 miles	Holocene-active	6.5
Verdugo Fault	11.1 miles	Holocene-active	6.7
Hollywood Fault	11.7 miles	Holocene-active	6.9
Sierra Madre Fault	14.4 miles	Holocene-active	6.7
San Jose	14.5 miles	Holocene-active	6.4
San Andreas Fault	44 miles	Holocene-active	8.0

Source: (Appendix E); CIT 2013.
Notes:
* Moment Magnitude (Mw) is a measure of an earthquake's magnitude (size or strength) based on its seismic energy. Magnitudes are based on a logarithmic scale (base 10) which means that every whole number you go up on the magnitude scale, recorded ground motion goes up 10 times in strength. Maximum Event Magnitude is the estimated maximum magnitude of a given fault, expressed in Mw.

Ground Shaking

Ground shaking is the movement of the earth's surface as a result of an earthquake. Ground motion produced by seismic waves emanates from slow or sudden slip on a fault. The degree of ground shaking felt at a given site depends on the distance from the earthquake source, the magnitude of the earthquake, the type of subsurface material on which the site is situated, and topography. Generally, ground shaking is less severe on rock than on alluvium or fill, but other local phenomena may override this generalization. Ground shaking can produce significant ground horizontal and vertical movement that can result in severe damage to structures that are generally not equipped to withstand it.

The Project site has been subjected to past ground shaking by faults that traverse though the region. Seismic shaking is expected to produce strong ground shaking during the design life of the proposed Project. Sladden Engineering calculated that the vacant lot portion of the Project site could be subjected to ground motions of approximately 0.45g[1] (gravity). The peak ground acceleration of this portion of the site is predicted to have a 475 year return period and a 10% chance of exceedance in 50 years (Appendix E). As seismic events occur on a regional scale, it's expected that the remainder of the site would be subject to similar degrees of ground motions and return intervals.

Surface Rupture

Surface rupture involves the displacement and cracking of the ground surface along a fault trace. Surface ruptures are visible instances of horizontal or vertical displacement, or a combination of the two, typically confined to a narrow zone along the fault. Surface rupture is more likely to occur in conjunction with active fault segments where earthquakes are large, or where the origin of the movement (earthquake hypocenter) is shallow.

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 regulates development near Holocene-active faults to address the hazard of surface fault rupture. This Act requires the State Geologist to establish regulatory zones (known as Alquist-Priolo Special Study Fault Zones) around the surface traces of Holocene-active faults and to issue appropriate maps. Local agencies regulate most development projects within the zones. Before a project can be permitted, the local agency requires a geologic investigation to demonstrate that proposed buildings will not be constructed across active faults. A licensed geologist must prepare an evaluation and written report for the specific site. If a Holocene-active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back from the fault. The setbacks must be sufficient to account for both Holocene-active fault traces and fault-related ground deformation. A structure for human occupancy is defined as any structure used or intended for supporting or sheltering any use or occupancy, which is expected to have a human occupancy rate of more than 2,000 person-hours per year (CGS 2018).

The State Seismic Hazard Zone Maps for the South Gate and Whittier Quadrangles indicate that there are no Alquist-Priolo Faults with the boundaries of the Project site. The closest Alquist-Priolo Fault Zones are associated with the East Montebello Fault, located approximately 5.4 miles to northeast, and the Whittier Fault, located approximately 5 miles to the east of the Project site (CGS 2017, USGS 2019b). In addition, no signs of active surface faulting were observed during Sladden Engineering's review of the vacant lot portion of the Project site.

[1] The forces caused by ground shaking during an earthquake can be measured as a percentage of gravity, or percent g. As such, "g" is a measurement of the force of ground shaking during an earthquake, measured with respect to the force of gravity.

Liquefaction/Lateral Spreading

Liquefaction is a process in which loose, saturated granular soil loses strength as a result of cyclic loading[2]. The strength loss is a result of a decrease in granular sand volume and positive increase in pore pressures. Generally, liquefaction can occur if all of the following conditions apply: liquefaction-susceptible soil, groundwater within a depth of 50 feet or less, and strong seismic ground shaking. Soils that are most susceptible to liquefaction are clay-free deposits of sands and silts, and unconsolidated alluvium (Appendix E). In addition, lateral spreading, a hazard associated with liquefaction, is the finite, lateral movement of gently to steeply sloping, saturated soil deposits caused by earthquake-induced liquefaction.

Groundwater was not encountered to the maximum depth explored (51.5 bgs) during the site-specific geotechnical investigation of the vacant lot portion of the Project site. However historic groundwater levels for the region has been mapped at an approximate depth of 15 bgs (Appendix E).

The State Seismic Hazard Zone Maps for the South Gate and Whittier Quadrangles indicate that all but a portion of the northern portion of the Project site is located within an area designated as having a potential for liquefaction (CGS 1999a; CGS 1999b). A geotechnical analysis performed by Sladden Engineering concluded that on-site soils within the vacant lot portion of the Project site could be susceptible to up to 3.37 inches of seismically induced settlement. The differential settlement is expected to be less than 1.5 inches over a horizontal distance of 100 feet. The seismic settlement analysis is based on a peak ground analysis of 0.809g, and a historic high groundwater table of 15 feet bgs (Appendix E). While this seismic settlement analysis is limited in scope to the vacant lot portion of the Project site, there would likely be some degree of seismically induced settlement and differential settlement throughout the remainder of the Project site in the event of an earthquake.

Slope Failure/Landslides

The site is situated on relatively level ground and is not immediately adjacent to any slopes or hillsides that could be potentially susceptible to slope instability. According to the State Seismic Hazard Zone Maps for the South Gate and Whittier Quadrangles, the site is not situated within a Seismic Hazard Zone for slope instability (CGS 1999a; CGS 1999b). In addition, no signs of slope instability in the form of landslides, earthflows, or slumps were observed at or near the subject site during a geotechnical investigation of the vacant lot portion of the Project site. As such, risks associated with slope instability was determined to be “negligible” (Appendix E). As topography, slope, and soil characteristics don’t dramatically differ for the remainder of the site, the remainder of the Project site would additionally likely have a low to no potential for slope failure and landslides.

Subsidence

Land subsidence is a gradual settling or sudden sinking of the Earth's surface due to subsurface movement of earth materials. The main cause of subsidence in California is groundwater pumping, however subsidence can additionally occur as a result of peat loss and oil extraction. The effects of subsidence include damage to buildings and infrastructure, increased flood risk in low-lying areas, and lasting damage to groundwater aquifers and aquatic ecosystems (USGS 2019a).

According to the U.S. Geological Survey “Areas of Land Subsidence in California Map,” the Project area is not currently within a zone of subsidence from groundwater pumping, peat loss, or oil extraction (USGS 2019a). As such, the risk of subsidence at the Project site is considered low.

[2] Cyclic loading is the application of repeated or fluctuating stresses, strains, or stress intensities to locations on structural components.

Expansive Soils

Expansive soils are composed largely of clays, which greatly increase in volume when saturated with water and shrink when dried. Expansive soils can cause building foundations to rise during the rainy season and fall during the dry season. If this expansive movement varies underneath different parts of a single building, foundations may crack, structural portions of the building may be distorted, and doors and windows may become warped such that the doors and windows no longer function properly. The potential for soil to undergo shrink and swell is greatly enhanced by the presence of a fluctuating, shallow groundwater table. Changes in the volume of expansive soils can result in the consolidation of soft clays after the lowering of the water table or the placement of fill. Based on soil testing along the vacant lot portion of the site, the materials underlying the site have a "medium" expansion potential (Appendix E). As the remainder of the site is underlain by clayey soils, there is a potential for soil expansion throughout the Project site.

Paleontological Resources

As indicated in Society of Vertebrate Paleontology (SVP) (2010) guidelines, the assessment for paleontological resources is based on the "the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, plant, or trace fossils and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, paleoecologic, taphonomic, biochronologic, or stratigraphic data." Quaternary alluvial deposits (Holocene; less than 11,700 years old) are mapped within the the Project area (Dibblee and Ehrenspeck, 2001) (Jennings, 1962). Older (Pleistocene age; ~2.58 million to 11,700 years old), "Ice-Age", Quaternary alluvial deposits are mapped at the surface along the northern boundary of the Project site, and potentially underlie younger Quaternary alluvial deposits at an unknown depth. According to the geotechnical findings for the eastern Project area, artificial fill was encountered within borings to a depth of 25 feet (Appendix E). Artificial fill has no potential to yield paleontological resources, and thus, has no paleontological resource sensitivity. Younger Quaternary alluvial deposits have a low paleontological resource sensitivity. Pleistocene age sedimentary deposits potentially underlie the western portion of the Project area, and have been known to produce scientifically significant fossils in this region and have high paleontological resource sensitivity (Appendix E).

Although no fossils are recorded from within the project area itself, they are documented nearby from similar sedimentary deposits as those underlying the project area. According to the records search results received from the Natural History Museum of Los Angeles County (LACM), their closest fossil localities are LACM 7701-7702, which yielded fossil specimens of threespine stickleback (*Gasterosteus aculeatus*), salamander (*Batrachoseps*), lizard (Lacertillia), snake (Colubridae), rabbit (*Sylvilagus*), pocket mouse (*Microtus*), harvest mouse (*Reithrodontomys*), and pocket gopher (*Thomomys*), between 11 and 34 feet below grade, northwest of the proposed project area, near the intersection of Atlantic Avenue and the Long Beach Freeway (Interstate 710) (Appendix E) (McLeod 2019).

3.6.2 Relevant Plans, Policies, and Ordinances

Federal

The following federal regulations pertaining to seismicity and geologic hazards would apply to the proposed Project.

Earthquake Hazards Reduction Act

In October 1977, the U.S. Congress passed the Earthquake Hazards Reduction Act to reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards reduction program. To accomplish this goal, the act established the National Earthquake Hazards Reduction Program (NEHRP). This program was substantially amended in November 1990 by the National Earthquake Hazards Reduction Program Act (NEHRPA), which refined the description of agency responsibilities, program goals, and objectives.

The mission of NEHRP includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improved building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improved mitigation capacity; and accelerated application of research results. The NEHRPA designates the Federal Emergency Management Agency as the lead agency of the program and assigns several planning, coordinating, and reporting responsibilities. Other NEHRPA agencies include the National Institute of Standards and Technology, National Science Foundation, and the U.S. Geological Survey.

State

The following state regulations pertaining to seismicity and geologic hazards would apply to the proposed Project.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Act (PRC Sections 2621–2630) was passed in 1972 to mitigate the hazard of surface faulting to structures designed for human occupancy. The main purpose of the law is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The law addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards. The Alquist-Priolo Act requires the State Geologist to establish regulatory zones known as Earthquake Fault Zones around the surface traces of active faults and to issue appropriate maps. The maps are distributed to all affected cities, counties, and state agencies for their use in planning efforts. Before a project can be permitted in a designated Alquist-Priolo Earthquake Fault Zone, cities and counties must require a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (PRC Sections 2690–2699.6) addresses earthquake hazards from non-surface fault rupture, including liquefaction and seismically induced landslides. The act established a mapping program for areas that have the potential for liquefaction, landslide, strong ground shaking, or other earthquake and geologic hazards. The act also specifies that the lead agency for a project may withhold development permits until geologic or soils investigations are conducted for specific sites and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

National Pollutant Discharge Elimination System Permit

In California, the State Water Resources Control Board (SWRCB) administers regulations promulgated by the U.S. Environmental Protection Agency (EPA) (55 Code of Federal Regulations [CFR] 47990), requiring the permitting of stormwater-generated pollution under the National Pollutant Discharge Elimination System (NPDES). In turn, the SWRCB's jurisdiction is administered through nine Regional Water Quality Control Boards (RWQCBs). Under these federal regulations, an operator must obtain a General Construction Permit through the NPDES Stormwater Program for all construction activities with ground disturbance of 1 acre or more. The General Construction Permit requires the implementation of best management practices (BMPs) to reduce sedimentation into surface waters and to control erosion. One element of compliance with the NPDES permit is preparation of a storm water pollution prevention plan (SWPPP) that addresses control of water pollution, including sediment, in runoff during construction.

California Building Standards Code

The California Building Standards Commission (CBSC) is responsible for coordinating, managing, adopting, and approving building codes in California. In July 2007, the CBSC adopted and published the 2006 International Building Code as the 2007 California Building Code (CBC). This new code became effective on January 1, 2008, and updated all the subsequent codes under CCR Title 24. The City of Commerce Building & Safety Department has adopted the Los Angeles Building Code (Title 26), which in turn has adopted the CBC, of which the most recent version was published in 2016. The State of California provides minimum standards for building design through the 2016 CBC (CCR Title 24). Effective January 1, 2020, the City of Commerce Building & Safety Department will review all plans in accordance with the 2020 Los Angeles County Building Code.

Where no other building codes apply, Chapter 29 of the CBC regulates excavation, foundations, and retaining walls. The CBC applies to building design and construction in California and is based on the federal Uniform Building Code (UBC), used widely throughout the country (generally adopted on a state-by-state or district-by-district basis). The CBC has been modified for California conditions with numerous more detailed or more stringent regulations.

The state earthquake protection law (California Health and Safety Code Section 19100 et seq.) requires that structures be designed to resist stresses produced by lateral forces caused by wind and earthquakes. The CBC replaces the previous "seismic zones" (assigned a number from 1 to 4, where 4 required the most earthquake-resistant design) with Seismic Design Categories A through F (where F requires the most earthquake-resistant design) for structures designed for a project site. With the shift from seismic zones to seismic design, the CBC philosophy has shifted from "life safety design" to "collapse prevention," meaning that structures are designed for prevention of collapse for the maximum level of ground shaking that could reasonably be expected to occur at a site. Chapter 16 of the CBC specifies exactly how each seismic design category is to be determined on a site-specific basis through the site-specific soil characteristics and proximity to potential seismic hazards.

Chapter 18 of the CBC regulates the excavation of foundations and retaining walls. This chapter regulates the preparation of a preliminary soil report, engineering geologic report, geotechnical report, and supplemental ground-response report. Chapter 18 also regulates the analysis of expansive soils and the determination of the depth to groundwater table. For Seismic Design Category C, Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading. For Seismic Design Categories D, E, and F, Chapter 18 requires these same analyses plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also requires addressing mitigation measures to be considered in structural design. Mitigation measures may include ground

stabilization, selection of appropriate foundation type and depths, selection of appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. The potential for liquefaction and soil strength loss must be evaluated for site-specific peak ground acceleration magnitudes and source characteristics consistent with the design earthquake ground motions. Peak ground acceleration must be determined from a site-specific study, the contents of which are specified in CBC Chapter 18.

Finally, Appendix Chapter J of the 2016 CBC regulates grading activities, including drainage and erosion control and construction on unstable soils, such as expansive soils and areas subject to liquefaction.

Paleontological Resources

Paleontological resources are limited, nonrenewable resources of scientific, cultural, and educational value and are afforded protection under state laws and regulations. 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 fossils of signal importance – remains of species or genera new to science, for example, or fossils exhibiting features not previously recognized for a given animal group – as well as localities that yield fossils significant in their abundance, diversity, preservation, and so forth. Further, CEQA provides that generally, a resource shall be considered "historically significant" if it has yielded or may be likely to yield information important in prehistory (Cal. Pub. Resources Code § 15064.5 [a][3][D]). Paleontological resources would fall within this category. The Public Resources Code, Chapter 1.7, sections 5097.5 and 30244 also regulates removal of paleontological resources from state lands, defines unauthorized removal of fossil resources as a misdemeanor, and requires mitigation of disturbed sites.

Local

The following local/regional regulations pertaining to seismicity and geologic hazards would apply to the proposed Project.

Los Angeles Building Code

Earthwork activities, including grading, are governed by the Los Angeles Building Code, which has been adopted by the City of Commerce Building & Safety Department. Specifically, Section 91.7006.7 of the Los Angeles Building Code includes requirements regarding import and export of material; Section 91.7010 includes regulations pertaining to excavations; Section 91.7011 includes requirements for fill materials; Section 91.7014 includes general construction requirements as well as requirements regarding flood and mudflow protection; and Section 91.7016 includes regulations for areas that are subject to landslides and unstable soils. Additionally, Section 91.803 of the Los Angeles Building Code includes specific requirements addressing seismic design, grading, foundation design, geologic investigations and reports, soil and rock testing, and groundwater. The Los Angeles Building Code incorporates by reference the CBC. The City of Commerce Building & Safety Department is responsible for implementing the provisions of the Los Angeles Building Code.

City of Commerce General Plan

The 2008 Safety Element of the City's General Plan contains the following goal and policies potentially relevant to the proposed Project:

Safety Element Policies

Safety Policy 4.1. The city of Commerce will ensure that appropriate mitigation measures relative to soil contamination and soils characteristics (subsidence, erosion, etc.) are required for development and redevelopment in order to reduce hazards.

Safety Policy 4.3. The city of Commerce will work with the Los Angeles County Department of Building and Safety to identify and monitor those buildings that may represent a risk in the event of a major earthquake.

Safety Policy 5.1. The city of Commerce will continue to support the efforts of public safety officials to educate the public in preparing for a major and destructive earthquake.

Resource Management Programs

Cultural Resource Management. Should archaeological or paleontological resources be encountered during excavation and grading activities, all work would cease until appropriate salvage measures are established. Appendix K of the State CEQA Guidelines shall be followed for excavation monitoring and salvage work that may be necessary. Salvage and preservation effots will be undertaken pursuant to Appendix K requirements outlined in CEQA.

3.6.3 Thresholds of Significance

The significance criteria used to evaluate the Project impacts to geology and soils are based on Appendix G of the State CEQA Guidelines. Through the analysis in the Initial Study (see Appendix A), it was determined that the proposed Project would not result in a landslide (i.e., Threshold A (iv)) and would not require the use of septic tanks or alternative wastewater disposal systems (i.e., Threshold E). Accordingly, these issues are not further analyzed in the EIR. Based on the remaining thresholds (Thresholds A (i, ii, and iii), B, C, D, and F) according to Appendix G of the State CEQA Guidelines, a significant impact related to geology and soils would occur if the Project would:

A. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
   I. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area based on other substantial evidence of as known fault. Refer to Division of Mines and Geology Special Publication 42.
   II. Strong seismic ground shaking.
   III. Seismic-related ground failure, including liquefaction.
B. Result in substantial soil erosion or the loss of topsoil.
C. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
D. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property.
F. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

3.6.4 Methodology

Analysis of impacts to geology, soils, and paleontological resources are assessed by comparing existing conditions to changes that could occur associated with implementation of the proposed Project. The analysis evaluates if the Project would directly or indirectly cause or exacerbate soil, geologic, or seismic hazards. It should be noted that existing conditions do not constitute a significant impact 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.). A geotechnical investigation by Sladden Engineering (Appendix E) was used when evaluating geologic hazards, in conjunction with publicly available soils-, geologic-, and seismic hazards-related documents, with respect to the thresholds of significance listed above.

3.6.5 Impacts Analysis

Threshold A: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

I. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area based on other substantial evidence of as known fault. Refer to Division of Mines and Geology Special Publication 42.

The Project site is not located within an Alquist-Priolo Earthquake Fault Zone. The closest such zone is located along the the Whittier section of the Elsinore Fault Zone, located approximately 6 miles to the east-northeast of the Project site (CGS 1998). In addition, no known faults traverse the Project site. Furthermore, the proposed Project site would not directly or indirectly cause or exacerbate existing fault rupture risks from the construction of new buildings and associated infrastructure on the Project site. As a result, **no impact** related to surface rupture of a known earthquake fault would occur.

II. Strong seismic ground shaking?

The Project site is located in the seismically active region of Southern California. Movement along major faults in proximity to the Project site (e.g., Elysian Park Thrust, Whittier, Newport-Inglewood, and San Andreas) are capable of producing moderate to large earthquakes that could affect the City, including the Project site. However, proposed Project site construction would be completed in accordance with State and City building codes. As with all development with the City of Commerce, development within the Project site would be required to comply with the seismic safety requirements of the CBC and the Los Angeles Building Code (Title 26), which in turn has adopted the CBC. The CBC provides procedures for earthquake resistant structural design that includes considerations for onsite soil conditions, occupancy, and the configuration of the structure, including the structural system and height. Although substantial damage to structures may be unavoidable during large earthquakes, the proposed structures would be designed to resist structural collapse and thereby provide reasonable protection from serious injury, catastrophic property damage, and loss of life.

As previously discussed, Chapters 18 and 18A of the CBC include (but are not limited to) the requirements for foundation and soil investigations (Sections 1803 and 1803A); excavation, grading, and fill (Sections 1804 and 1804A); damp-proofing and water-proofing (Sections 1805 and 1805A); allowable

load-bearing values of soils (Sections 1806 and 1806A); the design of foundation walls, retaining walls, embedded posts and poles (Sections 1807 and 1807A), and foundations (Sections 1808 and 1808A); and design of shallow foundations (Sections 1809 and 1809A) and deep foundations (Sections 1810 and 1810A). With incorporation of CBC procedures aimed at mitigating and minimizing geologic hazards, the proposed Project site would not directly or indirectly cause substantial adverse effects involving strong seismic ground shaking. Impacts would be **less than significant**. No mitigation is required.

III. Seismic-related ground failure, including liquefaction?

As previously discussed, the Project site is underlain by soils that could be susceptible to liquefaction during a seismic event. Hazards associated with soil liquefaction and seismic-related ground failure include temporary loss of soil bearing capacity, lateral spreading, differential compaction, and slope instability. A liquefaction analysis of the vacant lot portion of the Project site indicated that on-site soils may susceptible to up to 3.37 inches of seismically induced settlement and would have a differential settlement of less than 1.5 inches over a horizontal distance of 100 feet (Appendix E). In addition, the remainder of the site is underlain by sandy soils that could be susceptible to liquefaction in the event of an earthquake.

Final Project design, grading, and construction would be completed in accordance with a standard, site-specific geotechnical investigation of the entire site. Because the geotechnical report completed to date for the Project site (Appendix E) was completed in association with a prior development project only on the vacant lot, an updated geotechnical report would be completed for the vacant lot, as well as the remainder of the site. Proposed remediation of the Project site involves the excavation and removal of all former landfill debris and contaminated soils, to an approximately 20-foot depth. The geotechnical report completed for the vacant lot recommended that all artificial fill and native low density near surface soil be removed to competent native soil, expected at depths of up to 25 feet below existing grade. Remedial grading would extend laterally a minimum of 10 feet beyond the limits of proposed foundations, where possible.

Similar to the exisiting geotechnical report, the updated geotechnical investigation would include soil borings throughout the Project site, and based on soil samples collected in the borings, would provide recommendations for excavation of incompetent material, compaction of soil, and the installation of foundations designed to resist seismically induced settlement. These recommendations, in combination with other standard geotechnical recommendations regarding grading and construction, would minimize the potential for seismically induced settlement to occur.

Although proposed development within the proposed Project site could be subject to liquefaction, the Project site would not increase or exacerbate the potential for liquefaction to occur and therefore would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismically-related ground failure, including liquefaction. Impacts would be **less than significant**. No mitigation is required.

Threshold B: Would the project result in substantial soil erosion or the loss of topsoil?

Construction

Proposed Project construction would entail the demolition, excavation, and grading of the entire Project site, followed by construction of the proposed structures. Construction activities would include site preparation, grading/earthwork, building construction, paving, and architectural coating. Prior to development of the Project site, a Remedial Action Plan, approved by the Los Angeles Regional Quality Control Board (RWQCB), would require

the excavation and removal of all former landfill debris and contaminated soils to an approximate 20-foot depth. Following construction of subterranean parking structures, the excavation would be then be replaced with compacted, non-contaminated fill. In addition, remedial grading to lower the moisture content may be required during site grading if overly wet soils are encountered. Soil excavations and backfilling would require temporary stockpiling. These construction activities could result in temporary, short-term impacts related to soil erosion and possible off-site sedimentation of nearby drainages, including the adjacent Rio Hondo. As such, there is a potential for erosion during the development of the Project site. State and federal NPDES requirements include the preparation and implementation of a SWPPP for projects with cumulative ground disturbance in excess of 1 acre. In compliance with Construction General Permit requirements, the SWPPP would establish erosion and sediment control BMPs for construction activities. Typical examples of erosion-related construction BMPs include:

- Silt fences and/or fiber rolls installed along with the limits of work and/or the Project construction site;
- Stockpile containment and exposed soil stabilization structures (e.g., visqueen plastic sheeting, fiber rolls, gravel bags and/or hydroseed);
- Runoff control devices (e.g., fiber rolls, gravel bag barriers/chevrons, etc.) used during construction phases conducted during the rainy season;
- Wind erosion (dust) controls;
- Tracking controls at the site entrance, including regular street sweeping and tire washes for equipment; and
- Regular inspections and maintenance of BMPs.

These BMPs would be refined and/or added to as necessary by a qualified SWPPP professional to meet the performance standards in the Construction General Permit.

In addition, development activities would comply with City grading and erosion control standards to minimize soil erosion. Compliance with the Construction General Permit would ensure that soil erosion or loss of topsoil impacts would be minimized. As such, impacts would be **less than significant**. No mitigation is required.

Operations

Long-term operation of the proposed Project would not result in substantial soil erosion or loss of topsoil as the majority of the Project site would be covered by proposed structures and paving, while the remaining portions of the site would be covered with irrigated landscaping. No exposed areas subject to erosion would be created or affected by the proposed Project. In addition, the majority of the area surrounding the Project site is completely developed and would not be susceptible to indirect erosional processes (e.g., uncontrolled runoff) caused by the proposed Project. With the implementation of applicable construction BMPs, impacts would be **less than significant** related to erosion or loss of topsoil. No mitigation is required.

Threshold C: Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

As described above for Checklist Question A (III), the Project site would not increase the potential for liquefaction and lateral spreading to occur. In addition, as described in Section 3.6.3, Thresholds of Significance, the Initial Study determined that Project would not increase the potential for landslides to occur. Therefore, potential impacts associated with these geologic hazards would be **less than significant**. No mitigation is required.

Subsidence

With respect to subsidence, according to the U.S. Geological Survey *Areas of Land Subsidence in California Map*, the Project site is not currently subsiding as a result of groundwater extraction, oil extraction, or peat loss. In addition, Project construction and operation would not exacerbate the potential for subsidence to occur. Although groundwater dewatering may be required during construction, the relative amount of groundwater extracted would be minimal. Therefore, potential impacts associated with subsidence would be **less than significant**. No mitigation is required.

Collapsible Soils

In regards to collapsible soils, artificial fill and alluvial fan sediments underlie the Project site. The fill deposits would be removed prior to Project construction. Based on a geotechnical evaluation of the vacant lot portion of the Project site, alluvium underlying the fill deposits consists of medium dense to very dense, sandy clay, clayey sand, and sand. The geotechnical report did not identify collapsible soils as a geologic hazard, as dense sands are not typically prone to collapse. Therefore, potential impacts associated with collapsible soils would be **less than significant**. No mitigation is required.

Threshold D: 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?

Expansive soils are clay-rich soils that shrink when dry and swell when wet. This change in volume can exert substantial pressure on foundations, resulting in structural distress and/or damage. Laboratory testing of on-site soils within the vacant lot portion of the Project site indicates that the soils have a medium expansion potential. Soils underlying the remaining portions of the Project site are likely similar to soils within the vacant lot. As such, these soils would likely be susceptible to expansion. In compliance with the CBC and Los Angeles Building Code, risk of structural damage caused by volumetric changes in the subgrade soil would be considered during final design. Slabs on grade would be designed based on post-grading test results. Typical mitigation measures described in Chapter 18 of the CBC to alleviate expansive soils include:

- Excavation of expansive soils beneath proposed foundations and backfill with non-expansive soils;
- Installation of foundations designed to resist forces exerted on the foundation due by expansive soils; and
- Stabilization of the soils by chemical, dewatering, pre-saturation, or equivalent techniques.

As a result, the proposed Project would not increase or exacerbate the potential for expansive soils to create substantial direct or indirect risks to life or property. As such, impacts associated with expansive soils would be **less than significant**. No mitigation is required..

Threshold F: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Excavations to a depth of 25 feet in the eastern portion of the Project site are anticipated to encounter artificial fill. However, if excavations in the western portion of the Project site encounter previously undisturbed older Quaternary alluvial deposits, Pleistcoene age vertebrate fossils may be impacted. Thus, deep excavations within the western portion of the Project site for subterranean parking could result in a potentially significant paleontological resource impact. However, with the implementation of mitigation measure **MM-GEO-1**, impacts would be **less than significant with mitigation incorporated**.

3.6.6 Cumulative Impacts

Potential cumulative impacts on geology and soils would result from projects that combine to create geologic hazards, including unstable geologic conditions, or contribute substantially to erosion. The majority of impacts from geologic hazards, such as liquefaction, landslides, and unstable soils, are site-specific and are, therefore, generally mitigated on a project-by-project basis. Each cumulative project would be required to adhere to required building engineering design per the most recent version of the CBC in order to ensure the safety of building occupants and avoid a cumulative geologic hazard. Additionally, as needed, projects would incorporate individual mitigation or geotechnical requirements for site-specific geologic hazards present on each individual cumulative project site. Therefore, a potential cumulative impact related to site-specific geologic hazards such as subsidence, and soil collapse would not occur. Therefore, with the implementation of mitigation measure **MM-GEO-1**, the proposed Project, in combination with other cumulative projects, would not contribute to a significant cumulative impact associated with geology and soils. Cumulative impacts would be **less than significant with mitigation incorporated**.

3.6.7 Mitigation Measures

To reduce potential impacts to subsurface paleontological resources from excavations during development, the following mitigation measure shall be implemented:

MM-GEO-1 Prior to issuance of a grading permit within areas identified with a high paleontological sensitivity (older Quaternary alluvial deposits), a qualified paleontologist shall be retained per the Society of Vertebrate Paleontology (SVP) (2010) guidelines. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the Project. The PRIMP shall be consistent with the SVP (2010) guidelines and shall outline requirements for preconstruction meeting attendance and worker environmental awareness training, where monitoring is required within the Project area 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 paleontological monitor shall be on-site during rough grading and other ground-disturbing activities in previously undisturbed, fine-grained older Quaternary alluvial deposits. These deposits may be encountered at shallow depths below the surface. Within developed areas of the proposed Project, this depth is assumed to be at least twenty-five feet below the ground surface in the eastern portion of the Project. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor shall temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery shall be roped off with a 50-foot-radius buffer. Once documentation and collection of the find is completed pursuant to the PRIMP and the Society of Vertebrate Paleontology (SVP) (2010) guidelines, the monitor shall allow grading to recommence in the area of the find. Curation and storage of salvaged specimens in an approved repository institution shall be completed for all significant resources discovered and collected.

3.6.8 Level of Significance After Mitigation

With the implementation of mitigation measure MM-GEO-1, impacts would be less than significant.

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3.7 Greenhouse Gas Emissions

This section describes the existing setting with respect to climate change for the Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Project.

Comments received in response to the Notice of Preparation (see Appendix A) included concerns regarding impacts on energy consumption, transit use, and reduction of GHGs.

Information contained in this section is based on an evaluation of the Project area. Other documentation used in this analysis includes GHG emissions modeling (Appendix B). Other sources consulted are listed in Section 3.7.9 References.

3.7.1 Environmental Setting

3.7.1.1 Climate Change Overview

Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind patterns, lasting for an extended period of time (i.e., decades or longer). 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 2017a).

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.

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 is the most significant driver of observed climate change (IPCC 2013; EPA 2017a). 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 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, which is discussed further in Section 3.7.1.5, Potential Effects of Climate Change.

3.7.1.2 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 State CEQA Guidelines, Section 15364.5.) Some GHGs, such as CO_2, CH_4, and N_2O, occur naturally and 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, which have a much greater heat-absorption potential than CO_2, 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.[1]

Carbon Dioxide. CO_2 is a naturally occurring gas and a by-product of human activities and is the principal anthropogenic GHG that affects the Earth's radiative balance. Natural sources of CO_2 include respiration of bacteria, plants, animals, and fungus; evaporation from oceans; volcanic out-gassing; and decomposition of dead organic matter. Human activities that generate CO_2 are from the combustion of fuels such as coal, oil, natural gas, and wood and changes in land use.

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 (e.g., 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., CFCs, 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 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.

[1] The descriptions of GHGs are summarized from the Intergovernmental Panel on Climate Change (IPCC) Second Assessment Report (1995), IPCC Fourth Assessment Report (2007), CARB's "Glossary of Terms Used in GHG Inventories" (2015a), and EPA's "Glossary of Climate Change Terms" (2016e).

- **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.

Chlorofluorocarbons. CFCs are synthetic chemicals that have been used as cleaning solvents, refrigerants, and aerosol propellants. CFCs are chemically unreactive in the lower atmosphere (troposphere) and the production of CFCs was prohibited in 1987 due to the chemical destruction of stratospheric O_3.

Hydrochlorofluorocarbons. HCFCs are a large group of compounds, whose structure is very close to that of CFCs—containing hydrogen, fluorine, chlorine, and carbon atoms—but including one or more hydrogen atoms. Like HFCs, HCFCs are used in refrigerants and propellants. HCFCs were also used in place of CFCs for some applications; however, their use in general is being phased out.

Black Carbon. Black carbon is a component of fine particulate matter, which has been identified as a leading environmental risk factor for premature death. It is produced from the incomplete combustion of fossil fuels and biomass burning, particularly from older diesel engines and forest fires. Black carbon warms the atmosphere by absorbing solar radiation, influences cloud formation, and darkens the surface of snow and ice, which accelerates heat absorption and melting. Black carbon is a short-lived species that varies spatially, which makes it difficult to quantify the global warming potential. Diesel particulate matter emissions are a major source of black carbon and are TACs that have been regulated and controlled in California for several decades to protect public health. In relation to declining diesel particulate matter from the California Air Resources Board's (CARB's) regulations pertaining to diesel engines, diesel fuels, and burning activities, CARB estimates that annual black carbon emissions in California have reduced by 70% between 1990 and 2010, with 95% control expected by 2020 (CARB 2014).

Water Vapor. The primary source of water vapor is evaporation from the ocean, with additional vapor generated by sublimation (change from solid to gas) from ice and snow, evaporation from other water bodies, and transpiration from plant leaves. Water vapor is the most important, abundant, and variable GHG in the atmosphere and maintains a climate necessary for life.

Ozone. Tropospheric O_3, which is created by photochemical reactions involving gases from both natural sources and human activities, acts as a GHG. Stratospheric O_3, which is created by the interaction between solar ultraviolet radiation and molecular oxygen (O_2), plays a decisive role in the stratospheric radiative balance. Depletion of stratospheric O_3, due to chemical reactions that may be enhanced by climate change, results in an increased ground-level flux of ultraviolet-B radiation.

Aerosols. Aerosols are suspensions of particulate matter in a gas emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light.

3.7.1.3 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, and/or when a gas affects atmospheric processes that alter the radiative balance of the Earth (e.g., affect cloud formation or albedo) (EPA

2016e). 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 CalEEMod (version 2016.3.2) 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.

3.7.1.4 Sources of Greenhouse Gas Emissions

Anthropogenic GHG emissions worldwide in 2017 (the most recent year for which data is available) totaled approximately 50,860 million metric tons (MMT) of CO_2e, excluding land use change and forestry (PBL 2018). Six countries—China, the United States, the Russian Federation, India, Japan, and Brazil—and the European community accounted for approximately 65% of the total global emissions, or approximately 33,290 MMT CO_2e (PBL 2018).

Per the EPA's *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2017* (2019), total United States GHG emissions were approximately 6,457 MMT CO_2e in 2017. The primary GHG emitted by human activities in the United States was CO_2, which represented approximately 81.6% of total GHG emissions (6,457 MMT CO_2e). The largest source of CO_2, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 93.2% of CO_2 emissions in 2017 (4,912 MMT CO_2e). Relative to 1990, gross United States GHG emissions in 2017 are higher by 1.3%, down from a high of 15.7% above 1990 levels in 2007. GHG emissions decreased from 2016 to 2017 by 0.5% (35.5 MMT CO_2e) and overall, net emissions in 2017 were 13% below 2005 levels (EPA 2019).

According to California's 2000–2017 GHG emissions inventory (2019 edition), California emitted 424 MMT CO_2e in 2017, including emissions resulting from out-of-state electrical generation (CARB 2019). 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 global-warming potential substances, and recycling and waste. The California GHG emission source categories (as defined in CARB's 2008 Scoping Plan) and their relative contributions in 2017 are presented in Table 3.7-1.

Table 3.7-1. Greenhouse Gas Emissions Sources in California

Source Category	Annual GHG Emissions (MMT CO_2e)	Percent of Total[a]
Transportation	174.31	41%
Industrial	101.14	24%
Electric power[b]	62.57	15%
Commercial and residential	53.66	13%
Agriculture	32.42	8%
Total	**424.1**	**100%**

Source: CARB 2019.
Notes: GHG = greenhouse gas; MMT CO_2e = million metric tons of carbon dioxide equivalent.
Emissions reflect the 2017 California GHG inventory.
[a] Percentage of total has been rounded, and total may not sum due to rounding.
[b] Includes emissions associated with imported electricity, which account for 26.28 MMT CO_2e annually.

During the 2000 to 2017 period, per capita GHG emissions in California have continued to drop from a peak in 2001 of 14.0 MT per person to 10.7 MT per person in 2017, representing a 24% decrease. In addition, total GHG emissions in 2017 were approximately 5 MMT CO_2e less than 2016 emissions. The declining trend in GHG emissions, coupled with programs that will continue to provide additional GHG reductions going forward, demonstrates that California is just below the 2020 target of 431 MMT CO_2e (CARB 2019).

3.7.1.5 Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through uncertain impacts related to future air temperatures and precipitation patterns. The 2014 *Intergovernmental Panel on Climate Change Synthesis Report* (IPCC 2014) indicated that warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. Signs that global climate change has occurred include warming of the atmosphere and ocean, diminished amounts of snow and ice, and rising sea levels (IPCC 2014).

In California, climate change impacts have the potential to affect sea-level rise, agriculture, snowpack and water supply, forestry, wildfire risk, public health, and electricity demand and supply (California Climate Change Center (CCCC) 2006). The primary effect of global climate change has been a 0.2°C (0.36°F) rise in average global tropospheric temperature per decade, determined from meteorological measurements worldwide between 1990 and 2005. 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. A warming of about 0.2°C (0.36°F) per decade is projected, and there are identifiable signs that global warming could be taking place.

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 average temperatures in California have increased, leading to more extreme hot days and fewer cold nights. Shifts in the water cycle have been observed, with less winter precipitation falling as snow, and both snowmelt and rainwater running off earlier in the year. Sea levels have risen, and wildland fires are becoming more frequent and intense due to dry seasons that start earlier and end later (CAT 2010).

An increase in annual average temperature is a reasonably foreseeable effect of climate change. Observed changes over the last several decades across the western United States reveal clear signals of climate change. Statewide average temperatures increased by about 1.7°F from 1895 to 2011, and warming has been greatest in the Sierra Nevada (CCCC 2012). By 2050, California is projected to warm by approximately 2.7°F above 2000 averages, a threefold increase in the rate of warming over the last century. By 2100, average temperatures could increase by 4.1°F to 8.6°F, depending on emissions levels. Springtime warming—a critical influence on snowmelt—will be particularly pronounced. Summer temperatures will rise more than winter temperatures, and the increases will be greater in inland California, compared to the coast. Heat waves will be more frequent, hotter, and longer. There will be fewer extremely cold nights (CCCC 2012). A decline of Sierra Nevada snowpack, which accounts for approximately half of the surface water storage in California, by 30% to as much as 90% is predicted over the next 100 years (CAT 2006).

Model projections for precipitation over California continue to show the Mediterranean pattern of wet winters and dry summers with seasonal, year-to-year, and decade-to-decade variability. For the first time, however, several of the improved climate models shift toward drier conditions by the mid-to-late twenty-first century in central, and most notably, Southern California. By the late century, all projections show drying, and half of them suggest 30-year average precipitation will decline by more than 10% below the historical average (CCCC 2012).

A summary of current and future climate change impacts to resource areas in California, as discussed in the *Safeguarding California: Reducing Climate Risk* (CNRA 2014), is provided below.

Agriculture. Some of the specific challenges faced by the agricultural sector and farmers include more drastic and unpredictable precipitation and weather patterns; extreme weather events that range from severe flooding to extreme drought, to destructive storm events; significant shifts in water availably and water quality; changes in pollinator lifecycles; temperature fluctuations, including extreme heat stress and decreased chill hours; increased risks from invasive species and weeds, agricultural pests and plant diseases; and disruptions to the transportation and energy infrastructure supporting agricultural production.

Biodiversity and Habitat. Specific climate change challenges to biodiversity and habitat include species migration in response to climatic changes, range shift and novel combinations of species; pathogens, parasites and disease; invasive species; extinction risks; changes in the timing of seasonal life-cycle events; food web disruptions; threshold effects (i.e., a change in the ecosystem that results in a "tipping point" beyond which irreversible damage or loss has occurs).

Energy. Specific climate change challenges for the energy sector include temperature, fluctuating precipitation patterns, increasing extreme weather events, and sea level rise.

Forestry. The most significant climate change related risk to forests is accelerated risk of wildfire and more frequent and severe droughts. Droughts have resulted in more large scale mortalities and combined with increasing temperatures have led to an overall increase in wildfire risks. Increased wildfire intensity subsequently increases public safety risks, property damage, fire suppression and emergency response costs, watershed and water quality impacts, and vegetation conversions.

Ocean and Coastal Ecosystems and Resources. Sea level rise, changing ocean conditions, and other climate change stressors are likely to exacerbate long-standing challenges related to ocean and coastal ecosystems in addition to threatening people and infrastructure located along the California coastline and in coastal communities. Sea level rise in addition to more frequent and severe coastal storms and erosion are threatening vital infrastructure such as roads, bridges, power plants, ports and airports, gasoline pipes, and emergency facilities as well as negatively impacting the coastal recreational assets such as beaches and tidal wetlands.

Public Health. Climate change can impact public health through various environmental changes and is the largest threat to human health in the twenty-first century. Changes in precipitation patterns affect public health primarily through potential for altered water supplies, and extreme events such as heat, floods, droughts, and wildfires. Increased frequency, intensity and duration of extreme heat and heat waves are likely to increase the risk of mortality due to heat related illness as well as exacerbate existing chronic health conditions. Other extreme weather events are likely to negatively impact air quality and increase or intensify respiratory illness such as asthma and allergies.

Transportation. While the transportation industry is a source of GHG emissions it is also vulnerable to climate change risks. Increasing temperatures and extended periods of extreme heat threaten the integrity of the roadways and rail lines. High temperatures cause the road surfaces to expand which leads to increased pressure and pavement buckling. High temperatures can also cause rail breakages, which could lead to train derailment. Other forms of extreme weather events, such as extreme storm events, can negatively impact infrastructure, which can impair movement of peoples and goods, or potentially block evacuation routes and emergency access roads. Increased wildfires, flooding, erosion risks, landslides, mudslides and rockslides can all profoundly impact the transportation system and pose a serious risk to public safety.

Water. Climate change could seriously impact the timing, form, amount of precipitation, runoff patterns, and frequency and severity of precipitation events. Higher temperatures reduce the amount of snowpack and lead to earlier snowmelt, which can impact water supply availability, natural ecosystems and winter recreation. Water supply availability during the intense dry summer months is heavily dependent on the snowpack accumulated during the winter time. Increased risk of flooding has a variety of public health concerns including water quality, public safety, property damage, displacement and post-disaster mental health problems. Prolonged and intensified droughts can also negatively groundwater reserves and result in increased overdraft and subsidence. The higher risk of wildfires can lead to increased erosion, which can negatively impact watersheds and result in poor water quality.

In March 2016, the CNRA released *Safeguarding California: Implementation Action Plans*, a document that shows how California is acting to convert the recommendations contained in the 2014 *Safeguarding California* plan into action (CNRA 2016). Additionally, in May 2017, CNRA released the draft *Safeguarding California Plan: 2017 Update*, which is a survey of current programmatic responses for climate change and contains recommendations for further actions (CNRA 2017).

The CNRA released *Safeguarding California Plan: 2018 Update* in January 2018, which provides a roadmap for state agencies to protect communities, infrastructure, services, and the natural environment from climate change impacts. The 2018 Safeguarding California Plan includes 69 recommendations across 11 sectors and more than 1,000 ongoing actions and next steps developed by scientific and policy experts across 38 state agencies (CNRA 2018). As with previous state adaptation plans, the 2018 Update addresses 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.

3.7.2 Relevant Plans, Policies, and Ordinances

Federal

Massachusetts v. EPA. In *Massachusetts v. EPA* (April 2007), the U.S. Supreme Court 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 December 2009, the administrator signed a final rule with the following two distinct findings regarding GHGs under Section 202(a) of the federal Clean Air Act:

- The Administrator found that elevated concentrations of GHGs—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations. This is the "endangerment finding."
- The Administrator further found the combined emissions of GHGs—CO_2, CH_4, N_2O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is 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.

Energy Independence and Security Act of 2007. The Energy Independence and Security Act of 2007 (December 2007), among other key measures, would do the following, which would aid in the reduction of national GHG emissions (EPA 2007):

- 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 directs 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.

Federal Vehicle Standards. In response to the U.S. Supreme Court ruling previously discussed, the Bush Administration issued Executive Order (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. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011, and in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016 (75 FR 25324–25728).

In 2010, President Barack Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021 (77 FR 62624–63200). On January 12, 2017, the EPA finalized its decision to maintain the current greenhouse (GHG) emissions standards for model years 2022–2025 cars and light trucks (EPA 2017b).

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018 (76 FR 57106–57513). The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6%–23% over the 2010 baselines.

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO_2 emissions by approximately 1.1 billion MT and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program (EPA and NHTSA 2016).

Clean Power Plan and New Source Performance Standards for Electric Generating Units. On October 23, 2015, EPA published a final rule (effective December 22, 2015) establishing the Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (80 FR 64510–64660), also known as the Clean Power Plan. These guidelines prescribe how states must develop plans to reduce GHG emissions from existing

fossil-fuel-fired electric generating units. The guidelines establish CO_2 emission performance rates representing the best system of emission reduction for two subcategories of existing fossil-fuel-fired electric generating units: (1) fossil-fuel-fired electric utility steam-generating units, and (2) stationary combustion turbines. Concurrently, the EPA published a final rule (effective October 23, 2015) establishing Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units (80 FR 64661–65120). The rule prescribes CO_2 emission standards for newly constructed, modified, and reconstructed affected fossil-fuel-fired electric utility generating units. The U.S. Supreme Court stayed implementation of the Clean Power Plan pending resolution of several lawsuits.

State

The statewide GHG emissions regulatory framework is summarized below 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 EOs, legislation, regulations, and other plans and policies that would directly or indirectly reduce GHG emissions and/or address climate change issues.

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 below.

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% 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. The Climate Action Team (CAT) was formed, which subsequently issued reports from 2006 to 2010 (CAT 2016).

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 (September 27, 2006). 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.

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% 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, in order 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.

CARB's 2007 Statewide Limit. In 2007, in accordance with California Health and Safety Code, Section 38550, CARB approved a statewide limit on the GHG emissions level for year 2020 consistent with the determined 1990 baseline (427 million metric tons (MMT) CO_2e).

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. The key elements of the Scoping Plan include the following (CARB 2008):

1. Expanding and strengthening existing energy efficiency programs as well as building and appliance standards
2. Achieving a statewide renewable energy mix of 33%
3. Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85% of California's GHG emissions
4. Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets
5. Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard (LCFS 17 CCR, Section 95480 et seq.)
6. Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation

The Scoping Plan also identified local governments as essential partners in achieving California's goals to reduce GHG emissions because they have broad influence and, in some cases, exclusive authority over activities that contribute to significant direct and indirect GHG emissions through their planning and permitting processes, local ordinances, outreach and education efforts, and municipal operations. Specifically, the Scoping Plan encouraged local governments to adopt a reduction goal for municipal operations and for community emissions to reduce GHGs by approximately 15% from then levels (2008) by 2020. Many local governments developed community-scale local GHG reduction plans based on this Scoping Plan recommendation.

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 EOs S-3-05 and B-16-2012. The *First Update* concluded that California is on track to meet the 2020 target but recommended 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. As part of the *First Update*, CARB recalculated the state's 1990 emissions level, using more recent global warming potentials identified by the Intergovernmental Panel on Climate Change, from 427 MMT CO_2e to 431 MMT CO_2e.

In 2015, as directed by EO B-30-15, CARB began working on an update to the Scoping Plan to incorporate the 2030 target of 40% 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% below 1990 levels by 2050 as set forth in S-3-05. The Governor called on California to pursue a new and ambitious set of strategies, in line with the five climate change pillars from his inaugural address, to reduce GHG emissions and prepare for the unavoidable impacts of climate change. In the summer of 2016, the Legislature affirmed the importance of addressing climate change through passage of Senate Bill (SB) 32 (Pavley, Chapter 249, Statutes of 2016).

In January 2017, CARB released the *2017 Climate Change Scoping Plan Update (2030 Scoping Plan)* for public review and comment (CARB 2017b). The 2030 Scoping Plan 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 Plan, and increased stringency of SB 375 targets. To fill the gap in additional reductions needed to achieve the 2030 target, it recommends continuing the Cap-and-Trade Program and a measure to reduce GHGs from refineries by 20%.

For local governments, the 2030 Scoping Plan replaced the initial Scoping Plan's 15% reduction goal with a recommendation to aim for a community-wide goal of no more than 6 MT CO_2e per capita by 2030 and no more than 2 MT CO_2e per capita by 2050, which are consistent with the state's long-term goals. These goals are also consistent with the Under 2 MOU (Under 2 2016) and the Paris Agreement, which are developed around the scientifically based levels necessary to limit global warming below 2°C. The 2030 Scoping Plan recognized the benefits of local government GHG planning (e.g., through climate action plans (CAPs)) and provide more information regarding tools CARB is working on to support those efforts. It also recognizes the CEQA streamlining provisions for project level review where there is a legally adequate CAP.[2] The Second Update was approved by CARB's Governing Board on December 14, 2017.

The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32, SB 32, and the EOs and establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. A project is considered consistent with the statutes and EOs if it meets the general policies in reducing GHG emissions to facilitate the achievement of the state's goals and does not impede attainment of those goals. As discussed in several cases, a given project need not be in perfect conformity with each and every planning policy or goals to be consistent. A project would be consistent, if it will further the objectives and not obstruct their attainment.

CARB's Regulations for the Mandatory Reporting of Greenhouse Gas Emissions. CARB's Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (17 CCR 95100–95157) incorporated by reference certain requirements that EPA promulgated in its Final Rule on Mandatory Reporting of Greenhouse Gases (Title 40, CFR, Part 98). Specifically, Section 95100(c) of the Mandatory Reporting Regulation incorporated those requirements that EPA promulgated in the Federal Register on October 30, 2009; July 12, 2010; September 22, 2010; October 28, 2010; November 30, 2010; December 17, 2010; and April 25, 2011. In general, entities subject to the Mandatory Reporting Regulation that emit over 10,000 MT CO_2e per year are required to report annual GHGs through the California Electronic GHG Reporting Tool. Certain sectors, such as refineries and cement plants, are required to report regardless of emission levels. Entities that emit more than the 25,000 MT CO_2e per year threshold are required to have their GHG emission report verified by a CARB-accredited third-party verified.

[2] *Sierra Club v. County of Napa* (2004) 121 Cal.App.4th 1490; *San Francisco Tomorrow et al. v. City and County of San Francisco* (2015) 229 Cal.App.4th 498; *San Franciscans Upholding the Downtown Specific Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656; *Sequoyah Hills Homeowners Assn. V. City of Oakland* (1993) 23 Cal.App.4th 704, 719.

EO B-18-12. EO B-18-12 (April 2012) directed state agencies, departments, and other entities under the governor's executive authority to take action to reduce entity-wide GHG emissions by at least 10% by 2015 and 20% by 2020, as measured against a 2010 baseline. EO B-18-12 also established goals for existing state buildings for reducing grid-based energy purchases and water use.

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% 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% 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 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 605 and SB 1383. SB 605 (2014) requires CARB to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants (SLCPs) in the state; and SB 1383 (2016) requires CARB to approve and implement that strategy by January 1, 2018. SB 1383 also establishes specific targets for the reduction of SLCPs (40% below 2013 levels by 2030 for methane and HFCs, and 50% 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 *Short-Lived Climate Pollutant Reduction Strategy* (*SLCP Reduction Strategy*) in March 2017. The *SLCP Reduction Strategy* establishes a framework for the statewide reduction of emissions of black carbon, methane, and fluorinated gases.

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 energy efficiency standards are reviewed every few 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, with the goal of "reducing of 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, 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 current Title 24 standards are the 2016 Title 24 building energy efficiency standards, which became effective January 1, 2017. The 2019 Title 24 Building Energy Efficiency Standards, which will be effective January 1, 2020, will further reduce energy used and associated GHG emissions compared to current standards. Nonresidential buildings built to the 2019 standards are anticipated to use an estimated 30% less energy than those built to the 2016 standards (CEC 2018).

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 California's Green Building Standards (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 CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential and state-owned buildings and schools and hospitals. The CALGreen 2016 standards became effective January 1, 2017. The mandatory standards require the following (24 CCR Part 11):

- Mandatory reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings
- Mandatory reduction in outdoor water use through compliance with a local water efficient landscaping ordinance or the California Department of Water Resources' Model Water Efficient Landscape Ordinance
- 65% of construction and demolition waste must be diverted from landfills
- Mandatory inspections of energy systems to ensure optimal working efficiency
- Inclusion of electric vehicle charging stations or designated spaces capable of supporting future charging stations
- Low-pollutant emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring, and particle boards

The CALGreen standards also include voluntary efficiency measures that are provided at two separate tiers and implemented at the discretion of local agencies and applicants. CALGreen's Tier 1 standards call for a 15% improvement in energy requirements; stricter water conservation, 65% diversion of construction and demolition waste, 10% recycled content in building materials, 20% permeable paving, and 20% cement reduction. CALGreen's more rigorous Tier 2 standards call for a 30% improvement in energy requirements, stricter water conservation, 80% diversion of construction and demolition waste, 15% recycled content in building materials, 30% permeable paving, and 25% cement reduction.

The California Public Utilities Commission, CEC, and CARB also have a shared, established goal of achieving zero net energy (ZNE) performance for new construction in California. The key policy timelines include: (1) all new residential construction in California will be ZNE by 2020, and (2) all new commercial construction in California will be ZNE by 2030.3

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. 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. Title 20 presents protocols for testing each type of appliance covered under the regulations and appliances must meet the standards for energy performance, energy design, water performance and water design. Title 20 contains three types of standards for appliances: federal and state standards for federally regulated appliances, state standards for federally regulated appliances, and state standards for non-federally regulated appliances.

[3] See for example, CPUC, California's Zero Net Energy Policies and Initiatives, Sept. 18, 2013, accessed at http://annualmeeting.naseo.org/Data/Sites/2/presentations/Fogel-Getting-to-ZNE-CA-Experience.pdf. It is expected that achievement of the zero net energy goal will occur via revisions to the Title 24 standards.

Senate Bill 1. SB 1 (Murray) (August 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 Public Resources Code, including Chapter 8.8 (California Solar Initiative), that require building projects applying for ratepayer-funded incentives for photovoltaic systems to meet minimum energy efficiency levels and performance requirements. 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% of new homes within 13 years of adoption. SB 1, also termed "Go Solar California," was previously titled "Million Solar Roofs."

California AB 1470 (Solar Water Heating). This bill established the Solar Water Heating and Efficiency Act of 2007. 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. The bill defines several terms for purposes of the act. The bill requires the commission to evaluate the data available from a specified pilot program, and, if it makes a specified determination, to design and implement a program of incentives for the installation of 200,000 solar water heating systems in homes and businesses throughout the state by 2017.

Renewable Energy and Energy Procurement

SB 1078. 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% of sales, with an aggregate goal of 20% by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20% of their power from renewable sources by 2010 (see SB 107, EO S-14-08, and S-21-09).

SB 1368. SB 1368 (September 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. These standards must be consistent with the standards adopted by the California Public Utilities Commission (CPUC).

AB 1109. Enacted in 2007, AB 1109 required the CEC to adopt minimum energy efficiency standards for general-purpose lighting, to reduce electricity consumption 50% for indoor residential lighting and 25% for indoor commercial lighting.

EO S-14-08. EO S-14-08 (November 2008) focused on the contribution of renewable energy sources to meet the electrical needs of California while reducing the GHG emissions from the electrical sector. This EO required that all retail suppliers of electricity in California serve 33% of their load with renewable energy by 2020. Furthermore, the EO directed state agencies to take appropriate actions to facilitate reaching this target. The California Natural Resources Agency (CNRA), through collaboration with the CEC and California Department of Fish and Wildlife (formerly the California Department of Fish and Game), was directed to lead this effort.

EO S-21-09 and SBX1-2. EO S-21-09 (September 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 the 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. Under this order, CARB was to give the highest priority to those renewable resources that provide the greatest environmental benefits with the least environmental costs and impacts on public health and can be developed the most quickly in support of reliable, efficient, cost-effective electricity system operations. On September 23, 2010, CARB initially approved regulations to implement a Renewable Electricity Standard. However, this regulation was not finalized because of subsequent legislation (SB X1-2, Simitian, statutes of 2011) signed by Governor Brown in April 2011.

SB X1 2 expanded the Renewables Portfolio Standard by establishing a renewable energy target of 20% of the total electricity sold to retail customers in California per year by December 31, 2013, and 33% by December 31, 2020, and in subsequent years. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation (30 megawatts or less), digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and that meets other specified requirements with respect to its location.

SB X1-2 applies to all electricity retailers in the state including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities must meet the renewable energy goals previously listed.

SB 350. SB 350 (October 2015) further expanded the RPS by establishing a goal of 50% of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, SB 350 included the goal to double the energy efficiency savings in electricity and natural gas final end uses (e.g., heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the CPUC, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal.

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

Mobile Sources

AB 1493. AB 1493 (Pavley) (July 2002) was enacted in a response to the transportation sector accounting for more than half of California's CO_2 emissions. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles that are primarily used for noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. When fully phased in, the near-term (2009–2012) standards will result in a reduction of about 22% in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term (2013–2016) standards will result in a reduction of about 30%.

Heavy Duty Diesel. CARB adopted the final Heavy Duty Truck and Bus Regulation, Title 13, Division 3, Chapter 1, Section 2025, on December 31, 2014, to reduce PM and NO_x emissions from heavy-duty diesel vehicles. The rule requires PM filters be applied to newer heavier trucks and buses by January 1, 2012, with older vehicles required to comply by January 1, 2015. The rule will require nearly all diesel trucks and buses to be compliant with the 2010 model year engine requirement by January 1, 2023. CARB also adopted an Airborne Toxic Control Measure to limit idling of diesel-fueled commercial vehicles on December 12, 2013. This rule 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).

EO S-1-07. EO S-1-07 (January 2007, implementing regulation adopted in April 2009) sets a declining LCFS for GHG emissions measured in CO_2e grams per unit of fuel energy sold in California. The target of the LCFS is to

reduce the carbon intensity of California passenger vehicle fuels by at least 10% 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.

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 a 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.

Pursuant to Government Code, Section 65080(b)(2)(K), a SCS does not: (i) regulate the use of land; (ii) supersede the land use authority of cities and counties; or (iii) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it. 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.

In September 2010, CARB adopted the first SB 375 targets for the regional metropolitan planning organizations. The targets for SCAG are an 8% reduction in emissions per capita by 2020 and a 13% reduction by 2035. Achieving these goals through adoption of a SCS is the responsibility of the metropolitan planning organizations. SCAG adopted its first RTP/SCS in April 2012. The plan quantified a 9% reduction by 2020 and a 16% reduction by 2035 (SCAG 2012). In June 2012, CARB accepted SCAG's quantification of GHG reductions and its determination the SCS, if implemented, would achieve SCAG targets. On April 4, 2016, the SCAG Regional Council adopted the 2016 RTP/SCS, which builds upon the progress made in the 2012 RTP/SCS. The updated RTP/SCS quantified an 8% reduction by 2020 and an 18% reduction by 2030 (SCAG 2016). In June 2016, CARB accepted SCAG's quantification of GHG reductions and its determination the SCS, if implemented, would achieve SCAG targets.

Advanced Clean Cars Program and Zero-Emissions Vehicle Program. The Advanced Clean Cars program (January 2012) is a new emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package. The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars (CARB 2012). To improve air quality, CARB has implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that in 2025 cars will emit 75% less smog-forming pollution than the average new car sold today. To reduce GHG emissions, CARB, in conjunction with the EPA and the NHTSA, adopted new GHG standards for model year 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34% in 2025. The ZEV program will act as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles in the 2018 to 2025 model years.

EO B-16-12. EO B-16-12 (March 2012) required that state entities under the governor's direction and control support and facilitate the rapid commercialization of ZEVs. It ordered CARB, CEC, CPUC, and other relevant agencies to work with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to help achieve benchmark goals by 2015, 2020, and 2025. On a statewide basis, EO B-16-12 established a target reduction of GHG emissions from the transportation sector equaling 80% less than 1990 levels by 2050. This directive did not apply to vehicles that have special performance requirements necessary for the protection of the public safety and welfare.

AB 1236. AB 1236 (October 2015) (Chiu) required a city, county, or city and county to approve an application for the installation of electric vehicle charging stations, as defined, through the issuance of specified permits unless the city or county makes specified written findings based upon substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. The bill provided for appeal of that decision to the planning commission, as specified. The bill provided that the implementation of consistent statewide standards to achieve the timely and cost-effective installation of electric vehicle charging stations is a matter of statewide concern. The bill required electric vehicle charging stations to meet specified standards. The bill required a city, county, or city and county with a population of 200,000 or more residents to adopt an ordinance, by September 30, 2016, that created an expedited and streamlined permitting process for electric vehicle charging stations, as specified. The bill also required a city, county, or city and county with a population of less than 200,000 residents to adopt this ordinance by September 30, 2017.

Water

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% 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.

Solid Waste

AB 939 and AB 341. 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, 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% by 1995 and 50% by the year 2000.

AB 341 (Chapter 476, Statutes of 2011 [Chesbro]) 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% of solid waste generated be source-reduced, recycled, or composted by the year 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery (CalRecycle) to develop strategies to achieve the state's policy goal. CalRecycle conducted several general stakeholder workshops and several focused workshops and in August 2015 published a discussion document titled AB 341 Report to the Legislature, which identifies five priority strategies that CalRecycle believes would assist the state in reaching the 75% goal by 2020, legislative and regulatory recommendations and an evaluation of program effectiveness (CalRecycle 2012).

Other State Actions

Senate Bill 97. SB 97 (Dutton) (August 2007) directed the Governor's Office of Planning and Research (OPR) to develop guidelines under CEQA for the mitigation of GHG emissions. In 2008, OPR issued a technical advisory as

interim guidance regarding the analysis of GHG emissions in CEQA documents. The advisory indicated that the lead agency should identify and estimate a project's GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities (OPR 2008). The advisory further recommended that the lead agency determine significance of the impacts and impose all mitigation measures necessary to reduce GHG emissions to a level that is less than significant. The CNRA adopted the State CEQA Guidelines amendments in December 2009, which became effective in March 2010.

Under the amended 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 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 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. 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. The CNRA also acknowledges that a lead agency may 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, the State CEQA Guidelines state in Section 15064.4(a) that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. The State CEQA Guidelines note that an agency may identify emissions by either selecting a "model or methodology" to quantify the emissions or by relying on "qualitative analysis or other 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 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 (CNRA 2009), and an update, Safeguarding California: Reducing Climate Risk, followed in July 2014 (CNRA 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 the Safeguarding California: Implementation Action Plans followed in March 2016 (CNRA 2016). In January 2018, the CNRA released the Safeguarding California Plan: 2018 Update, which communicates current and needed actions that state government should take to build climate change resiliency (CNRA 2018).

2015 State of the State Address. In January 2015, Governor Brown in his inaugural address and annual report to the Legislature established supplementary goals, which would further reduce GHG emissions over the next 15 years. These goals include an increase in California's renewable energy portfolio from 33% to 50%, a reduction in vehicle petroleum use for cars and trucks by up to 50%, measures to double the efficiency of existing buildings, and decreasing emissions associated with heating fuels.

2016 State of the State Address. In his January 2016 address, Governor Brown established a statewide goal to bring per capita GHG emission down to two tons per person, which reflects the goal of the Global Climate Leadership Memorandum of Understanding (Under 2 MOU) to limit global warming to less than two degrees Celsius by 2050. The Under 2 MOU agreement pursues emission reductions of 80% to 95% below 1990 levels by 2050 and/or reaching a per capita annual emissions goal of less than 2 metric tons by 2050. A total of 135 jurisdictions representing 32 countries and 6 continents, including California, have signed or endorsed the Under 2 MOU (Under 2 2016).

Local

South Coast Air Quality Management District

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 3.7.3, Thresholds of Significance, 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 were not adopted. See Section 3.2.2.3.1, South Coast Air Quality Management District, for additional discussion on the SCAQMD.

City of Commerce 2020 General Plan

The Air Quality Element of the City's 2020 General Plan (City of Commerce 2008) includes the goals and policies that result in co-benefits with reducing GHG emissions. The Air Quality Element of the City's General Plan is discussed in Section 3.2.2.3.3. The Transportation Element includes issues and policies that result in benefits with reducing GHG emissions, these applicable issues and policies are as follows:

Issue: Alternative Modes of Travel

Policy 3.1 The city of Commerce will continue to encourage the use of alternate transportation modes (e.g., shuttles, etc.).

Policy 3.2 The city of Commerce will continue to provide residents, employees, and visitors with a local public transit system.

Policy 3.5 The city of Commerce will encourage the maintenance and improvement of "pedestrian-safe" oriented facilities to ensure safe pedestrian movement.

Policy 3.8 The city of Commerce will continue to implement the city's transportation demand management (TDM) measures to improve the efficiency of the city's circulation network.

Policy 3.9 The city of Commerce will require major employers to adopt TDM plans pursuant to the city's adopted TDM ordinance.

3.7.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to greenhouse gases are based on Appendix G of the State CEQA Guidelines. Through the analysis in the Initial Study (see Appendix A), it was determined that the proposed Project could have a potentially significant impact to greenhouse gases. Accordingly, all of the thresholds are further analyzed in the EIR. According to Appendix G of the State CEQA Guidelines, a significant impact related to greenhouse gases would occur if the Project would:

A. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
B. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

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 proposed 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 on a project-level under CEQA.

The State CEQA Guidelines do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the State CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA (CNRA 2009). The State of California has not adopted emission-based thresholds for GHG emissions under CEQA. The Governor's Office of Planning and Research's Technical Advisory, titled "Discussion Draft CEQA and Climate Change Advisory," states that

> "Neither the CEQA statute nor the CEQA Guidelines prescribe thresholds of significance or particular methodologies for perming an impact analysis. This is left to lead agency judgment and discretion, based upon factual data and guidance from regulatory agencies and other sources where available and applicable. Even in the absence of clearly defined thresholds for GHG emissions, such emissions 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 2018)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." Section 15064.7(c) of the CEQA Guidelines specifies that "when adopting 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."

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 CAPCOA, 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. 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). However, SCAQMD has not adopted a GHG significance threshold for land use development projects such as commercial projects; the proposed commercial/residential thresholds were never formally adopted. Thus, the SCAQMD interim GHG significance threshold is not applicable to the Project as the Project is a commercial project.

In light of no adopted significance threshold, for projects that would be operational on or before 2020, significance can be determined by an efficiency metric of 4.9 MT CO_2e per service population per year. Service population refers to a project's residents and/or employees. This efficiency metric is based on the AB 32 GHG-reduction target and GHG emissions inventory prepared for CARB's 2008 Scoping Plan. Land use-driven sectors in the 1990 GHG inventory were identified and separated to tailor the inventory to land use projects, which include residential, commercial/retail, and mixed use. The adjusted 1990 emissions (286.7 MMT CO_2e) were divided by the projected 2020 service population (59,130,546) for an efficiency metric of 4.9 MT CO_2e for the year 2020. The City recognizes that GHG emissions need to be reduced at an annual average rate of 5.2 percent between 2020 and 2050 to meet long-range GHG reduction goals. For project-level and focused programmatic proposals, based on guidance provided by the Association of Environmental Professionals Climate Change Committee, a narrower emissions inventory is used that does not include emissions sources by which a project has no means or nexus to reduce emissions or whereby the emissions source is not relevant to a project (e.g., emissions from cargo ships in a community with no port). Therefore, this methodology has been utilized to determine the significance of Specific Plan build out. Regarding typical land use projects, the greatest source of emissions that cannot effectively be reduced directly are from mobile sources. Vehicle emissions and feasible, affectable reduction strategies must be formulated at the state and federal levels and implemented by vehicle and parts manufacturers to improve technological efficiencies. Local land use decisions have some part in reducing mobile source emissions through reductions in VMT and through the strategic approval of industrial projects that generate high volumes of truck traffic. These gains, however, are less than the achievements realized by technological improvements and are generally inconsequential in terms of project efficiency to meet per capita standards or business-as-usual reduction requirements. Using this approach, the state's 1990 emissions inventory for the land use sector is 267 MMT CO_2e. The 1990 emissions inventory without inclusion of passenger or light-duty vehicle emissions is 158 MMT CO_2e. The 1990 emissions inventory without on-road vehicle sources is 129 MMT CO_2e (AEP 2016). These translate to respective year 2020 efficiency standards of 4.7, 2.8, and 2.3. Assuming the goal for 2020 is 4.7 MT CO_2e per person and the goal for 2030 is 2.6 MT CO_2e per person, in order to compare the threshold to the proposed Project the two goals were linearly interpolated to 2024. The interpolated goal for 2024 of 3.9 MT CO_2e per person is used to determine significance under GHG Threshold 1.

In the absence of any adopted numeric threshold, the significance of a project's GHG emissions is evaluated consistent with State CEQA Guidelines Section 15064.4(b) by considering whether the project complies with applicable plans, policies, regulations, and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. As a land use development project, the most directly applicable adopted regulatory plan to reduce the proposed Project's GHG emissions is SCAG's RTP/SCS, which is designed to achieve regional GHG reductions from the land use and transportation sectors as required by SB 375 and the state's long-term climate goals. However, as shown in Appendix B of CARB's 2018 SB375 Progress Report, the SCAG is not meeting its targets under SB 375 and thus the SCAG RTP/SCS can't be used to tier off in accordance with State CEQA Guidelines Section 15183.5 (CARB 2018). Therefore, this analysis considers consistency with regulations or requirements adopted by the 2008 Climate Change Scoping Plan and subsequent updates to address Threshold 2.

3.7.4 Methodology

3.7.4.1 Construction Emissions

CalEEMod Version 2016.3.2 was used to estimate potential 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. GHG emission reductions from project design feature **PDF-AQ/GHG-1** (see Section 3.2 Air Quality), related to construction, were not quantified. All details for construction criteria air pollutants discussed in Section 3.2.4.1, are also applicable for the estimation of construction-related GHG emissions. As such, see Section 3.2.4.1 for a discussion of construction emissions calculation methodology and assumptions.

3.7.4.2 Operation

Existing Site

Emissions from the operational phase of the existing Veterans Memorial Park were estimated using CalEEMod Version 2016.3.2. Operational year 2019 was assumed consistent with the current site.

Area Sources

CalEEMod was used to estimate GHG emissions from the Project's area sources, which include operation of gasoline-powered landscape maintenance equipment, which produce minimal GHG emissions. See Section 3.2.4.1, for a discussion of landscaping equipment emissions calculations. Consumer product use and architectural coatings result in VOC emissions, which are analyzed in air quality analysis only, and little to no GHG emissions.

Energy Sources

The estimation of operational energy emissions was based on CalEEMod land use defaults and total area (i.e., square footage) of the Project's land uses. The energy use from nonresidential land uses is calculated in CalEEMod based on the California Commercial End-Use Survey database. Emissions are calculated by multiplying the energy use by the utility carbon intensity (pounds of GHGs per kilowatt-hour for electricity or 1,000 British thermal units for natural gas) for CO_2 and other GHGs. Annual natural gas and electricity emissions were estimated in CalEEMod using the emissions factors for Southern California Edison (SCE), which would be the energy source provider for the existing site.

CalEEMod default energy intensity factors (CO_2, CH_4, and N_2O mass emissions per kilowatt hour) for SCE is based on the value for SCE's energy mix in 2012. As explained in Section 3.7.2.2, SB X1 2 established a target of 33% from renewable energy sources for all electricity providers in California by 2020 and SB 350 calls for further development of renewable energy, with a target of 60% by 2030. The CO_2 emissions intensity factor for utility energy use in CalEEMod was adjusted consistent with SCE's 2017 Power Content Label, which reported that 32% of the power mix was generated by eligible renewable sources (SCE 2018). Because SCE is striving to meet the 33% RPS by December 31, 2020, the CO_2 emissions intensity factor is anticipated to be less than assumed in CalEEMod at the existing site (2019), which would reflect the increase in percentage of renewable energy in SCE's energy portfolio.

Mobile Sources

All details for criteria air pollutants discussed in Section 3.2.4.2 are also applicable for the estimation of operational mobile source GHG emissions. The Projects traffic report was relied upon for average daily trips for the Veterans Memorial Park. CalEEMod defaults were assumed for all other mobile source inputs.

Solid Waste

The Veterans Memorial Park generates solid waste, and therefore, result in CO_2e emissions associated with landfill off-gassing. CalEEMod default values for solid waste generation were used to estimate GHG emissions associated with solid waste.

Water and Wastewater

Supply, conveyance, treatment, and distribution of water for the Project require the use of electricity, which would result in associated indirect GHG emissions. Similarly, wastewater generated by the Project requires the use of electricity for conveyance and treatment, along with GHG emissions generated during wastewater treatment. Water consumption estimates for both indoor and outdoor water use and associated electricity consumption from water use and wastewater generation were estimated using CalEEMod default values.

Proposed Project

Emissions from the operational phase of the Project were estimated using CalEEMod Version 2016.3.2. Operational year 2024 was assumed consistent with completion of Project construction. The Project would incorporate the PDFs summarized in Section 3.2.4.5.

CalEEMod Version 2016.3.2 was used to estimate potential Project-generated operational GHG emissions from area sources (landscape maintenance), energy sources (natural gas and electricity), mobile sources, solid waste, and water supply and wastewater treatment. Emissions from each category are discussed in the following text with respect to the Project. For additional details, see Section 3.2.4.2, Operational Emissions, for a discussion of operational emission calculation methodology and assumptions, specifically for area, energy (natural gas), and mobile sources.

Area Sources

CalEEMod was used to estimate GHG emissions from the Project's area sources, which include operation of gasoline-powered landscape maintenance equipment, which produce minimal GHG emissions. See Section 3.2.4.2, for a discussion of landscaping equipment emissions calculations.

Energy Sources

The estimation of operational energy emissions was based on CalEEMod land use defaults and total area (i.e., square footage) of the Project's land uses. The Project will comply with Title 24 2019 version at the least and the Project is assumed to install solar photovoltaics in accordance with the requirements on its residential portion of the Project.

CalEEMod default energy intensity factors (CO2, CH4, and N2O mass emissions per kilowatt hour) for SCE is based on the value for SCE's energy mix in 2012. As explained in Section 3.7.2.2, SB X1 2 established a target of 33% from renewable energy sources for all electricity providers in California by 2020 and SB 350 calls for further development of renewable energy, with a target of 60% by 2030. The CO2 emissions intensity factor for utility energy use in CalEEMod

was adjusted consistent with SCE's 2017 Power Content Label, which reported that 32% of the power mix was generated by eligible renewable sources (SCE 2018). Because SCE is striving to meet the 33% RPS by December 31, 2020, the CO2 emissions intensity factor is anticipated to be less than assumed in CalEEMod at Project operation (2024), which would reflect the increase in percentage of renewable energy in SCE's energy portfolio.

Mobile Sources

All details for criteria air pollutants discussed in Section 3.2.4.2 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 vehicles that are primarily used for noncommercial personal transportation in the state. In addition, the NHTSA and EPA have established corporate fuel economy standards and GHG emission standards, respectively, for automobiles and light-, medium-, and heavy-duty vehicles. Implementation of these standards and 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 2024 to the extent it was captured in EMFAC 2014.

The Low Carbon Fuel Standard calls for a 10% reduction in the "carbon intensity" of motor vehicle fuels by 2021, which would further reduce GHG emissions. However, the carbon intensity reduction associated with the Low Carbon Fuel Standard was not assumed in EMFAC 2014 and, thus, was not included in CalEEMod Version 2016.3.2 or the calculations below.

Solid Waste

The Project would generate solid waste, and therefore, result in CO_2e emissions associated with landfill off-gassing. CalEEMod default values for solid waste generation were used to estimate GHG emissions associated with solid waste. Project compliance with statewide solid waste diversion goals, including the 75% diversion rate by 2020 consistent with AB 341 (25% increase from the solid waste diversion requirements of AB 939, Integrated Waste Management Act), would reduce Project-generated GHG emissions associated with solid waste disposal.

Water and Wastewater

Supply, conveyance, treatment, and distribution of water for the Project require the use of electricity, which would result in associated indirect GHG emissions. Similarly, wastewater generated by the Project requires the use of electricity for conveyance and treatment, along with GHG emissions generated during wastewater treatment. Water consumption estimates for both indoor and outdoor water use and associated electricity consumption from water use and wastewater generation were estimated using CalEEMod default values. The Project was assumed to include all low-flow water fixtures and install water-efficient irrigation systems. As discussed in Section 3.2.4.5, additional water saving features will be implemented but were not accounted for in the analysis.

3.7.5 Impacts Analysis

Threshold A: Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction Emissions

Construction of the Project would result in GHG emissions, which are primarily associated with the use of off-road construction equipment, haul trucks, on-road vendor trucks, and worker vehicles. The SCAQMD *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold* (2009) recommends that "construction emissions be amortized over a 30-year project lifetime, so that GHG reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies." Thus, the total construction GHG emissions were calculated, amortized over 30 years, and added to the total operational emissions.

CalEEMod was used to calculate the annual GHG emissions based on the construction scenario described in Section 3.2.4.1. Construction of the Project is anticipated to commence in May 2020 and would last approximately 43 months, ending in January 2024. On-site sources of GHG emissions include off-road equipment and off-site sources including haul trucks, vendor trucks, and worker vehicles. Table 3.7-2 presents construction emissions for the Project in 2020 through 2024 from on-site and off-site emission sources.

Table 3.7-2. Estimated Annual Construction Greenhouse Gas Emissions - Unmitigated

Year	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
2020	2,144.71	0.28	0.00	2,151.73
2021	2,211.74	0.35	0.00	2,220.42
2022	2,467.99	0.18	0.00	2,472.43
2023	1,949.61	0.13	0.00	1,952.86
2024	15.01	0.00	0.00	15.02
			Total	**8,812.46**

Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent.
See Appendix B for complete results.
The values shown are the annual emissions reflect California Emissions Estimator Model "mitigated" output.
Totals may not add due to rounding.

As shown in Table 3.7-2, the estimated total GHG emissions during construction of would be approximately 8,813 MT CO_2e over the construction period. Estimated Project-generated construction emissions amortized over 30 years would be approximately 294 MT CO_2e per year. As with Project-generated construction criteria air pollutant emissions, GHG emissions generated during construction of the Project would be short-term in nature, lasting only for the duration of the construction period, and would not represent a long-term source of GHG emissions. As such, during construction, there would be a **less than significant** impact. No mitigation is required.

Operational Emissions

Operation of the Project would generate GHG emissions through motor vehicle and delivery truck trips to and from the Project site; landscape maintenance equipment operation; energy use (natural gas and generation of electricity consumed by the Project); solid waste disposal; and generation of electricity associated with water supply, treatment,

and distribution and wastewater treatment. CalEEMod was used to calculate the annual GHG emissions based on the operational assumptions described in Section 3.2.4.2, Operation.

The estimated existing and operational Project-generated GHG emissions from area sources, energy usage, motor vehicles, solid waste generation, and water usage and wastewater generation are shown in Table 3.7-3.

Table 3.7-3. Estimated Annual Operational Greenhouse Gas Emissions

Emission Source	CO_2	CH_4	N_2O	CO_2e
	metric tons per year			
Existing Site				
Area	0.00	0.00	0.00	0.00
Energy	260.37	0.01	0.00	261.58
Mobile	1,589.59	0.10	0.00	1,592.07
Solid waste	74.67	4.41	0.00	184.98
Water supply and wastewater	43.19	0.13	0.00	47.34
			Total	2,085.98
Proposed Project				
Area	14.36	0.01	0.00	14.71
Energy	3,068.44	0.13	0.04	3,084.33
Mobile	8,162.08	0.41	0.00	8,172.40
Solid waste	220.23	13.02	0.00	545.61
Water supply and wastewater	461.49	3.00	0.08	558.86
			Amortized 30-Year Construction Emissions	*293.75*
			Operation plus Amortized Construction Total	12,669.66
			Net Operational Emissions (Proposed Project minus Existing Site)	10,583.68

Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent; PDF = project design feature. See Appendix B for complete results.
The values shown are the annual emissions reflect California Emissions Estimator Model "mitigated" output and operational year 2021 which accounts for implementation of project design feature **PDF-AQ/GHG-1**, including installing low flow bathroom faucets and toilets, installing water efficient irrigation systems, installing LED lamps in the parking lots, and installing EV charging stations.
Totals may not add due to rounding.

As shown in Table 3.7-3, estimated annual Project-generated GHG emissions would be approximately 12,670 MT CO_2e per year as a result of Project operations and amortized construction. Estimated annual net Project-generated operational emissions in 2024 would be approximately 10,584 MT CO_2e per year. The proposed Project would generate a residential population of 2,550 persons, 850 units, and 390 jobs. Assuming all employees of the Project moved to the City, the proposed Project would generate a population of 2,940 persons. Therefore, the proposed Project would have an efficiency impact of 3.6 MT CO_2e per person per year. This would be less than the significance threshold of 3.9 MT CO_2e per person per year as discussed in Section 3.7.3. Therefore, during operation, the Project would have a **less than significant** impact. No mitigation is required.

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

The Project's consistency with statewide GHG reduction strategies is summarized in detail in Table 3.7-4.

Table 3.7-4. Applicable Greenhouse Gas-Related Laws and Regulations

Project Component	Applicable Laws/ Regulations	GHG Reduction Measures Required for Project
Building Components/Facility Operations		
Roofs/Ceilings/ Insulation	CALGreen Code (Title 24, Part 11) California Energy Code (Title 24, Part 6)	The project must comply with efficiency standards regarding roofing, ceilings, and insulation. For example: Roofs/Ceilings: New construction must reduce roof heat island effects per CALGreen Code Section 106.11.2, which requires use of roofing materials having a minimum aged solar reflectance, thermal emittance complying with Section A5.106.11.2.2 and A5.106.11.2.3 or a minimum aged Solar Reflectance Index as specified in Tables A5.106.11.2.2, or A5.106.11.2.3. Roofing materials must also meet solar reflectance and thermal emittance standards contained in Title 20 Standards. Roof/Ceiling Insulation: There are also requirements for the installation of roofing and ceiling insulation. (See Title 24, Part 6 Compliance Manual at Section 3.2.2.)
Flooring	CALGreen Code	The project must comply with efficiency standards regarding flooring materials. For example, for 80% of floor area receiving "resilient flooring," the flooring must meet applicable installation and material requirements contained in CALGreen Code Section 5.504.4.6.
Window and Doors (Fenestration)	California Energy Code	The project must comply with fenestration efficiency requirements. For example, the choice of windows, glazed doors, and any skylights for the project must conform to energy consumption requirements affecting size, orientation, and types of fenestration products used. (See Title 24, Part 6 Compliance Manual, Section 3.3.)
Building Walls/Insulation	CALGreen Code California Energy Code	The project must comply with efficiency requirements for building walls and insulation. Exterior Walls: Must meet requirements in current edition of California Energy Code, and comply with Sections A5.106.7.1 or A5.106.7.2 of CALGreen Code for wall surfaces, as well as Section 5.407.1, which required weather-resistant exterior wall and foundation envelope as required by California Building Code Section 1403.2. Construction must also meet requirements contained in Title 24, Part 6, which vary by material of the exterior walls. (See Title 24, Part 6 Compliance Manual, Part 3.2.3.) Demising (Interior) Walls: Mandatory insulation requirements for demising walls (which separate conditioned from non-conditions space) differ by the type of wall material used. (*Id*. at 3.2.4.) Door Insulation: There are mandatory requirements for air infiltration rates to improve insulation efficiency; they differ according to the type of door. (*Id*. at 3.2.5.) Flooring Insulation: There are mandatory requirements for insulation that depend on the material and location of the flooring. (*Id*. at 3.2.6.)
Finish Materials	CALGreen Code	The project must comply with pollutant control requirements for finish materials. For example, materials including adhesives, sealants, caulks, paints and coatings, carpet systems, and composite wood products must meet requirements in CALGreen Code to ensure pollutant control. (CALGreen Code Section 5.504.4.)
Wet Appliances (Toilets/Faucets/Urinal,	CALGreen Code California Energy	Wet appliances associated with the project must meet various efficiency requirements. For example:

Table 3.7-4. Applicable Greenhouse Gas-Related Laws and Regulations

Project Component	Applicable Laws/ Regulations	GHG Reduction Measures Required for Project
Dishwasher/Clothes Washer, Spa and Pool/Water Heater)	Code Appliance Efficiency Regulations (Title 20 Standards)	Spa and Pool: Use associated with the project is subject to appliance efficiency requirements for service water heating systems and equipment, spa and pool heating systems and equipment. (Title 24, Part 6, Sections 110.3, 110.4, 110.5; Title 20 Standards, Sections 1605.1(g), 1605.3(g); see also California Energy Code.) Toilets/Faucets/Urinals: Use associated with the project is subject to new maximum rates for toilets, urinals, and faucets effective January 1, 2016: • Showerheads maximum flow rate 2.5 gpm at 80 psi • Wash fountains 2.2 x (rim space in inches/20) gpm at 60 psi • Metering faucets 0.25 gallons/cycle • Lavatory faucets and aerators 1.2 gpm at 60 psi • Kitchen faucets and aerators 1.8 gpm with optional temporary flow of 2.2 gpm at 60 psi • Public lavatory faucets 0.5 gpm at 60 psi • Trough-type urinals 16 inches length • Wall mounted urinals 0.125 gallons per flush • Other urinals 0.5 gallons per flush (Title 20 Standards, Sections 1605.1(h),(i) 1065.3(h),(i).) Water Heaters: Use associated with the project is subject to appliance efficiency requirements for water heaters. (Title 20 Standards, Sections 1605.1(f), 1605.3(f).) Dishwasher/Clothes Washer: Use associated with the project is subject to appliance efficiency requirements for dishwashers and clothes washers. (Title 20 Standards, Sections 1605.1(o),(p),(q), 1605.3(o),(p),(q).)
Dry Appliances (Refrigerator/Freezer, Heater/Air Conditioner, Clothes Dryer)	Title 20 Standards CALGreen Code	Dry appliances associated with the project must meet various efficiency requirements. For example: Refrigerator/Freezer: Use associated with the project is subject to appliance efficiency requirements for refrigerators and freezers. (Title 20 Standards, Sections 1605.1(a), 1605.3(a).) Heater/Air Conditioner: Use associated with the project is subject to appliance efficiency requirements for heaters and air conditioners. (Title 20 Standards, Sections 1605.1(b),(c),(d),(e), 1605.3(b),(c),(d),(e) as applicable.) Clothes Dryer: Use associated with the project is subject to appliance efficiency requirements for clothes dryers. (Title 20 Standards, Section 1605.1(q).)
	CALGreen Code	Installations of HVAC, refrigeration and fire suppression equipment must comply with CALGreen Code Sections 5.508.1.1 and 508.1.2, which prohibits CFCs, halons, and certain HCFCs and HFCs.
Lighting	Title 20 Standards	Lighting associated with the project will be subject to energy efficiency requirements contained in Title 20 Standards. General Lighting: Indoor and outdoor lighting associated with the project must comply with applicable appliance efficiency regulations (Title 20 Standards, Sections 1605.1(j),(k),(n), 1605.3(j),(k),(n).) Emergency lighting and self-contained lighting: the project must also comply with applicable appliance efficiency regulations (Title 20

Table 3.7-4. Applicable Greenhouse Gas-Related Laws and Regulations

Project Component	Applicable Laws/ Regulations	GHG Reduction Measures Required for Project
		Standards, Sections 1605.1(l), 1605.3(l).) Traffic Signal Lighting: For any necessary project improvements involving traffic lighting, traffic signal modules and traffic signal lamps will need to comply with applicable appliance efficiency regulations (Title 20 Standards, Sections 1605.1(m), 1605.3(m).)
	California Energy Code	Lighting associated with the project will also be subject to energy efficiency requirements contained in Title 24, Part 6, which contains energy standards for non-residential indoor lighting and outdoor lighting. (See Title 24 Part 6 Compliance Manual, at Sections 5, 6.) Mandatory lighting controls for indoor lighting include, for example, regulations for automatic shut-off, automatic daytime controls, demand responsive controls, and certificates of installation. (Id. at Section 5.) Regulations for outdoor lighting include, for example, creation of lighting zones, lighting power requirements, a hardscape lighting power allowance, requirements for outdoor incandescent and luminaire lighting, and lighting control functionality. (Id. at Section 6.)
	AB 1109	Lighting associated with the project will be subject to energy efficiency requirements adopted pursuant to AB 1109. Enacted in 2007, AB 1109 required the CEC to adopt minimum energy efficiency standards for general purpose lighting, to reduce electricity consumption 50% for indoor residential lighting and 25% for indoor commercial lighting.
Bicycle and Vehicle Parking	CALGreen Code	The project will be required to provide compliant bicycle parking, fuel-efficient vehicle parking, and electric vehicle charging spaces (CALGreen Code Sections 5.106.4, 5.106.5.1, 5.106.5.3)
	California Energy Code	The project is also subject to parking requirements contained in Title 24, Party 6. For example, parking capacity is to meet but not exceed minimum local zoning requirements, and the project should employ approved strategies to reduce parking capacity (Title 24, Part 6, section 106.6)
Landscaping	CALGreen Code	The CALGreen Code requires and has further voluntary provisions for: - A water budget for landscape irrigation use; - For new water service, separate meters or submeters must be installed for indoor and outdoor potable water use for landscaped areas of 1,000-5,000 square feet; - Provide water-efficient landscape design that reduces use of potable water beyond initial requirements for plant installation and establishment
	Model Water Efficient Landscaping Ordinance	The model ordinance promotes efficient landscaping in new developments and establishes an outdoor water budget for new and renovated landscaped areas that are 500 square feet or larger. (CCR, Title 23, Division 2, Chapter 2.7.)
	Cap-and-Trade Program	Transportation fuels used in landscape maintenance equipment (e.g., gasoline) would be subject to the Cap-and-Trade Program. (See "Energy Use," below.)
Refrigerants	CARB Management of High GWP Refrigerants for Stationary Sources	Any refrigerants associated with the project will be subject to CARB standards. CARB's Regulation for the Management of High GWP Refrigerants for Stationary Sources 1) reduces emissions of high-GWP refrigerants from leaky stationary, non-residential refrigeration

Table 3.7-4. Applicable Greenhouse Gas-Related Laws and Regulations

Project Component	Applicable Laws/ Regulations	GHG Reduction Measures Required for Project
		equipment; 2) reduces emissions resulting from the installation and servicing of stationary refrigeration and air conditioning appliances using high-GWP refrigerants; and 3) requires verification GHG emission reductions. (CCR, Title 17, Division 3, Chapter 1, Subchapter 10, Article 4, Subarticle 5.1, Section 95380 et seq.)
Consumer Products	CARB High GWP GHGs in Consumer Products	All consumer products associated with the project will be subject to CARB standards. CARB's consumer products regulations set VOC limits for numerous categories of consumer products, and limits the reactivity of the ingredients used in numerous categories of aerosol coating products (CCR, Title 17, Division 3, Chapter 1, Subchapter 8.5.)
Construction		
Use of Off-Road Diesel Engines, Vehicles, and Equipment	CARB In-Use Off-Road Diesel Vehicle Regulation	Any relevant vehicle or machine use associated with the project will be subject to CARB standards. The CARB In-Use-Off-Road Diesel Vehicle Regulation 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 requirements and compliance dates of the Off-Road regulation vary by fleet size, as defined by the regulation.
	Cap-and-Trade Program	Transportation fuels (e.g., gasoline) used in equipment operation would be subject to the Cap-and-Trade Program. (See "Energy Use," below.)
Greening New Construction	CALGreen Code	All new construction, including the project, must comply with CALGreen Code, as discussed in more detail throughout this table. Adoption of the mandatory CALGreen Code standards for construction has been essential for improving the overall environmental performance of new buildings; it also sets voluntary targets for builders to exceed the mandatory requirements.
Construction Waste	CALGreen Code	The project will be subject to CALGreen Code requirements for construction waste reduction, disposal, and recycling, such as a requirement to recycle and/or salvage for reuse a minimum of 50% of the non-hazardous construction waste in accordance with Section 5.408.1.1, 5.408.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent.
Worker, vendor and truck vehicle trips (on-road vehicles)	Cap-and-Trade Program	Transportation fuels (e.g., gasoline) used in worker, vendor and truck vehicle trips would be subject to the Cap-and-Trade Program.

Table 3.7-4. Applicable Greenhouse Gas-Related Laws and Regulations

Project Component	Applicable Laws/ Regulations	GHG Reduction Measures Required for Project
Solid Waste		
Solid Waste Management	Landfill Methane Control Measure	Waste associated with the project will be disposed per state requirements for landfills, material recovery facilities, and transfer stations. Per the statewide GHG emissions inventory, the largest emissions from waste management sectors come from landfills, and are in the form of CH_4. In 2010, CARB adopted a regulation that reduces emissions from methane in landfills, primarily by requiring owners and operators of certain uncontrolled municipal solid waste landfills to install gas collection and control systems, and requires existing and newly installed gas and control systems to operate in an optimal manner. The regulation allows local air districts to voluntarily enter into a memorandum of understanding with CARB to implement and enforce the regulation and to assess fees to cover costs of implementation.
	Mandatory Commercial Recycling (AB 341)	AB 341 will require the project, if it generates four cubic yards or more of commercial solid waste per week, to arrange for recycling services, using one of the following: self-haul; subscribe to a hauler(s); arranging for pickup of recyclable materials; subscribing to a recycling service that may include mixed waste processing that yields diversion results comparable to source separation. The project will also be subject to local commercial solid waste recycling program required to be implemented by each jurisdiction under AB 341.
	CALGreen Code	The project will be subject to CALGreen Code requirement to provide areas that serve the entire building and are identified for the depositing, storage and collection of nonhazardous materials for recycling (CALGreen Code Section 5.410.1)
Energy Use		
Electricity/Natural Gas Generation	Cap-and-Trade Program	Electricity and natural gas usage associated with the project will be subject to the Cap-and-Trade Program. The rules came into effect on January 1, 2013, applying to large electric power plants and large industrial plants. In 2015, importers and distributors of fossil fuels were added to the Cap-and-Trade Program in the second phase. Specifically, on January 1, 2015, cap-and-trade compliance obligations were phased in for suppliers of natural gas, reformulated gasoline blendstock for oxygenate blending (RBOB), distillate fuel oils, and liquefied petroleum gas that meet or exceed specified emissions thresholds. The threshold that triggers a cap-and-trade compliance obligation for a fuel supplier is 25,000 metric tons or more of CO_2e annually from the GHG emissions that would result from full combustion or oxidation of quantities of fuels (including natural gas, RBOB, distillate fuel oil, liquefied petroleum gas, and blended fuels that contain these fuels) imported and/or delivered to California.

Table 3.7-4. Applicable Greenhouse Gas-Related Laws and Regulations

Project Component	Applicable Laws/ Regulations	GHG Reduction Measures Required for Project
Renewable Energy	California RPS (SB X1-2, SB 350, and SB 100)	Energy providers associated with the project will be required to comply with RPS set by SB X1 2, SB 350, and SB 100. SB X1 2 requires investor-owned utilities, publicly-owned utilities, and electric service providers to increase purchases of renewable energy such that at least 33% of retail sales are procured from renewable energy resources by December 31, 2020. In the interim, each entity was required to procure an average of 20% of renewable energy for the period of January 1, 2011 through December 31, 2013; and will be required to procure an average of 25% by December 31, 2016, and 33% by 2020. SB 350 requires retail sellers and publicly owned utilities to procure 50% of their electricity from eligible renewable energy resources by 2030. SB 100 increased the standards set forth in SB 350 establishing that 44% of the total electricity sold to retail customers in California per year by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California by 2045.
	Million Solar Roofs Program (SB 1)	The project will participate in California's energy market, which is affected by implementation of the Million Solar Roofs Program. As part of Governor Schwarzenegger's Million Solar Roofs Program, California has set a goal to install 3,000 megawatts of new, solar capacity through 2016. The Million Solar Roofs Program is a ratepayer-financed incentive program aimed at transforming the market for rooftop solar systems by driving down costs over time.
	California Solar Initiative- Thermal Program	The project will participate in California's energy market, which is affected by implementation of the California Solar Initiative -Thermal Program. The program offers cash rebates of up to $4,366 on solar water heating systems for single-family residential customers. Multifamily and Commercial properties qualify for rebates of up to $800,000 on solar water heating systems and eligible solar pool heating systems qualify for rebates of up to $500,000. Funding for the California Solar Initiative-Thermal program comes from ratepayers of Pacific Gas & Electric, SCE, Southern California Gas Company, and San Diego Gas & Electric. The rebate program is overseen by the CPUC as part of the California Solar Initiative.
	Waste Heat and Carbon Emissions Reduction Act (AB 1613, AB 2791)	The project will participate in California's energy market, which is affected by implementation of the Waste Heat and Carbon Emissions Reduction Act. Originally enacted in 2007 and amended in 2008, this act directed the CEC, CPUC, and CARB to implement a program that would encourage the development of new combined heat and power systems in California with a generating capacity of not more than 20 megawatts, to increase combined heat and power use by 30,000 gigawatt-hour. The CPUC publicly owned electric utilities, and CEC duly established policies and procedures for the purchase of electricity from eligible combined heat and power systems.

Table 3.7-4. Applicable Greenhouse Gas-Related Laws and Regulations

Project Component	Applicable Laws/ Regulations	GHG Reduction Measures Required for Project
		CEC guidelines require combined heat and power systems to be designed to reduce waste energy; have a minimum efficiency of 60%; have NO_x emissions of no more than 0.07 pounds per megawatt-hour; be sized to meet eligible customer generation thermal load; operate continuously in a manner that meets expected thermal load and optimizes efficient use of waste heat; and be cost effective, technologically feasible, and environmentally beneficial.
Vehicular/Mobile Sources		
General	SB 375 and SCAG RTP/SCS	The project complies with, and is subject to, the SCAG adopted RTP/SCS, which CARB approved as meeting its regional GHG targets in 2016.
Fuel	Low Carbon Fuel Standard (LCFS)/ EO S-01-07	Auto trips associated with the project will be subject to LCFS (EO S-01-07), which requires a 10% or greater reduction in the average fuel carbon intensity by 2020 with a 2010 baseline for transportation fuels in California regulated by CARB. The program establishes a strong framework to promote the low carbon fuel adoption necessary to achieve the Governor's 2030 and 2050 GHG goals.
	Cap-and-Trade Program	Use of gasoline associated with the project will be subject to the Cap-and-Trade Program. The rules came into effect on January 1, 2013, applying to large electric power plants and large industrial plants. In 2015, importers and distributors of fossil fuels were added to the Cap-and-Trade Program in the second phase. Specifically, on January 1, 2015, cap-and-trade compliance obligations were phased in for suppliers of natural gas, RBOB, distillate fuel oils, and liquefied petroleum gas that meet or exceed specified emissions thresholds. The threshold that triggers a cap-and-trade compliance obligation for a fuel supplier is 25,000 MT or more of CO_2e annually from the GHG emissions that would result from full combustion or oxidation of quantities of fuels (including natural gas, RBOB, distillate fuel oil, liquefied petroleum gas, and blended fuels that contain these fuels) imported and/or delivered to California.
Automotive Refrigerants	CARB Regulation for Small Containers of Automotive Refrigerant	Vehicles associated with the project will be subject to CARB's Regulation for Small Containers of Automotive Refrigerant. (CCR, Title 17, Division 3, Chapter 1, Subchapter 10, Article 4, Subarticle 5, Section 95360 et seq.) The regulation applies to the sale, use, and disposal of small containers of automotive refrigerant with a GWP greater than 150. The regulation achieves emission reductions through implementation of four requirements: 1) use of a self-sealing valve on the container, 2) improved labeling instructions, 3) a deposit and recycling program for small containers, and 4) an education program that emphasizes best practices for vehicle recharging. This regulation went into effect on January 1, 2010 with a one-year sell-through period for containers manufactured before January 1, 2010. The target recycle rate is initially set at 90%, and rises to 95% beginning January 1, 2012.
Light-Duty Vehicles	AB 1493 (or the Pavley Standard)	Cars that drive to and from the project will be subject to AB 1493, which directed CARB to adopt a regulation requiring the maximum

Table 3.7-4. Applicable Greenhouse Gas-Related Laws and Regulations

Project Component	Applicable Laws/ Regulations	GHG Reduction Measures Required for Project
		feasible and cost effective reduction of GHG emissions from new passenger vehicles. Pursuant to AB 1493, CARB adopted regulations that establish a declining fleet average standard for CO_2, CH_4, N_2O, and HFCs (air conditioner refrigerants) in new passenger vehicles and light-duty trucks beginning with the 2009 model year and phased-in through the 2016 model year. These standards are divided into those applicable to lighter and those applicable to heavier portions of the passenger vehicle fleet. The regulations will reduce "upstream" smog-forming emissions from refining, marketing, and distribution of fuel.
	Advanced Clean Car and ZEV Programs	Cars that drive to and from the project will be subject to the Advanced Clean Car and ZEV Programs. In January 2012, CARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards called Advanced Clean Cars. By 2025, new automobiles will emit 34% fewer global warming gases and 75% fewer smog-forming emissions. The ZEV program will act as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles in the 2018-2025 model years.
	Tire Inflation Regulation	Cars that drive to and from the project will be subject to the CARB Tire Inflation Regulation, which took effect on September 1, 2010, and applies to vehicles with a gross vehicle weight rating of 10,000 pounds or less. Under this regulation, automotive service providers must, inter alia, check and inflate each vehicle's tires to the recommended tire pressure rating, with air or nitrogen, as appropriate, at the time of performing any automotive maintenance or repair service, and to keep a copy of the service invoice for a minimum of three years, and make the vehicle service invoice available to the CARB, or its authorized representative upon request.
	EPA and NHTSA GHG and CAFE standards.	Mobile sources that travel to and from the project would be subject to EPA and NHTSA GHG and CAFE standards for passenger cars, light-duty trucks, and medium-duty passenger vehicles. (75 FR 25324–25728 and 77 FR 62624–63200.)
Medium- and Heavy-Duty Vehicles	CARB In-Use On-Road Heavy-Duty Diesel Vehicles Regulation (Truck and Bus Regulation)	Any heavy-duty trucks associated with the project will be subject to CARB standards. The regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet PM filter requirements. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent. The regulation applies to nearly all privately and federally owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating greater than 14,000 pounds.

Table 3.7-4. Applicable Greenhouse Gas-Related Laws and Regulations

Project Component	Applicable Laws/ Regulations	GHG Reduction Measures Required for Project
	CARB In-Use Off-Road Diesel Vehicle Regulation	Any relevant vehicle or machine use associated with the project will be subject to CARB standards. The CARB In-Use-Off-Road Diesel Vehicle Regulation applies to certain off-road diesel engines, vehicles, or equipment greater than 25 horsepower. The regulations: 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 requirements and compliance dates of the Off-Road regulation vary by fleet size, as defined by the regulation.
	Heavy-Duty Vehicle GHG Emission Reduction Regulation	Any relevant vehicle or machine use associated with the project will be subject to CARB standards. The CARB Heavy-Duty Vehicle GHG Emission Reduction Regulation applies to heavy-duty tractors that pull 53-foot or longer box-type trailers. (CCR, Title 17, Division 3, Chapter 1, Subchapter 10, Article 4, Subarticle 1, Section 95300 et seq.) Fuel efficiency is improved through improvements in tractor and trailer aerodynamics and the use of low rolling resistance tires.
	EPA and NHTSA GHG and CAFE standards.	Mobile sources that travel to and from the project would be subject to EPA and NHTSA GHG and CAFE standards for medium- and heavy-duty vehicles. (76 FR 57106–57513.)
Water Use		
Water Use Efficiency	Emergency State Water Board Regulations	Water use associated with the project will be subject to emergency regulations. On May 18, 2016, partially in response to EO B-27-16, the State Water Board adopted emergency water use regulations (CCR, title 23, Section 864.5 and amended and re-adopted Sections 863, 864, 865, and 866). The regulation directs the State Water Board, Department of Water Resources, and CPUC to implement rates and pricing structures to incentivize water conservation, and calls upon water suppliers, homeowners' associations, California businesses, landlords and tenants, and wholesale water agencies to take stronger conservation measures.
	EO B-37-16	Water use associated with the project will be subject to Emergency EO B-37-16, issued May 9, 2016, which directs the State Water Resources Control Board to adjust emergency water conservation regulations through the end of January, 2017 to reflect differing water supply conditions across the state. The Water Board must also develop a proposal to achieve a mandatory reduction of potable urban water usage that builds off the mandatory 25% reduction called for in EO B-29-15. The Water Board and Department of Water Resources will develop new, permanent water use targets to which the project will be subject. The Water Board will permanently prohibit water-wasting practices

Table 3.7-4. Applicable Greenhouse Gas-Related Laws and Regulations

Project Component	Applicable Laws/ Regulations	GHG Reduction Measures Required for Project
		such as hosing off sidewalks, driveways, and other hardscapes; washing automobiles with hoses not equipped with a shut-off nozzle; using non-recirculated water in a fountain or other decorative water feature; watering lawns in a manner that causes runoff, or within 48 hours after measurable precipitation; and irrigating ornamental turf on public street medians.
	EO B-40-17	EO B-40-17 lifted the drought emergency in all California counties except Fresno, Kings, Tulare, and Tuolumne. It also rescinds EO B-29-15, but expressly states that EO B-37-16 remains in effect and directs the State Water Resources Control Board to continue development of permanent prohibitions on wasteful water use to which the project will be subject.
	SB X7-7	Water provided to the project will be affected by SB X7-7's requirements for water suppliers. SB X7-7, or the Water Conservation Act of 2009, requires all water suppliers to increase water use efficiency. It also requires, among other things, that the Department of Water Resources, in consultation with other state agencies, develop a single standardized water use reporting form, which would be used by both urban and agricultural water agencies.
	CALGreen Code	The project is subject to CALGreen Code's water efficiency standards, including a required 20% mandatory reduction in indoor water use. (CALGreen Code, Division 4.3.)
	California Water Code, Division 6, Part 2.10, Sections 10910–10915.	Development and approval of the project requires the development of a project-specific Water Supply Assessment.
	Cap-and-Trade Program	Electricity usage associated with water and wastewater supply, treatment and distribution would be subject to the Cap-and-Trade Program.
	California RPS (SB X1-2, SB 350, SB 100)	Electricity usage associated with water and wastewater supply, treatment and distribution associated with the project will be required to comply with RPS set by SB X1-2, SB 350, and SB 100.

Notes: AB = Assembly Bill; CARB = California Air Resources Board; CEC = California Energy Commission; CFC = chlorofluorocarbon; CH4 = methane; CO2 = carbon dioxide; CO2e = carbon dioxide equivalent; CPUC = California Public Utilities Commission; EO = Executive Order; EPA = Environmental Protection Agency; GHG = greenhouse gas; GWP = global warming potential; HCFC = hydrochlorofluorocarbon; HFC = hydrofluorocarbon; gpm = gallons per minute; MT = metric tons; N2O = nitrous oxide; NHTSA = National Highway Traffic Safety Administration; PM = particulate matter; RPS = Renewable Portfolio Standard; RTP/SCS = Regional Transportation Plan/Sustainable Communities Strategy; SB = Senate Bill; SCAG = Southern California Association of Governments; VOC = volatile organic compound; ZEV = zero emission vehicle

As shown, the Project would be consistent with, and would not conflict with, the applicable GHG-reducing strategies of the state.

The City's General Plan includes various goals and policies that promote the use of clean and renewable energy sources, facilitate alternative modes of transportation and reduce VMTs, reduce waste, conserve water, and promote the efficient and sustainable use of energy. The Conservation Element includes goals and policies that result in benefits with reducing GHG emissions. Table 3.7-5, Consistency with City of Commerce's 2020 General Plan Policies, summarizes the Project's consistency with these policies.

Table 3.7-5. Consistency with City of Commerce's 2020 General Plan Policies

General Plan Policies	Project Consistency
Policy AQ-1.3. The City will promote and support mixed-use land patterns that allow the integration of retail, office, institutional and residential uses.	*Consistent.* The proposed project is a mixed-use project that includes residential, commercial, retail, and recreational land uses at one location.
Policy AQ-2.1. The City will require that developers of high density and mixed-use developments consult with the local transit agency and incorporate all appropriate and feasible transit amenities into the plans.	*Consistent.* The proposed project's applicant will coordinate with the Los Angeles County Metropolitan Transportation Authority (Metro) when developing local transportation amenities.
Policy AQ-2.4. The City will create opportunities to receive State transportation funds by adopting incentives (e.g., an expedited review process) for planning and implementing infill development projects within urbanized areas that include job centers and clean transportation nodes (e.g., preparation of "transit village" plans).	*Consistent.* The proposed project is an infill project of an existing brownfield site and community park. The project would keep the recreational amenities at the site while expanding the community services.
Policy AQ-2.8. The City will seek new cooperative relationships between employers and employees to reduce vehicle miles traveled (VMT).	*Consistent.* As a mixed-use development the proposed project has an inherent lower VMT per capita than other land use projects due to the various amenities found in one location. Further, residents of the proposed project have little need to travel for essential services.
Policy AQ-2.9. The City will work with large employers and commercial/industrial complexes to create Transportation Management Associations and to implement trip/VMT action strategies.	*Consistent.*
Policy Transportation-3.9. The city of Commerce will require major employers to adopt TDM plans pursuant to the city's adopted TDM ordinance.	*Consistent.*

Source: City of Murrieta 2011a.
Notes: HVAC = heating, ventilation, and air conditioning.

As discussed in Table 3.7-5, the Project would be consistent with the City's General Plan Policies.

The Scoping Plan, approved by CARB on December 12, 2008, 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. Relatedly, in the Final Statement of Reasons for the Amendments to the State CEQA Guidelines, the CNRA observed that "[t]he [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 2009a). 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 proposed Project would comply with all applicable regulations adopted in furtherance of the Scoping Plan to the extent required by law.

The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32 and establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. Table 3.7-6 highlights measures that have been developed under the Scoping Plan and the proposed Project's consistency with those measures. The table also includes measures proposed in the Draft 2017 Scoping Plan Update. To the extent that these regulations are applicable to the proposed Project, its inhabitants, or uses, the proposed Project would comply with all applicable regulations adopted in furtherance of the Scoping Plan.

Table 3.7-6. Project Consistency with Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Transportation Sector		
Advanced Clean Cars	T-1	The proposed project's residents, employees, and visitors would purchase vehicles in compliance with CARB vehicle standards that are in effect at the time of vehicle purchase.
1.5 million zero-emission and plug-in hybrid light-duty electric vehicles by 2025 (4.2 million Zero-Emissions Vehicles by 2030)	Proposed	The proposed project includes EV charging stations in accordance with CalGreen standards.
Low Carbon Fuel Standard	T-2	Motor vehicles driven by the proposed project's residents, employees, and visitors would use compliant fuels.
Low Carbon Fuel Standard (18 percent reduction in carbon intensity by 2030)	Proposed	Motor vehicles driven by the proposed project's residents, employees, and visitors would use compliant fuels.
Regional Transportation-Related GHG Targets	T-3	The proposed project would encourage use of alternative forms of transportation.
Advanced Clean Transit	Proposed	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Last Mile Delivery	Proposed	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Reduction in Vehicle Miles Traveled	Proposed	The proposed project is located on an infill site, which promotes compact walkable communities with an emphasis on proximity and accessibility.
Vehicle Efficiency Measures 1. Tire Pressure 2. Fuel Efficiency Tire Program 3. Low-Friction Oil 4. Solar-Reflective Automotive Paint and Window Glazing	T-4	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Ship Electrification at Ports (Shore Power)	T-5	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.

Table 3.7-6. Project Consistency with Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Goods Movement Efficiency Measures 1. Port Drayage Trucks 2. Transport Refrigeration Units Cold Storage Prohibition 3. Cargo Handling Equipment, Anti-Idling, Hybrid, Electrification 4. Goods Movement Systemwide Efficiency Improvements 5. Commercial Harbor Craft Maintenance and Design Efficiency 6. Clean Ships 7. Vessel Speed Reduction	T-6	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
California Sustainable Freight Action Plan	Proposed	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Heavy-Duty Vehicle GHG Emission Reduction 1. Tractor-Trailer GHG Regulation 2. Heavy-Duty Greenhouse Gas Standards for New Vehicle and Engines (Phase I)	T-7	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Medium- and Heavy-Duty Vehicle Hybridization Voucher Incentive Project	T-8	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Medium and Heavy-Duty GHG Phase 2	Proposed	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
High-Speed Rail	T-9	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Electricity and Natural Gas Sector		
Energy Efficiency Measures (Electricity)	E-1	The proposed project will comply with current Title 24, Part 6, of the California Code of Regulations energy efficiency standards for electrical appliances and other devices at the time of building construction.
Energy Efficiency (Natural Gas)	CR-1	The proposed project will comply with current Title 24, Part 6, of the California Code of Regulations energy efficiency standards for electrical appliances and other devices at the time of building construction.
Solar Water Heating (California Solar Initiative Thermal Program)	CR-2	The proposed project would not employ solar water heating as part of the design.
Combined Heat and Power	E-2	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Renewable Portfolios Standard (33 percent by 2020)	E-3	The proposed project would use energy supplied SCE, which is in compliance with the Renewable Portfolio Standard.

Table 3.7-6. Project Consistency with Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Renewable Portfolios Standard (50 percent by 2050)	Proposed	The proposed project would use energy supplied by SCE, which is in compliance with the Renewable Portfolio Standard.
Senate Bill 1 Million Solar Roofs (California Solar Initiative, New Solar Home Partnership, Public Utility Programs) and Earlier Solar Programs	E-4	The proposed project would include solar roofs installations.
Water Sector		
Water Use Efficiency	W-1	The proposed project is going to utilize water saving features including low-flow fixtures and non-potable water for landscape irrigation.
Water Recycling	W-2	The project will reclaim rainwater to be reused onsite.
Water System Energy Efficiency	W-3	This is applicable for the transmission and treatment of water, but it is not applicable for the proposed project.
Reuse Urban Runoff	W-4	The project will reclaim rainwater to be reused onsite.
Renewable Energy Production	W-5	Applicable for wastewater treatment systems. Not applicable for the proposed project.
Green Buildings		
State Green Building Initiative: Leading the Way with State Buildings (Greening New and Existing State Buildings)	GB-1	The proposed project would be required to be constructed in compliance with state or local green building standards in effect at the time of building construction.
Green Building Standards Code (Greening New Public Schools, Residential and Commercial Buildings)	GB-2	The proposed project's buildings would meet green building standards that are in effect at the time of construction.
Beyond Code: Voluntary Programs at the Local Level (Greening New Public Schools, Residential and Commercial Buildings)	GB-3	The proposed project would be required to be constructed in compliance with local green building standards in effect at the time of building construction.
Greening Existing Buildings (Greening Existing Homes and Commercial Buildings)	GB-4	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Industry Sector		
Energy Efficiency and Co-Benefits Audits for Large Industrial Sources	I-1	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Oil and Gas Extraction GHG Emission Reduction	I-2	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Reduce GHG Emissions by 20 percent in Oil Refinery Sector	Proposed	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
GHG Emissions Reduction from Natural Gas Transmission and Distribution	I-3	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.

Table 3.7-6. Project Consistency with Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Refinery Flare Recovery Process Improvements	I-4	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Work with the local air districts to evaluate amendments to their existing leak detection and repair rules for industrial facilities to include methane leaks	I-5	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Recycling and Waste Management Sector		
Landfill Methane Control Measure	RW-1	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Increasing the Efficiency of Landfill Methane Capture	RW-2	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Mandatory Commercial Recycling	RW-3	During both construction and operation of the proposed project, the proposed project would comply with all state regulations related to solid waste generation, storage, and disposal, including the California Integrated Waste Management Act, as amended. During construction, all wastes would be recycled to the maximum extent possible.
Increase Production and Markets for Compost and Other Organics	RW-4	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Anaerobic/Aerobic Digestion	RW-5	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Extended Producer Responsibility	RW-6	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Environmentally Preferable Purchasing	RW-7	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Forests Sector		
Sustainable Forest Target	F-1	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
High Global Warming Potential Gases Sector		
Motor Vehicle Air Conditioning Systems: Reduction of Refrigerant Emissions from Non-Professional Servicing	H-1	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
SF_6 Limits in Non-Utility and Non-Semiconductor Applications	H-2	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.

Table 3.7-6. Project Consistency with Scoping Plan GHG Emission-Reduction Strategies

Scoping Plan Measure	Measure Number	Project Consistency
Reduction of Perfluorocarbons in Semiconductor Manufacturing	H-3	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Limit High Global Warming Potential Use in Consumer Products	H-4	The proposed project's residents, employees, and visitors would use consumer products that would comply with the regulations that are in effect at the time of manufacture.
Air Conditioning Refrigerant Leak Test During Vehicle Smog Check	H-5	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Stationary Equipment Refrigerant Management Program – Refrigerant Tracking/Reporting/Repair Program	H-6	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Stationary Equipment Refrigerant Management Program – Specifications for Commercial and Industrial Refrigeration	H-6	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
SF_6 Leak Reduction Gas Insulated Switchgear	H-6	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
40 percent reduction in methane and hydrofluorocarbon emissions	Proposed	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
50 percent reduction in black carbon emissions	Proposed	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.
Agriculture Sector		
Methane Capture at Large Dairies	A-1	This measure does not apply to the proposed project. The proposed project would not inhibit CARB from implementing this Scoping Plan Measure.

Source: CARB 2008, 2017b.
Notes: GHG = greenhouse gas; proposed project = The Farm in Poway; CARB = California Air Resources Board; EV = electric vehicle; SF_6 = sulfur hexafluoride.

Based on the analysis in Table 3.7-6, the proposed Project would be consistent with the applicable strategies and measures in the Scoping Plan.

In addition to the measures outlined in the Table 3.7-6, the Scoping Plan also highlights, in several areas, the goals and importance of infill projects. Specifically, the Scoping Plan calls out an ongoing and proposed measure to streamline CEQA compliance and other barriers to infill development. The plan encourages infill projects and sees them as crucial to achieving the State's long-term climate goals. The plan encourages accelerating equitable and affordable infill development through enhanced financing and policy incentives and mechanisms.

The state will complete an Integrated Natural and Working Lands Climate Change Action Plan (Action Plan) by 2018, which will consider aggregation of eco-regional plans and efforts to achieve net sequestration goals. The Action Plan will include goals and plans to promote and provide incentives for infill development through

community revitalization and urban greening and promote the adoption of regional transportation and development plans, such as SB 375 SCS and Climate Action Plans, which prioritize infill and compact development and also consider the climate change impacts of land use and management.

The following strategies were outlined to expand infill development within the Scoping Plan:

- Encouraging regional transfer of development rights programs to allow owners of natural and working lands to sell their development rights to developers who can use those rights to add additional density to development projects in preferred infill areas.
- Promoting regional transit-oriented development funds that leverage public resources with private-sector investment capital to provide flexible capital for transit-oriented development projects.
- Rebates for low-VMT/location-efficient housing, similar to programs that use rebates to encourage adoption of energy-efficient appliances, ZEVs, water-efficient yards, or renewable energy installation. For example, the rebate could reimburse residents for a portion of the down payment for purchasing or renting a qualified home in exchange for a minimum term of residence.
- Promotion of cross-subsidizing multi-station financing districts along transit corridors to leverage revenues from development in strong-market station areas in order to seed needed infrastructure and development in weaker-market station areas.
- Abatement of residential property tax increases in exchange for property-based improvements in distressed infill areas.
- Ways to promote reduced parking in areas where viable transportation alternatives are present.
- Additional creative financing mechanisms to enhance the viability of priority infill projects.
- Ways to promote and strengthen urban growth boundaries to promote infill development and conservation of natural and working lands by defining and limiting developable land within a metropolitan area according to projected growth needs.

The Project is consistent with the GHG emission reduction measures in the Scoping Plan. The Project is consistent with the Scoping Plan, City's General Plan, and the City's CAP, which all promote economic growth while achieving greater energy efficiency. The Project would be consistent with SB 32, and EO S-3-05. The Project would not conflict with any plans adopted with the purpose of reducing GHG emissions; therefore, the proposed Project's impacts on GHG emissions would be **less than significant**. No mitigation is required.

3.7.6 Cumulative Impacts

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. As discussed in detail in Section 3.7.5, the Project would have a less than significant impact related to the generation of GHGs and whether the Project conflicts with a GHG reduction plan. Therefore, the Project would be **less than cumulatively considerable**. No mitigation is required.

3.7.7 Mitigation Measures

Impacts would be **less than significant**. No mitigation measures are required.

3.7.8 Level of Significance After Mitigation

Impacts would be **less than significant**.

3.7.9 References

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3.8 Hazards and Hazardous Materials

This section describes the existing hazardous materials conditions of the Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Project.

Comments received in response to the Notice of Preparation (see Appendix A) included acknowledgement that the Los Angeles Regional Water Quality Control Board (RWQCB) has an open environmental remediation case on the eastern portion of the Project site. In addition, the remedial work required in connection with the Project will be performed pursuant to a Response Plan being prepared under the California Land Reuse and Revitalization Act ("CLRRA") program. The RWQCB has reviewed this Response Plan including with respect to remedial action selected and acknowledged that complete removal of all identifiable waste, followed by confirmation sampling, as well as installation of groundwater monitoring network, would provide the maximum level of protection of human health and environmental and that an evaluation of remedial alternatives was not necessary. If groundwater impacts associated with the historic landfill are identified, the RWQCB may require additional work plans from responsible parties to address groundwater response action. RWQCB further indicated that it will use this EIR in conducting the CEQA review required of it in connection with its approval of the work identified in the Response Plan. It should be noted the Response Plan is still in draft form, and it has not yet been formally submitted to the RWQCB.

Information contained in this section is based, in part, on the following technical evaluations of the Project area:

- Limited Environmental Site Assessment Report, prepared by TRC in June 2013
- Remedial Action Plan for the Gage Avenue Disposal Site, Eastern Parcel, prepared by TRC in April 2015
- Phase I Environmental Site Assessment, prepared by SCS Engineers in October 2019
- Response Plan for the Gate Avenue and Fletcher Disposal Sites, prepared by SCS Engineers in February 2020
- Landfill Gas Investigation: Gage Avenue Dump and Vicinity, 7316 Gage Avenue and 6364 Zindell Avenue, SWIS No. 19-AA-5543, and Other Waste Disposal Sites, Commerce and Bell Gardens, California, prepared by Ninyo & Moore in August 2015

Other sources consulted are listed in Section 3.8.9 References.

3.8.1 Environmental Setting

The currently vacant eastern portion of the Project site was formerly the Gage Avenue Dump permitted by Los Angeles County, and owned and operated by L.A. By-Products, Inc. from 1950 to 1954. In 1958, an approximately 52,160 square-foot rectangular commercial building and railroad spur was constructed over the eastern portion of the landfill on this portion of the Project site. The commercial building remained present until it was declared unsafe by the County of Los Angeles Fire Department in February 1991, due to settling of the ground's surface beneath the pile-supported building structure, and was demolished in 1992. This portion of the site remains vacant. Cover soil on the eastern portion of the Project site ranges from 3 to 5 feet in thickness and average waste thickness is approximately 11-28 feet.

In addition, an 8,000 gallon diesel underground storage tank (UST) was installed at the eastern portion of the Project site in 1975 and removed in 1989. During UST removal, petroleum hydrocarbon-contaminated soil was

discovered in soil samples collected from within the former tank cavity. The RWQCB issued a regulatory case closure letter for this case on March 10, 1998.

Between 1941 and 1954, at least four entities conducted landfilling operations on the western portion of the Project site, currently developed as a Veterans Memorial Park. By 1963, the area where these former landfilling operations took place had been capped with a layer of fill soil and a vegetative cover. The western portion of the Project site was redeveloped into its current configuration (a City Veterans Memorial Park with a baseball field, parking areas, and a community center) by 1972. The past presence of landfill activity on the Project site constitutes a recognized environmental condition (REC).

Waste thickness on the western portion of the Project (i.e., Veterans Memorial Park) is approximately 15 to 17 feet and approximately 11 to 28 feet in the eastern portion of the Project site.

3.8.1.1 Previous Environmental Assessment for the Eastern Parcel

In June 2013, TRC conducted a Limited Phase II ESA for the Eastern Parcel consisting of the excavation and sampling of five trenches in the eastern portion of the former Gage Avenue Dump site in order to characterize the nature of the disposed waste. A total of 18 samples from the five trenches were analyzed for the hazardous materials listed in Table 3.8-1.

In January 2014, additional excavation was conducted on this portion of the Eastern Parcel. The test pit and trenches were excavated to varied depths, ranging from 15 to 26 feet below ground surface (bgs) to expose the native soil underlying the disposed waste. TRC collected five material samples for analysis of the same analytes used in the 2013 trenching investigation. Results of 2014 sampling analysis are presented below in Table 3.8-1.

In 2015, Ninyo & Moore conducted a landfill gas (LFG) investigation that included the Project site, as well as the former Salvage Corporation/Freight Terminals property to the west, the adjacent Ramada Inn property to the north, and the Travelodge property to the east across the Interstate 5 (I-5) Freeway. The work was conducted for CalRecycle by Ninyo and Moore (Ninyo 2014). Waste was encountered in the former Fletcher Dump footprint to a depth of 15 feet and within the western portion of the former Gage Avenue Dump to a depth of 16 feet. Analytical results from in-refuse samples is provided below in Table 3.8-1.

In October 2015, TRC submitted a report to the RWQCB for the Eastern Parcel detailing additional in-waste profiling results associated with the trenches previously excavated in the eastern portion of the Gage Avenue Dump, as well as the former rail spur that was installed on this portion of the Project site. A total of 34 samples were collected from inside the waste mass and results of the sampling are provided in Table 3.8-1. Results from this round of sampling were compared to the “Recommended Soil Cleanup Criteria” (RSCC) which are based on a conservative evaluation of human health, ecotoxicity, groundwater protection, and background concentration analysis. Analytical results from the additional in-refuse samples are provided in Table 3.8-1, along with a comparison to the RSCC. The RSCC for chemicals of potential concern are presented in Table 3.8-2.

Table 3.8-1. Soil Contamination Results

Contaminants of Concern	Method of Analysis	Results of 2013 Sampling	Results of 2014 Sampling	2015 Landfill Gas (LFG) Investigation	2015 Supplemental Soil and Vapor Assessment
Total Petroleum Hydrocarbons (TPH) carbon chain (C8-C44)	EPA Method 8015 and 8015M	Gasoline-range organics (C4 to C12) detected in soil samples at levels up to 39 mg/kg	Gasoline-range organics (C4 to C12) detected in soil samples at levels up to 0.13 mg/kg	Gasoline-range organics (C4 to C12) detected in soil samples at levels up to 0.53 mg/kg	Gasoline-range organics (C4 to C12) detected in soil samples at levels from 0.25 to 530 mg/kg (one sample was above the Recommended Soil Cleanup Criteria (RSCC))
		TPH (C8 to C44) was detected in all soil samples at levels up to 8,500 mg/kg	TPH (C8 to C44) was detected in all soil samples at levels up to 1,100 mg/kg	TPH Diesel (C13-C22) was detected in all soil samples at levels from 29 to 210 mg/kg TPH Motor Oil (C23-C40) was detected in all soil samples at levels from 220 to 1,800 mg/kg	TPH (C8 to C44) was detected in all soil samples at levels up to 38,000 mg/kg (four samples were above the RSCC)
Volatile organic compounds (VOCs)	EPA Method 8260B	All VOC detections were below the regional screening levels for industrial soils.	All VOC detections were below the regional screening levels for industrial soils.	VOCs were not detected in the one sample analyzed for VOCs	
Semi-volatile organic compounds (SVOCs)	EPA Method 8270C	SVOCs were not detected in any composite samples analyzed.	Benzo(a)anthracene: detected in one sample at 0.11 mg/kg Chrysene: detected in one sample at 0.16 mg/kg	Benzo(a)pyrene: detected in one sample at 1.4 mg/kg (above regional screening levels) Dibenz(a,h)anthracene: detected on one sample at 0.30 mg/kg (above regional screening levels)	

Table 3.8-1. Soil Contamination Results

Contaminants of Concern	Method of Analysis	Results of 2013 Sampling	Results of 2014 Sampling	2015 Landfill Gas (LFG) Investigation	2015 Supplemental Soil and Vapor Assessment
Organochlorine pesticides (pesticides)	EPA Method 8080 and 8081A	4,4'-DDD; 4,4'-DDT; Dieldrin were all detected and determined to be above the regional screening levels for industrial soils.	4,4'-DDD; 4,4'-DDT; Dieldrin were all detected and determined to be above the regional screening levels for industrial soils.	4,4'-DDE was detected at 0.16 mg/kg (below regional screening levels)	
Polychlorinated biphenyls (PCBs)	EPA Method 8082	PCBs detected in one sample, and was determined to be below the regional screening levels for industrial soils.	PCBs not detected in any composite samples analyzed.	PCBs were not detected in the one sample analyzed for PCBs	
RCRA Title 22 metals	EPA Methods 6010B/7000 And 6010B/7471A/7199	RCRA metals (barium, cadmium, chromium, mercury, selenium, and silver) were either not detected, or were detected at concentrations significantly below the regional screening levels for industrial soil.	RCRA metals (barium, lead, chromium, mercury, selenium, and silver) were either not detected, or were detected at concentrations significantly below the regional screening levels for industrial soil.	RCRA metals (antimony, barium, beryllium, cadmium, cobalt, copper, mercury, molybdenum, nickel, selenium, silver, vanadium, and zinc) were either not detected, or were detected at concentrations below the regional screening levels.	
				Arsenic concentrations ranging from 4.6 to 29 mg/kg were detected in the waste material samples (above regional screening levels)	
		Arsenic concentrations up to 23 mg/kg were detected in the composite soil samples (above regional screening levels).	Arsenic concentrations ranging from 5.2 to 27 mg/kg were detected in the composite soil samples (above regional screening levels).	Lead concentration of 400 mg/kg was detected (equal to 2015 regional screening levels)	

Table 3.8-1. Soil Contamination Results

Contaminants of Concern	Method of Analysis	Results of 2013 Sampling	Results of 2014 Sampling	2015 Landfill Gas (LFG) Investigation	2015 Supplemental Soil and Vapor Assessment
		Lead concentrations up to 1,400 mg/kg were detected in the composite soil samples (above regional screening levels).	Cadmium was detected at 84 mg/kg (above the regional screening levels for industrial soils).	Thallium concentrations ranging from 1.1 to 1.2 mg/kg were detected in the waste material samples (between regional screening levels for residential and industrial soils)	

TRC 2014; EPA = Environmental Protection Agency

Table 3.8-2. Recommended Soil Cleanup Criteria

Chemicals of Potential Concern		Recommend Soil Cleanup Criteria	
		(mg/kg)	*Basis for Criteria*
Total Petroleum Hydrocarbons (TPH)[1]	TPH as Gasoline	100	Groundwater Protection
	TPH as Diesel	1,000	Groundwater Protection
	TPH as Motor Oil	1,000	Groundwater Protection
SVOCs	Benzo(b)fluoranthene	0.16	Human Health
	Benzo(a)pyrene	0.016	Human Health
	Benzo(g,h,i)perylene	27	Groundwater Protection
	Dibenz(a,h)anthracene	0.016	Human Health
Pesticides	4,4'-DDD (DDD)	2.4	Human Health
	4,4'-DDE (DDE)	1.7	Human Health
	4,4'-DDT (DDT)	1.7	Human Health
	Dieldrin	0.0023	Groundwater Protection
	Endrin	0.00065	Groundwater Protection
	Total PCBs	**0.22**	**Human Health**
Metals	Arsenic	12	Background
	Cadmium	6.9	Groundwater Protection
	Chromium	750	Ecotoxicity
	Chromium, Hexavalent	0.3	Groundwater Protection
	Copper	280	Groundwater Protection
	Lead	80	Human Health
	Mercury	0.33	Groundwater Protection
	Molybdenum	20	Groundwater Protection
	Nickel	26	Groundwater Protection
	Thallium	0.78	Groundwater Protection
	Vanadium	390	Human Health
	Zinc		

[1] TPH Constituents

3.8.1.2 Previous Environmental Assessment for the Western Parcel

The Western Parcel, which is now Veterans Memorial Park, was undeveloped or agricultural land from at least 1896 through 1940. Between 1941 and 1954, at least four entities (plus a possible fifth unpermitted one) conducted landfilling operations on the property. By 1963, the landfills were capped with a layer of fill soil and a vegetative cover. The property was redeveloped into its current configuration with a baseball field, parking areas, and a recreation center by 1972.

The existence of past agricultural activities on the property and in adjacent areas indicates a potential for pesticide and/or heavy metal (associated with dusting powders) contamination. However, SCS noted in its Phase I Environmental Site Assessment (ESA) that it is not uncommon to find trace levels of pesticides in soils at former agricultural areas and that these trace concentrations are rarely cause for environmental concern. SCS concluded that, absent specific evidence of pesticide storage or mismanagement, the past use for agricultural purposes was considered a *de minimis* condition that did not require collection and analysis of soil samples.

The Rio Hondo and associated flood control basins adjoin the Western Parcel immediately to the south. With the exception of a few small, rural structures, the surrounding area was also largely undeveloped or agricultural land from at least 1896 to 1940. A levee and residences were developed on the south side of the Rio Hondo in the late 1940s and early 1950s. Salvage Corp operated a landfill to the west of the property between 1948 and 1954. After 1948, this landfill operator assumed operations of the landfill onto the western side of this portion of the Project site. The former Gage Avenue Landfill operated on the Eastern Parcel between 1950 and 1954. Thereafter, industrial buildings were constructed to the east of the Western Parcel over landfilled material (International Paper Co.), to the west (a freight business), and to the north in the 1960s.

The following environmental reports related to the Western Parcel (i.e., the Veterans Memorial Park) were reviewed by SCS in its Phase I ESA dated October 2019:

- LeRoy Crandall & Associates, November 29, 1963. Report of Foundation Investigation: Proposed Southeast Park Recreational Facilities, Zindell Street, Commerce, California.
- Converse Environmental West (Converse), March 15, 1990. Final Report for Solid Waste Air Quality Assessment Testing (SWAT) at the City of Commerce's Veterans Park, 7316 Gage Avenue, City of Commerce, CA 90040.
- Converse, February 27, 1991. Results of SWAT Groundwater Quality Testing: Veterans Memorial Park, 6364 Zindell Avenue, Commerce, California.
- Converse, April 12, 1991. Presentation of Document Assessment: Watkins Truck Terminal, 6370 Greenwood Avenue, Bell Gardens, California.
- Ninyo & Moore, August 21, 2015. Landfill Gas Investigation: Gage Avenue Dump and Vicinity, 7316 Gage Avenue and 6364 Zindell Avenue, SWIS No. 19-AA-5543, and Other Waste Disposal Sites, Commerce and Bell Gardens, California.

These reports are summarized in detail in the Phase I ESA; however, in general, they indicate that the former landfill operations are similar in nature and extent including with respect to the type and volume of wastes received as those conducted on the Eastern Parcel and, as such, the impacts are similar as well.

The LeRoy Crandall & Associates *Report of Foundation* Investigation, for example, was conducted for the City in 1963 prior to the development of Veterans Memorial Park and included thirteen borings drilled to a maximum depth

of 50 feet bgs on the property, The report indicated the presence of fill between 11 and 28 feet in depth which consisted of uncompacted soil with large amounts of trash and debris, including organic materials, wood, concrete, tire casings, metal, rubber gaskets, glass, brick, wire, tile, etc. The report addressed means of supporting proposed park structures (pavilions, bleachers, community building, etc.), and in response, landfilled material was removed from an approximately one acre area at the northwestern portion of the property, where the community center building was constructed.

The Converse Solid Waste Assessment Test (SWAT) for air and groundwater were also conducted on behalf of the City to address the four permitted waste disposal sites and possibly one unpermitted disposal site, which operated at and immediately adjacent to the Western Parcel between 1941 and 1954. For the air SWAT, Converse installed five landfill gas (LFG) sampling probes in the interior of the property to a depth of 11 feet, approximately 6 feet below the bottom of the landfill cover. Seven probes were also installed and monitored around the perimeter of the Property. Benzene, 1,2-dichloroethane (1,2-DCA), carbon tetrachloride, tetrachloroethene (PCE), trichloroethene (TCE) and vinyl chloride were detected in LFG samples. Benzene was detected at concentrations ranging from 180 to 2,800 parts per billion (ppb), vinyl chloride between 170 and 4,300 ppb, PCE between 0.7 and 27 ppb, and TCE between 8 and 73 ppb. PCE, 1,2-DCA, TCE, and methylene chloride were also detected in ambient air samples. Methane was detected between 2.6% and 12% by volume in LFG and was not detected in ambient air. SCS noted that, when compared to current regulatory guidance, the VOC and methane present in soil gas at the property represents a risk of vapor intrusion and constituted a REC given continued presence of buried waste.

The groundwater SWAT was conducted to determine whether leachate originating from the landfill beneath the Western Parcel had affected subsurface soils and/or groundwater. Converse advanced four soil borings to depths between 42 and 90 feet bgs. During the SWAT, groundwater was encountered at a depth of approximately 72 feet below grade with groundwater flow to the west-southwest. Landfilled materials reportedly included asphalt chunks, glass, brick fragments, wood, etc. Three groundwater monitoring wells and a lysimeter were installed. Halogenated and aromatic hydrocarbons were not detected in groundwater samples from the on-site wells. Metals were detected in groundwater at concentrations below the California drinking water Maximum Contaminant Levels (MCLs).

The April 12, 1991, Converse document primarily addresses environmental issues associated with the former Watkins Terminal area to the west of the Western Parcel, which was “clean closed” and redeveloped into the Vista del Rio residential area. It describes the presence of petroleum hydrocarbons and metals (primarily copper and zinc) in test pits at the Watkins Terminal and indicated that “the same hydrocarbon and metals were detected in landfill material beneath the adjacent City of Commerce’s Veterans Park.” Converse stated that extensive testing of soils at Veterans Park had detected aromatic hydrocarbons, pesticides, and polynuclear aromatic hydrocarbons (PAHs) in landfill material.

The 2015 Ninyo & Moore investigation contains a thorough summary of the historical landfills located at the property and at nearby landfill sites, including those described in the Converse reports discussed above. The investigation was conducted on behalf of the California Department of Resources, Recycling, and Recovery (CalRecycle). Ninyo & Moore installed one LFG monitoring well in waste on the eastern side of the Western Parcel (immediately to the south of the baseball field maintenance building) and another in the park area at the southwestern portion of the Western Parcel. Additional LFG monitoring wells were located just outside the northern edge of the property and two hand auger borings were advanced to evaluate cover thickness. Soil samples collected during the LFG drilling reported concentrations of total lead, semi-volatile organic compounds (SVOCs) and total petroleum hydrocarbons (TPH) in samples from on the property. One waste sample was analyzed for organochlorine pesticides (OCPs), with one detection of 4,4-DDD at a concentration below its respective residential and industrial Risk Screening Levels. Volatile organic compounds (VOCs) and polychlorinated biphenyls (PCBs) were not detected in this sampling. Methane was detected at concentrations of 4.3 and 3.6 percent by volume.

3.8.2 Relevant Plans, Policies, and Ordinances

Federal

There are no federal plans, policies, and ordinances relevant to the proposed Project.

State

California Environmental Protection Agency

The California EPA implements and enforces a statewide hazardous materials program known as the Certified Unified Program Agency (CUPA) established by Senate Bill 1802 to enable counties and local government to enforce the administrative requirements, permits, inspections, and enforcement activities for the following environmental and emergency management programs for hazardous materials:

- Hazardous Materials Release Response Plans and Inventories (Business Plans)
- California Accidental Release Prevention Program
- Underground Storage Tank Program
- Aboveground Petroleum Storage Act Requirements for Spill Prevention, Control, and Countermeasure Plans
- Hazardous Waste Generator and On-site Hazardous Waste Treatment Programs
- California Uniform Fire Code, Hazardous Materials Management Plans, and Hazardous Material Inventory Statements

California Hazardous Waste Control Law

The California Hazardous Waste Control Law is administered by the California EPA to regulate hazardous wastes. Although the Hazardous Waste Control Law is generally more stringent than RCRA, until the federal EPA approves the California Hazardous Waste Control Program (which is charged with regulating the generation, treatment, storage, and disposal of hazardous waste), both the state and federal laws apply in California. The Hazardous Waste Control Law lists 791 chemicals and approximately 300 common materials that may be hazardous; establishes criteria for identifying, packaging, and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal, and transportation; and identifies some wastes that cannot be disposed of in landfills.

The California Code of Regulations (CCR) 22 CCR Section 66261.10 provides that waste has "hazardous" characteristics if it has the following effects:

> [a] (1) a waste that exhibits the characteristics may: (A) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, or disposed or otherwise managed.

According to 22 CCR (Article 11, Chapter 3), substances having a characteristic of toxicity, ignitability, corrosivity, or reactivity are considered hazardous waste. Hazardous wastes are hazardous substances that no longer have a practical use, such as material that has been abandoned, discarded, spilled, contaminated, or are being stored prior to proper disposal (EPA 2019).

Toxic substances may cause short-term or long-lasting health effects, ranging from temporary effects to permanent disability or death. For example, toxic substances can cause eye or skin irritation, disorientation, headache, nausea, allergic reactions, acute poisoning, chronic illness, or other adverse health effects if human exposure exceeds certain levels (the level depends on the substance involved). Carcinogens (substances known to cause cancer) are a special class of toxic substances. Examples of toxic substances include most heavy metals, pesticides, and benzene (a carcinogenic component of gasoline). Ignitable substances (e.g., gasoline, hexane, and natural gas) are hazardous because of their flammable properties. Corrosive substances (e.g., strong acids and bases such as sulfuric (battery) acid or lye) are chemically active and can damage other materials or cause severe burns upon contact. Reactive substances (e.g., explosives, pressurized canisters, and pure sodium metal, which reacts violently with water) may cause explosions or generate gases or fumes.

Other types of hazardous materials include radioactive and biohazardous materials. Radioactive materials and wastes contain radioisotopes, which are atoms with unstable nuclei that emit ionizing radiation to increase their stability. Radioactive waste mixed with chemical hazardous waste is referred to as "mixed wastes." Biohazardous materials and wastes include anything derived from living organisms. They may be contaminated with disease-causing agents, such as bacteria or viruses (22 CCR 66251.1 et seq.).

California Accidental Release Prevention Program

The California Accidental Release Prevention (CalARP) program was implemented on January 1, 1997, and replaced the California Risk Management and Prevention Program. The objectives of the CalARP program are to prevent accidental releases of substances that can cause serious harm to the public and the environment, to minimize the damage if releases do occur, and to satisfy community right-to-know laws. This is accomplished by requiring businesses that handle more than a threshold quantity of a regulated substance listed in the regulations to develop a Risk Management Plan. A Risk Management Plan is a detailed engineering analysis of the potential accident factors present at a business and the Mitigation Framework measures that can be implemented to reduce this accident potential. The CalARP program is implemented at the local government level by Certified Unified Program Agencies, also known as administering agencies. The CalARP program is designed so these agencies work directly with the regulated businesses. Certified Unified Program Agencies determine the level of detail in the risk management plans, review the risk management plans, and conduct facility inspections (CalOES 2011).

California Department of Toxic Substances Control and California Highway Patrol Hazard Transportation Program

The California Department of Toxic Substances Control (DTSC) administers the transportation of hazardous materials throughout the state. Regulations applicable to the transportation of hazardous waste include 22 CCR, Division 4.5, Chapters 13 and 29, as well as Division 20, Chapter 6.5, Articles 6.5, 6.6, and 13 of the California Health and Safety Code. The DTSC requires that drivers transporting hazardous wastes obtain a certificate of driver training that shows the driver has met the minimum requirements concerning the transport of hazardous materials, including proper labeling and marking procedures, loading/handling processes, incident reporting and emergency procedures, and appropriate driving and parking rules. The California Highway Patrol also requires shippers and carriers to complete hazardous materials employee training before transporting hazardous materials.

California Health and Safety Code

The handling and storage of hazardous materials is regulated by Division 20, Chapter 6.95 of the California Health and Safety Code. Under Sections 25500–25543.3, facilities handling hazardous materials are required to prepare a Hazardous Materials Business Plan. Hazardous Materials Business Plans contain basic information on the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of in the state.

Chapter 6.95 of the Health and Safety Code establishes minimum statewide standards for Hazardous Materials Business Plans. Each business must prepare a Hazardous Materials Business Plan if that business uses, handles, or stores a hazardous material (including hazardous waste) or an extremely hazardous material in disclosable quantities greater than or equal to the following:

- 500 pounds of a solid substance
- 55 gallons of a liquid
- 200 cubic feet of compressed gas
- A hazardous compressed gas in any amount (highly toxic with a Threshold Limit Value of 10 parts per million or less)
- Extremely hazardous substances in threshold planning quantities

California Occupational Safety and Health Administration Hazard Handling Procedures

The California Occupational Safety and Health Administration (CalOSHA) is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. CalOSHA standards are generally more stringent than federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR 337–340). The regulations specify requirements for employee training, availability of safety equipment, accident prevention programs, and hazardous substance exposure warnings.

Emergency Services Act

Under the Emergency Services Act, 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 but 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 (Governor's Office of Emergency Services 2006).

The Emergency Planning Community Right-to-Know Act

The Emergency Planning Community Right-to-Know Act requires facilities to disclose to the State and Local Emergency Planning Committee the quantities and type of toxic chemicals stored. To avoid multiple reports to various agencies, the California Health and Safety Code requires notification of chemical inventory to the Administering Agency (DTSC). Notification of chemical inventory is accomplished through completion of a Hazardous Materials Business Plan and inventory (EPA 2015).

Local

City of Commerce General Plan – Safety Element

The primary purpose of the Safety Element is to identify and assess the natural and man-made safety hazards that should be considered in the planning for future land uses and development. The following objective and policies are applicable to the proposed Project.

- *Policy 4.1:* The City of Commerce will ensure that appropriate mitigation measures relative to soil contamination and soils characteristics (subsidence, erosion, etc.) are required for development and redevelopment in order to reduce hazards.

- *Policy 4.4:* The City of Commerce will work with Federal, State, and county agencies, as well as the Industrial Council, to protect all city residents and workers from hazardous materials and the risks associated with the transportation of these materials.
- *Policy 4.5:* The City of Commerce will work with the Fire Department to enforce "right to know" laws.
- *Policy 4.6:* The City of Commerce will maintain a city liaison officer who will continue to work with the Fire Department to monitor the production, use, and storage of hazardous materials.
- *Policy 4.7:* The City of Commerce will establish an environmental review procedure that will assess the impact of new potentially hazardous industrial uses on adjacent residential neighborhoods.
- *Policy 4.8:* The City of Commerce will work with the Los Angeles County Sheriff's Department to enforce the use of the hazardous materials transport routes identified in the Public Safety Element.
- *Policy 4.9:* The City of Commerce will encourage the proper disposal of hazardous waste materials produced, used, and stored within the city's limits.

3.8.3 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 State CEQA Guidelines. Through the analysis in the Initial Study (see Appendix A), it was determined that the proposed Project would not have a substantial adverse effect regarding excessive noise when located within an airport land use plan (Threshold E); impairment or interference with implementation of an adopted emergency response plan (Threshold F); or exposure of people or structures to loss, injury, or death involving wildfires (Threshold G). Accordingly, these issues are not further analyzed in the EIR. Based on the remaining thresholds (Thresholds A, B, C, and D), according to Appendix G of the State CEQA Guidelines, a significant impact related to hazards and hazardous materials would occur if the Project would:

A. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
B. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
C. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
D. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as result, would it create a significant hazard to the public or the environment.

3.8.4 Methodology

The analysis contained in this section is based, in part, on the following technical evaluations of the Project area:

- Limited Environmental Site Assessment Report, prepared by TRC in June 2013
- Remedial Action Plan for the Gage Avenue Disposal Site, Eastern Parcel, prepared by TRC in April 2015
- Phase I Environmental Site Assessment, prepared by SCS Engineers in October 2019
- Response Plan for the Gate Avenue and Fletcher Disposal Sites, prepared by SCE Engineers in February 2020

3.8.5 Impacts Analysis

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

Pre-Construction (Soil Remediation)

Due to historic landfill activities on the Project site and levels of contamination found within the soil, prior to construction, remedial activities including removal of waste and waste-impacted soils will be required. The goal of the remediation activities is to demonstrate that chemicals of concern do not remain within the base or sidewalls of the excavation area at concentrations that could pose a potential threat to human health, groundwater, or ecological receptors. Chemicals of concern include those which were detected in samples of soil and/or landfill material during previous site investigations at levels above EPA regional screening levels. The objective of the remediation activities would be to restore the site, based on the RSCC (Table 3.8-2), to a condition that allows for unrestricted use.

A Remedial Action Plan (RAP) was previously approved in August 2016 by the RWQCB for the Eastern Parcel of the former Gage Avenue Dump site. Thereafter, the remedial approach envisioned in the RAP was essentially adopted by the initial and Revised Response Plan for use with respect to the entire Project site, which includes the Gage Avenue and Fletcher Disposal Sites, prepared by SCE Engineers to include remediation of the entire Project site. Remediation of the Project site will involve the excavation and removal of all former landfill debris and contaminated soils to an approximately 20-foot depth. The excavation of soils is estimated to be approximately 380,000 cubic yards (cy) that would be transferred to a RWQCB-approved landfill site in Southern California. Upon removal, the Project's soil-bottoms and sidewalls would be tested to ensure all contaminants and debris have been removed. Remediation of the Project site is expected to last for approximately 9-12 months beginning as early as May 2020.

A Site Health & Safety Plan (HASP) has been prepared to address health and safety hazards, regulatory compliance, and specific tasks that will be performed as part of the approved Response Plan. All employees, contractors and their subcontractors, and site visitors must read and understand the HASP before entering the work area.

The HASP outlines procedures to minimize the health risk from exposure to potentially harmful materials such as air-borne vapors, landfill gas, and fugitive dust. The HASP focuses primarily on site workers closest to the landfill debris and cover soil where the highest potential for exposure exists. By establishing strict health and safety requirements, the health risks to workers or park users would also be conservatively mitigated. Potential exposure to hazards, as well as mitigation measures, will be communicated to site workers as a component of planned site-specific health and safety training.

The HASP has been prepared under the supervision of a Certified Industrial Hygienist who will assist in instituting recommendations to protect nearby workers and park users from potential health risks during remediation. The HASP describes the expected and potential chemical and physical hazards, health and safety training requirements, specific personal hygiene protocols, monitoring equipment, and personal protective equipment that will be used during remediation work.

Most site workers will be operating or driving equipment and will not likely come in direct contact with the cover soils or landfill materials. For this reason, the potential for significant exposures are minimal. However, workers who may potentially come in contact with the landfilled materials or related contaminants will be required to wear appropriate personal protective equipment in compliance with OSHA standards. Monitoring for air-borne emissions such as landfill gas, vapors, and dust that could potentially be released during the excavation and transport of landfill debris and cover

material is another important component of the HASP. Landfill gas consists primarily of methane, carbon dioxide, and trace levels of volatile and semi-volatile organic compounds.

Methane and carbon dioxide are asphyxiants since they displace oxygen, and produce a hazardous oxygen-deficient atmosphere. These gasses are not considered to be carcinogenic. Methane also presents an explosion hazard if the concentration in air exceeds 5 percent by volume. Such concentrations would normally occur only in confined or enclosed spaces. Therefore, in addition to the air monitoring requirements for remediation workers, air measurements will also be performed at the site boundary to ensure the health and safety of the nearby community.

All waste material streams recovered from the mechanized screening process will be stockpiled for appropriate characterization followed by off-site disposal, treatment, or recycling. Based on materials encountered during previous investigations, it is anticipated that waste debris to be disposed off-site will include various quantities of wood and green waste, treated wood, tires, plastic, metals, roof shingles, and other small quantities of material (glass, paper, etc.).

If any hazardous waste constituents, including contaminated soil, are discovered or suspected to be present based on visual or olfactory observation during excavation, these materials would be segregated from the remainder of the excavated materials, profiled, recorded, manifested, and disposed of at an appropriate permitted landfill. In the event containers are discovered with unknown contents, they would be segregated and stored based on physical characteristics and compatibility. Some buried wastes or impacted soils may contain elevated levels of TPH, metals, or pesticides and could be categorized as CalHaz waste. These materials will be segregated, profiled and/or treated, and then disposed of at an appropriate disposal facility.

Lastly, qualified transporters will be hired for hauling the excavated materials offsite. The hauling contractor(s) used to transport impacted material to the off-site disposal facilities would be required to be licensed and permitted by the State of California and/or the EPA. The remedial excavation contractor will verify that the selected transporter has a valid registration/license and insurance policy for transporting wastes off site and verify that the transporter has not negligently released waste material/soil during transport. Contractors would also be required to comply with the County of Los Angeles Truck Route Ordinance and/or California Department of Transportation (Caltrans) approved truck routes.

Once the RWQCB has determined the work called for in the Response Plan is complete, Project construction will proceed. The initial construction process entails construction of separate subterranean parking structures beneath the retail, community center, and residential living areas, followed by Phase I of Project construction.

Construction

Once remediated, construction activities on the Project site will involve the use and storage of commonly used hazardous materials such as gasoline, diesel fuel, lubricating oil, grease, solvents, and other vehicle and equipment maintenance fluids. These substances will be used and stored in designated construction staging areas within the Project area. These materials will be transported and handled in accordance with all federal, state, and local laws regulating the management and use of hazardous materials. It is reasonably anticipated that materials will be used, stored, and disposed of in commercially reasonable quantities given the size of the Project and in accordance with applicable laws and regulations and manufacturers' instructions. Compliance with all applicable codes and regulations concerning the handling, storage and disposal of hazardous waste, will reduce the potential to release contaminants.

Operation

The proposed land uses do not typically handle large quantities of hazardous materials. Once construction is complete, potential hazardous materials present during operation will be limited to reasonable quantities of commercially available landscaping and building maintenance products such as oils, landscaping chemicals, pesticides, paints and thinners, rust inhibitors and other substances associated with commercial, residential, and recreation uses.

While the proposed Project would result in the increase in routine transport, use, and disposal of hazardous materials and/or wastes generated during remediation, construction, and operation, all hazardous materials would be transported and handled in accordance with all federal, state, and local laws regulating the management and use of hazardous materials. However, prior to implementation of the work described Response Plan, the proposed Project may have the potential to result in a significant hazard to the public or the environment. However, with the implementation of mitigation measure **MM-HAZ-1**, potential impacts would be reduced to less than significant level. As such, impacts are considered **less than significant with mitigation incorporated**.

Threshold B: Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

As stated above, the Response Plan calls for the removal of all buried waste and impacted soils currently underlying the Project site. Excavating, removing, transporting, and disposing of this waste and waste-impacted soils has the potential to result in accidental conditions. The Response Plan prepared for the Project site outlines specific methodologies for material sorting and stockpiling, required regulatory compliance, waste material profiling and disposal, as well as, an HASP to protect workers and the environment. Personal air sampling will be conducted to test for airborne contaminants during the performance of specific remediation tasks. The air sampling will be conducted at the beginning of the work during the excavation of waste material and soils, screening of waste material and soil, and other work, as deemed appropriate by the site safety officer. In addition to the air monitoring requirements for remediation workers, air measurements will also be performed at the site boundary to ensure the health and safety of the nearby community.

Lastly, qualified transporters would be hired for hauling the excavated materials off-site. The hauling contractor(s) used to transport impacted material to the off-site disposal facilities will be required to be licensed and permitted by the State of California and/or the EPA. The waste hauler would be required to have a contingency plan prepared in order to handle the following potential conditions:

- When there are emergency situations (i.e., vehicle breakdown, accident, waste spill, waste leak, fire, explosion, etc.) during transportation of excavated materials/soil form the site to the designated treatment/ disposal facility;
- When the volumes of excavated soil change; or
- When waste characteristics change.

Following completion of the work identified in the Response Plan, Project construction and operation will not require the handling or storage of large quantities of hazardous materials (more than 1,000 kilograms (kg) of hazardous waste or over 1 kg of acutely hazardous waste per month). It is reasonably anticipated that commercially available products will be used, stored, and disposed of in commercially-reasonable quantities given the nature of the construction and in accordance with applicable laws and regulations and manufacturers' instructions. Direct impacts to human health and the environment from accidental spills of small amounts of hazardous materials from construction activities could potentially occur. However, compliance with federal, state, and local regulations, including the California Division of Occupational Safety and Health and

the Los Angeles County Department of Public Health requirements that provide safety and control measures for those materials handled on-site, would ensure that adverse impacts would not occur. Furthermore, compliance with the site specific HASP and Remedial Action Plan, including the contingency plan, will ensure the safety of the public and the environment in the event of any accidental release of hazardous materials. Impacts would be potentially significant prior to implementation of the work identified in the approved Response Plan. However, with the implementation of mitigation measure **MM-HAZ-1**, potential impacts would be reduced to less than significant level. As such, impacts are considered **less than significant with mitigation incorporated**.

Threshold C: 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?

The nearest school to the Project site is Ellen Ochoa Prep School (9th through 12th grade), located approximately 0.6 mile east of the Project site. While remediation and construction activities will temporarily increase the amount of hazardous materials transported to, present and used on-site, there is no school located within 0.25 mile, and the hazardous materials present would be managed in a manner so as to not present substantial potential for adverse effects. Compliance with federal, state, and local regulations, including the California Division of Occupational Safety and Health and the Los Angeles County Department of Public Health requirements that provide safety and control measures for those materials handled on-site, would ensure that adverse impacts would not occur. Impacts would be **less than significant**. No mitigation is required.

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

The Project itself does not appear on any of the lists required by any provision of Government Code Section 65962.5; however, a portion of the Project site is listed on the State Water Resources Control Board Geotracker website (T10000005526) in connection with the voluntary cleanup program activities initiated for the Eastern Parcel. In addition, the former Gage Avenue Dump facility appears on the Los Angeles County Department of Public Health Solid Waste Information Management System online database as bearing CalRecycle Permit 19-AA-5543 as to the former landfill. The Project site or street addresses associated with it are listed as having generated asbestos containing waste, unspecified aqueous solutions, and other inorganic solids. A portion of the Project site is also listed for a leaking underground storage tank (LUST) case, which was opened in August 1997 and closed in March 1998. Based on the regulatory status, a UST which was installed in 1975 and removed in 1989 and resulted in release of waste oil into soil is a closed case and not anticipated to affect the environmental condition of the property. However, the past presence of landfill operations at the Project site constitutes a REC. Therefore, prior to implementation of the Response Plan, impacts could be potentially significant. However, with the implementation of mitigation measure **MM-HAZ-1**, potential impacts would be reduced to less than significant level. As such, impacts are considered **less than significant with mitigation incorporated**.

3.8.6 Cumulative Impacts

Construction of cumulative projects would require the handling of hazardous materials similar to that of the proposed Project. As noted in the analysis above, implementing the proposed Project has the potential to result in a significant impact from the transport of hazardous materials, prior to implementation of the work identified in the Response Plan. However, as the Project would comply with federal, state, and local laws related to the transport

and handling of hazardous materials, and with each of the identified cumulative projects also complying with these laws, the cumulative impact related to the release of hazardous materials would be reduced.

The environmental site assessments performed for the proposed Project evaluated the Project site, which is listed on governmental databases for the potential or actual releases of hazardous substances to the environment. The Project site was identified as having contaminated soils beneath the site associated with the previous landfill operations. Where potential hazards on-site are identified, mitigation is provided. These impacts would be mitigated by removing, testing, disposing, and remediating hazardous soils in accordance with local, state, and federal laws, if necessary. Similar compliance would be required by other nearby cumulative projects with potentially hazardous existing contamination, which would be handled on a project-by-project basis. Therefore, with the implementation of mitigation measure **MM-HAZ-1**, the overall cumulative impacts are considered **less than significant with mitigation incorporated**.

3.8.7 Mitigation Measures

The following mitigation measure would reduce potential impacts to below a level of significance.

MM-HAZ-1 **Response Plan**. Prior to the start of construction for the proposed Project, wastes and waste-impacted soils underlying the entirety of the Project site must be excavated and removed in accordance with the approved Response Plan, as well as, architectural and engineering plans. Implementation of the proposed Project shall require the excavation, stockpiling, profiling, and appropriate disposal of all former landfill materials encountered during remediation activities. The objective of the remediation activities is to restore the Project site, based on the RSCC (Table 3.8-2), to a condition that allows for unrestricted use. Once the RWQCB has determined that the work required by the Response Plan is complete, Project construction shall proceed.

3.8.8 Level of Significance After Mitigation

With the implementation of mitigation measure **MM-HAZ-1**, impacts would be less than significant.

3.8.9 References

CalOES (California Office of Emergency Services). 2011. "California Accidental Release Prevention Program." California Office of Emergency Services, For Governments & Tribal. http://www.caloes.ca.gov/for-governments-tribal/response/california-accidental-release-prevention.

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3.9 Hydrology and Water Quality

This section describes the existing hydrologic and water quality conditions of the Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Project.

Comments received in response to the Notice of Preparation (see Appendix A) included concerns regarding impacts on groundwater depletion and runoff contamination.

Information contained in this section is based on sources listed in Section 3.9.9 References.

3.9.1 Environmental Setting

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

Regional Watershed

The proposed Project is located within the jurisdiction of the Los Angeles Regional Water Quality Control Board (RWQCB), which administers the Basin Plan and other water quality programs within the coastal watershed of Los Angeles and Ventura Counties. The Los Angeles RWQCB is a 5,600-square-mile area that encompasses all coastal drainages flowing to the Pacific Ocean between Rincon Point (on the coast of western Ventura County) and the eastern Los Angeles County line. The boundaries of the Los Angeles River Basin are demarcated partly by physical watershed divides and partly by administrative boundaries (i.e., Orange County/ Los Angeles County line).[1]

Table 3.9-1 shows the watersheds that encompass the Project site as designated by the United States Geological Survey (USGS) Watershed Boundary Dataset (Figure 3.9-1), as well as the Los Angeles RWQCB Basin Plan (Figure 3.9-2). The USGS Watershed Boundary Dataset delineates watersheds according to hydrologic units, which are nested within one another according to the scale of interest. USGS identifies hydrologic units by name and by hydrologic unit code (HUC), which increase in length as the watershed boundaries increase in detail. The Los Angeles RWQCB Basin Plan identifies watersheds in a hierarchical system similar to the USGS Watershed Boundary Dataset, but with somewhat different watershed names and boundaries. These geographic boundaries are likewise watershed-based, but are typically referred to as hydrologic units, areas, and sub-areas. These generally constitute the geographic basis around which many surface water quality problems and goals/objectives are defined in the Basin Plan. The proposed Project is located within the Coastal Plain hydrologic area of the Los Angeles – San Gabriel River hydrologic unit (No. 405.1), and more specifically within the Central hydrologic sub-area (No. 405.15), within the Los Angeles RWQCB (Los Angeles RWQCB 2014; Table 3.9-1, Figure 3.9-2). The USGS Watershed Boundary Dataset indicates the Project site lies within the 52.7-square-mile Alhambra Wash sub-watershed of the Rio Hondo watershed, located in the Los Angeles sub-basin in the Ventura/San Gabriel basin (Figure 3.9-1).[2]

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1 Los Angeles RWQCB (Regional Water Quality Control Board). 2014. *Water Quality Control Plan Los Angeles Region, Basin Plan for the Coastal Watershed of Los Angeles and Ventura Counties (Region 4)*. As amended through 2019.

2 USGS (U.S. Geological Survey) 2018. The National Map Viewer. Web Map Service accessed at http://viewer.nationalmap.gov/viewer on August 21, 2018.

Table 3.9-1. Watershed Designations by Agency/Source

Agency/Source	HUC/ Basin No.	Analysis Scale	Name	Size (Sq. Mi.)
USGS Watershed Boundary Dataset	180701	Basin	Ventura/San Gabriel	5,606
	18070105	Sub-basin	Los Angeles	831
	1807010503	Watershed	Rio Hondo	130.5
	180701050303	Sub-Watershed	Alhambra Wash – Rio Hondo	52.7
Los Angeles RWQCB Basin Plan	400	RWQCB Region	Los Angeles	5,600
	405	Hydrologic Unit (HU)	Los Angeles – San Gabriel River	1,742
	405.1	Hydrologic Area (HA)	Coastal Plain of Los Angeles	623
	405.15	Hydrologic Sub-Area (HSA)	Central	324

Sources: USGS 2016; Los Angeles RWQCB 2014.
Notes: HUC = hydrologic unit code; sq. mi = square miles

Topography and Drainage

The overall Project site is split over three different parcels including and adjacent to the current Veterans Memorial Park. Existing site drainage can generally be described as flowing slightly southwest on the undeveloped parcel, while drainage at Veterans Memorial Park flows to a storm drain system between the two parcels. The Project site's highpoint is near its northeast corner, at about 156 feet above mean sea level (amsl), and its low point, at about 145 feet amsl, lies at the southwest corner of the site. This 11-foot grade difference over the site creates a relatively flat area with slopes generally being less than 1%.

Site stormwater on the undeveloped parcel presently infiltrates, although there is a drainage ditch between Interstate 5 and this parcel, sloping south to the flood control basin. Site stormwater at the Park is presently conveyed to five catch basins along the center of the park, which drain via a 24" reinforced concrete pipe into the flood control basin to the south of the park (Figure 3.9-3). Impervious areas of the Project site are limited to parking areas, a building, and concrete walkways. Most of the site allows for infiltration of groundwater.

In the larger vicinity, stormwater runoff is collected in streets through inlets, catch basins and underground storm drains maintained by the Los Angeles County Flood Control District. Stormwater is then conveyed through the storm drain system to the Rio Hondo channel, located south of the Project site. Therefore, the "receiving waters" for the Project (i.e., all waters within the flow network downstream of the Project site) include Rio Hondo, the Los Angeles River and the Pacific Ocean.

Flood Hazards

Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps identify flood zones and areas that are susceptible to 100-year (1% annual chance of occurrence) and 500-year floods (0.2% annual chance of occurrence). These areas are referred to as Special Flood Hazard Areas and Moderate Flood Hazard Areas respectively. The proposed Project is located in an area identified by FEMA as being within Zone X (FEMA 2019), which indicates an area of minimal (<0.2%) flood. The Project is located adjacent to an area of 0.2%/ 500-year

flood risk which is separated from the Rio Hondo channel (Zone A, an area without base flood elevation) by a levee (Figure 3.9-3). While the Project is located downstream of the Whittier Narrows Reservoir Dam, it is not considered by FEMA to be subject to inundation in the event of a dam failure Residential areas located south of the Rio Hondo Channel, however, are considered at risk of dam failure inundation but are protected by a levee. The Project area is not subject to seiche or tsunami due to the distance from the ocean or large body of water.

Surface Water Quality

Several water bodies within and adjacent to the watershed are designated as "water quality-limited" for water quality impairments under the federal Clean Water Act's (CWA's) Section 303(d) (Table 3.9-2). Being "water quality-limited" means that a water body is "not reasonably expected to attain or maintain water quality standards" without additional regulation. The law requires that the U.S. Environmental Protection Agency develop total maximum daily loads (TMDLs) for each impaired water body in the nation. The TMDLs specify the maximum amount of a pollutant a water body can receive and still meet water quality standards. A TMDL may also include a plan for bringing an impaired water body back within standards. The most recently approved Section 303(d) List of Water Quality Limited Segments, as listed in the 2014-2016 Integrated Report, lists Rio Hondo, the Los Angeles River, the Los Angeles River Estuary, and San Pedro Bay as impaired water bodies under Section 303(d) of the CWA (Figure 3.9-4).

Table 3.9-2. CWA Section 303(d) Impairments

Name	Pollutant/ Stressor	Potential Sources	TMDL Status	Year
Rio Hondo Reach 1 (Confluence LA River to Santa Ana Freeway	Copper	Nonpoint Source / Point Source	Approved	2005
	Indicator Bacteria	Source Unknown	Revised	2012
	Lead	Nonpoint Source / Point Source	Approved	2005
	pH	Nonpoint Source / Point Source	Approved	2004
	Toxicity	Source Unknown	Scheduled	2021
	Trash	Nonpoint Source / Surface Runoff / Urban Runoff / Storm Sewers	Approved	2008
	Zinc	Nonpoint Source / Point Source	Approved	2005
Los Angeles River Reach 2 (Carson to Figueroa Street)	Ammonia	Nonpoint Source / Point Source	Approved	2004
	Copper	Source Unknown	Approved	2005
	Indicator Bacteria	Source Unknown	Approved	2012
	Lead	Nonpoint Source / Point Source	Approved	2005
	Nutrients (Algae)	Nonpoint Source / Point Source	Approved	2004
	Trash	Nonpoint Source / Surface Runoff / Urban Runoff / Storm Sewers	Approved	2008
	Oil	Natural Sources	Scheduled	2019
Los Angeles River Reach 1 (Estuary to Carson Street)	Ammonia	Nonpoint Source / Point Source	Approved	2004
	Cadmium	Source Unknown	Approved	2005
	Copper	Nonpoint Source / Point Source	Approved	2005
	Lead	Nonpoint Source / Point Source	Approved	2005
	Nutrients (Algae)	Nonpoint Source / Point Source	Approved	2004
	pH	Nonpoint Source / Point Source	Approved	2003
	Trash	Nonpoint Source / Surface Runoff / Urban Runoff / Storm Sewers	Approved	2008
	Zinc	Nonpoint Source / Point Source	Approved	2005
	Cyanide	Source Unknown	Scheduled	2019
	Indicator Bacteria	Source Unknown	Approved	2003

Table 3.9-2. CWA Section 303(d) Impairments

Name	Pollutant/ Stressor	Potential Sources	TMDL Status	Year
Los Angeles River Estuary (Queensway Bay)	Trash	Nonpoint Source / Surface Runoff / Urban Runoff / Storm Sewers	Approved	2008
	PCBs	Source Unknown	Scheduled	2019
	Chlordane	Source Unknown	Approved	2012
	DDT	Source Unknown	Approved	2012
	Toxicity	Source Unknown	Scheduled	2019
San Pedro Bay Near/Off Shore Zones	Chlordane	Source Unknown	Approved	2012
	PCBs	Source Unknown	Approved	2012
	Total DDT	Source Unknown	Approved	2012
	Toxicity	Source Unknown	Approved	2012

Source: SWRCB 2018.
Notes: CWA = Clean Water Act; TMDL = Total Maximum Daily Load

Pursuant to listing, the Los Angeles RWQCB will be tasked with developing TMDLs for the listed impairments currently lacking USEPA-approved TMDLs in at least one receiving water body, which include toxicity, oil, cyanide and PCBs. There are currently TMDLs approved by the U.S. Environmental Protection Agency that apply to the receiving waters for the Project for the following constituents: ammonia, cadmium, chlordane, copper, DDT, indicator bacteria, lead, nutrients (algae), PCBs, toxicity, trash, pH and zinc. These impairments are relevant to the proposed Project because runoff from the site (along with runoff from the whole watershed) eventually discharges into or adjacent to these 303(d) impaired waters, including Rio Hondo, the Los Angeles River and Estuary, and San Pedro Bay.

3.9.2 Relevant Plans, Policies, and Ordinances

Federal

The following federal regulations pertaining to Hydrology and Water Quality would apply to the proposed Project:

Clean Water Act

The Clean Water Act or CWA (33 U.S.C. 1251 et seq.), as amended by the Water Quality Act of 1987, is the major federal legislation governing water quality. The objective of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Key sections of the act are as follows:

- Sections 303 and 304 provide for water quality standards, criteria, and guidelines. Under Section 303(d) of the CWA, the State of California is required to develop a list of impaired water bodies that do not meet water quality standards and objectives and establish Total Maximum Daily Loads (TMDLs) for each pollutant/stressor. The water quality impairments of the project's receiving waters and associated TMDLs are shown in Table 3.9-2 above.
- Section 401 (Water Quality Certification) requires an applicant for any federal permit that proposes an activity which may result in a discharge to waters of the United States to obtain certification from the state that the discharge will comply with other provisions of the act. As there are no federal jurisdictional waters on the Project site, no water quality certification under CWA Section 401 would be required.
- Section 402 establishes the National Pollutant Discharge Elimination System (NPDES), a permitting system for the discharge of any pollutant (except for dredged or fill material) into waters of the United States. This

permit program is administered by the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCB), which have several programs that implement individual and general permits related to construction activities, municipal stormwater discharges, and various kinds of non-stormwater discharges. State and regional water quality related permits and approvals, including through NPDES, are shown in Table 3.9-3.

- Section 404 establishes a permit program for the discharge of dredged or fill material into waters of the United States. This permit program is jointly administered by the U.S. Army Corps of Engineers and the EPA. As there are no federal jurisdictional waters on the Project site, the Project would not require a permit under CWA Section 404.

Numerous agencies have responsibilities for administration and enforcement of the CWA. At the federal level this includes the EPA and the U.S. Army Corps of Engineers. At the state level, with the exception of tribal lands, the California EPA and its sub-agencies, including the SWRCB, have been delegated primary responsibility for administering and enforcing the CWA in California.

Federal Antidegradation Policy

The Federal Antidegradation Policy (40 CFR 131.12) requires states to develop statewide antidegradation policies and identify methods for implementing them. Pursuant to the Code of Federal Regulations (CFR), state antidegradation policies and implementation methods shall, at a minimum, protect and maintain: 1. existing in-stream water uses; 2. existing water quality where the quality of the waters exceeds levels necessary to support existing beneficial uses, unless the state finds that allowing lower water quality is necessary to accommodate economic and social development in the area; and 3. water quality in waters considered an outstanding national resource.

State

The following state regulations pertaining to Hydrology and Water Quality would apply to the proposed Project:

Porter-Cologne Water Quality Act (California Water Code)

The Porter–Cologne Act (codified in the California Water Code, Section 13000 et seq.) is the primary water quality control law for California. Whereas the CWA applies to all waters of the United States, the Porter–Cologne Act applies to waters of the state, which includes isolated wetlands and groundwater in addition to federal waters. It is implemented by the SWRCB and the nine RWQCBs. In addition to other regulatory responsibilities, the RWQCBs have the authority to conduct, order, and oversee investigation and cleanup where discharges or threatened discharges of waste to waters of the state could cause pollution or nuisance, including impacts to public health and the environment.

The act requires a “Report of Waste Discharge” for any discharge of waste (liquid, solid, or otherwise) to land or surface waters that may impair a beneficial use of surface or groundwater of the state. California Water Code Section 13260 subdivision (a) requires that any person discharging waste or proposing to discharge waste, other than to a community sewer system that could affect the quality of the waters of the state, to file a Report of Waste Discharge with the applicable RWQCB. For discharges directly to surface water (waters of the United States), an NPDES permit is required, which is issued under both state and federal law; for other types of discharges, such as waste discharges to land (e.g., spoils disposal and storage), erosion from soil disturbance, or discharges to waters of the state (such as groundwater and isolated wetlands), Waste Discharge Requirements (WDRs) are required and are issued exclusively under state law. WDRs typically require many of the same best management practices (BMPs) and pollution control technologies as required by NPDES-derived permits.

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 discharged to that water body shall not unreasonable affect present or anticipated beneficial use of such water resource.

California Toxics Rule

The USEPA 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.

Basin Planning

The California legislature has assigned the primary responsibility to administer and enforce statutes for the protection and enhancement of water quality, including the Porter–Cologne Act and portions of the CWA, to the SWRCB and its nine RWQCBs. The SWRCB provides state-level coordination of the water quality control program by establishing statewide policies and plans for implementation of state and federal regulations. The nine RWQCBs throughout California adopt and implement Basin Plans that recognize the unique characteristics of each region with regard to natural water quality, actual and potential beneficial uses, and water quality problems. The Los Angeles RWQCB is responsible for the protection of the beneficial uses of waters within the coastal watersheds of Los Angeles and Ventura counties, including the Project area.

The Water Quality Control Plan Los Angeles Region, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (Basin Plan) designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan (California Water Code Sections 13240–13247) (Los Angeles RWQCB 2014). The Los Angeles RWQCB Basin Plan must conform to the policies set forth in the Porter-Cologne Act as established by the SWRCB in its state water policy. The Porter-Cologne Act also provides the RWQCBs with authority to include within their basin plan water discharge prohibitions applicable to particular conditions, areas, or types of waste. The Basin Plan is continually being updated to include amendments related to implementation of TMDLs of potential pollutants or water quality stressors, revisions of programs and policies within the Los Angeles RWQCB region, and changes to beneficial use designations and associated water quality objectives.

NPDES and WDR Permits

NPDES and WDR programs regulate construction, municipal, and industrial stormwater and non-stormwater discharges under the requirements of the CWA and the Porter-Cologne Water Quality Control Act. The construction stormwater program is administered by the SWRCB, while the municipal stormwater program and other WDRs are administered by the Los Angeles RWQCB.

Construction General Permit (SWRCB Order 2009-0009-DWQ, as amended)

For stormwater discharges associated with construction activity in the State of California, the SWRCB has adopted the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) to avoid and minimize water quality impacts attributable to such activities. The Construction General Permit applies to all projects in which construction activity disturbs one acre or more of soil. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground, such as stockpiling and excavation. The Construction General Permit requires the development and implementation of a stormwater pollution prevention plan (SWPPP), which would include and specify water quality BMPs designed to prevent pollutants from contacting stormwater and keep all products of erosion from moving off site into receiving waters. Routine inspection of all BMPs is required under the provisions of the Construction General Permit, and the SWPPP must be prepared and implemented by qualified individuals as defined by the SWRCB.

As nearly all of the 17.37-acre Project site will need to be disturbed for construction activity, the proposed Project would require coverage under the Construction General Permit.

> Waste Discharge Requirements for the Discharge of Groundwater from Construction and Project Dewatering to Surface Waters in the Coastal Watersheds of Los Angeles and Ventura County (Los Angeles RWQCB Order no. R4-2018-0125).

This general order is intended to authorize discharges of treated or untreated groundwater generated from permanent or temporary dewatering operations or other applicable wastewater discharges not specifically covered in other general or individual NPDES permits. Discharges from facilities to waters of the United States that do not cause, have the reasonable potential to cause, or contribute to an in-stream excursion above any applicable state or federal water quality objectives/criteria or cause acute or chronic toxicity in the receiving water are authorized discharges in accordance with the conditions set forth in this Order. To demonstrate coverage under the order, dischargers must submit documentation to show that the discharge would not cause or contribute to a violation of any applicable water quality objective/criteria for the receiving waters, or any other discharge prohibition listed in the order. In addition, discharges must perform reasonable potential analysis using a representative sample of groundwater or wastewater to be discharged. The sample shall be analyzed and the data compared to the water quality screening criteria for the constituents listed in the order, and if results show exceedance of water quality screening criteria, the discharge will be required to treat the wastewater to acceptable standards prior to discharge.

California Green Building Standards Code

The California Green Building Standards Code (CALGreen Code), Part 11 of the California Building Standards Code (Title 24) is designed to improve public health, safety, and general welfare by utilizing design and construction methods that reduce the negative environmental impact of development and to encourage sustainable construction practices.

The CALGreen Code provides mandatory direction to developers of all new construction and renovations of residential and non-residential structures with regard to all aspects of design and construction, including, but not limited to, site drainage design, stormwater management, and water use efficiency. Required measures are accompanied by a set of voluntary standards designed to encourage developers and cities to aim for a higher standard of development.

California Water Plan

Required by the California Water Code Section 10005(a), the California Water Plan, prepared by the State Department of Water Resources (DWR), is the state government's strategic plan for managing and developing water resources statewide for current and future generations and provides a framework for water managers, legislators, and the public to consider options and make decisions regarding California's water future. The California Water Plan, which is updated every five years, presents basic data and information on California's water resources, including water supply evaluations and assessments of agricultural, urban, and environmental water uses to quantify the gap between water supplies and uses. The California Water Plan also identifies and evaluates existing and proposed statewide demand management and water supply augmentation programs and projects to address the state's water needs.

The goal for the California Water Plan Update is to meet California Water Code requirements, while receiving broad support among those participating in California's water planning, and serving as a useful document for the public, water planners throughout the state, legislators, and other decision-makers.

Table 3.9-3 lists the water-quality-related permits that would apply directly or indirectly (through implementing City ordinances) to the Project, each of which is further described below.

Table 3.9-3. State and Regional Water Quality-Related Permits and Approvals

Program/ Activity	Order Number/ NPDES Number	Permit Name	Affected Area
Construction Stormwater Program	2009-0009-DWQ/ CAS000002, as amended	NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit)	Statewide
Municipal Stormwater Program	Los Angeles RWQCB Order No. R4-2012-0175-A01 / CAS004001	Waste Discharge Requirements for the Municipal Separate Storm Sewer System (MS4) Discharges (Los Angeles County MS4 Permit)	Coastal Watersheds of Los Angeles County, Except those discharges originating from the City of Long Beach MS4
Discharge of Groundwater from Construction and Project Dewatering to Surface Waters	Los Angeles RWQCB Order No. Order No. R4-2018-0125	Waste Discharge Requirements for the Discharge of Groundwater from Construction and Project Dewatering to Surface Waters in the Coastal Watersheds of Los Angeles and Ventura Counties	Coastal Watersheds of Los Angeles and Ventura Counties

Notes: NPDES = National Pollutant Discharge Elimination System; MS4 = Municipal Separate Storm Sewer System; WDR = Waste Discharge Requirement

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 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 DWR provides ongoing support to local agencies through guidance, financial assistance, and technical assistance. SGMA empowers local agencies to form Groundwater Sustainability Agencies (GSAs) to manage basins sustainably, and requires those GSAs to adopt Groundwater Sustainability Plans for crucial groundwater basins in California.

Local

The following local/regional regulations pertaining to Hydrology and Water Quality would apply to the proposed Project:

Rio Hondo Watershed Management Plan

The Rio Hondo Watershed Management Plan, published in 2003, is an effort to provide an organizing framework for municipalities, conservation organizations, and individuals to work together to improve the water quality, health, habitat, and recreation potential of the Rio Hondo Watershed. The Watershed Management Plan identifies goals and strategies necessary to manage the overall watershed as a healthy natural system. This plan was developed by a management team formed by the San Gabriel Valley Council of Governments, the San Gabriel and Lower Los Angeles River and Mountains Conservancy, the Los Angeles RWQCB, and the County of Los Angeles Department of Public Works. The team's intent was to collectively set forth a strategy to develop pollution control and habitat restoration actions that could achieve an ecologically healthy watershed. The plan provides an assessment of existing environmental conditions, establishes goals and objectives to achieve an ecologically healthy watershed, identifies methods to achieve specific water quality improvements, recognizes opportunities for habitat restoration, develops a community based watershed monitoring plan, and identifies existing and future funding sources for plan implementation. With regard to individual development projects, the plan calls for implementation of BMPs to reduce contaminants in dry weather flows and stormwater flows and to reduce the volume of stormwater flows.

Municipal Stormwater Permit (Los Angeles RWQCB Order No R4-2012-0175-A01, as amended)

The *Waste Discharge Requirements for the Municipal Separate Storm Sewer System (MS4) Discharges from the Coastal Watersheds of Los Angeles County, except those discharges originating from the City of Long Beach MS4* (MS4 Permit) covers 88 cities and most of the unincorporated areas of Los Angeles County. Under the MS4 Permit, the Los Angeles County Flood Control District is designated as the Principal Permittee. The Permittees are the 88 Los Angeles County cities and Los Angeles County. Collectively, these (including the City of Commerce) are the "Co-Permittees." The Principal Permittee helps to facilitate activities necessary to comply with the requirements outlined in the MS4 Permit but is not responsible for ensuring compliance of any of the other Permittees.

The MS4 Permit requires Co-Permittees, including the City of Commerce, to implement a development planning program to address stormwater pollution. These programs require project applicants for certain types of projects to implement Standard Urban Stormwater Mitigation Plans (SUSMP) throughout the operational life of their projects. The purpose of SUSMP is to reduce the discharge of pollutants in stormwater and to eliminate increases in pre-existing runoff rates and volumes by outlining BMPs which must be incorporated into the design plans of new development and redevelopment. The proposed Project is a regulated project for this purpose because it is a redevelopment project that would create and/or replace more than 10,000 square feet of impervious surface. Therefore, the Project must prepare and implement a SUSMP.

In 2014, the Los Angeles County SUSMP Manual was replaced with the Los Angeles County Department of Public Works Low Impact Development (LID) Standards Manual. This manual provides a more in-depth discussion and guidance in the application of LID standards than the City of Commerce LID manual. The City of Commerce enforces the provisions of the Los Angeles County MS4 Permit through its Stormwater and Runoff Pollution Control Ordinance No. 676 to the City's Municipal Code.

Low Impact Development Ordinance

Effective December 28, 2012, the City of Commerce adopted a Low Impact Development (LID) ordinance to comply with the requirements of the Clean Water Act and the MS4 Stormwater and Urban Runoff Permit. Per the MS4 Permit, LID strategies are required for "Planning Priority Projects," including but not limited to development projects that replace or add 10,000 square feet of impervious surface area and parking lots with 25 or more parking spaces, among others. In addition, LID strategies are required for "Redevelopment Projects", which include:

- Land disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site on Planning Priority Project categories.
- Where Redevelopment results in an alteration to more than 50% of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction stormwater quality control requirements, the entire project must be mitigated.
- Where redevelopment results in an alteration of less than 50% of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction stormwater quality control requirements, only the alteration must be mitigated, and not the entire development.

Based on these criteria, the Project would be considered a Planning Priority Project and a Redevelopment Project.

LID is a stormwater management strategy with goals to mitigate the impacts of increased runoff and stormwater pollution as close to its source as possible. LID promotes the use of natural infiltration systems, evapotranspiration, and the reuse of stormwater. The goal of these LID practices is to remove nutrients, bacteria, and metals from stormwater while also reducing the quantity and intensity of stormwater flows. Through the use of various infiltration strategies, LID is aimed at minimizing impervious surface area. Where infiltration is not feasible, the use of bioretention, rain gardens, green roofs, and rain barrels that will store, evaporate detain, and/or treat runoff may be used. The intent of the City of Commerce LID standards is to:

- Require the use of LID practices in future developments and redevelopments to encourage the beneficial use of rainwater and urban runoff;
- Reduce stormwater/urban runoff while improving water quality;
- Promote rainwater harvesting;
- Reduce off-site runoff and provide increased groundwater recharge;
- Reduce erosion and hydrologic impacts downstream; and
- Enhance the recreational and aesthetic values in our communities.

Los Angeles County Hydrology Manual

The Project site is located within the City of Commerce within Los Angeles County. The Los Angeles County Department of Public Works' Hydrology Manual requires projects to have drainage facilities to meet the Urban Flood level of protection, which is defined as runoff from a 25-year frequency storm falling on a saturated watershed. A

25-year frequency design storm has a probability of 1/25 of being equaled or exceeded in any given year. The combined capacity of the storm drain and street flow system must be enough to accommodate flow from a 50-year storm event. Areas with sump conditions are required to have a storm drain conveyance system capable of conveying flow from a 50-year storm event.

3.9.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to hydrology and water quality are based on Appendix G of the State CEQA Guidelines. Through the analysis in the Initial Study (see Appendix A), it was determined that the proposed Project could have a potentially significant impact to hydrology and water quality. Accordingly, all of the thresholds are further analyzed in the EIR. According to Appendix G of the State CEQA Guidelines, a significant impact related to hydrology and water quality would occur if the Project would:

A. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.
B. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
C. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
    I. result in substantial erosion or siltation on or off site;
    II. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;
    III. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
    IV. impede or redirect flood flows.
D. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.
E. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

3.9.4 Methodology

The Project's impacts on existing hydrology and water quality conditions have been evaluated based on the Project's compliance with applicable regulations, changes in site configuration and use, and the Project's incorporation of stormwater BMPs to control pollutants, runoff volume, and runoff rates. In addition, the analysis considered potential impacts to groundwater levels as a result of groundwater extraction and recharge. A detailed water supply analysis is provided in Section 3.17, Utilities and Service Systems.

3.9.5 Impacts Analysis Impacts Analysis

Threshold A: Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Short Term Impacts of Excavation and Construction

The proposed Project would include excavation, demolition, and construction activities that together would result in land disturbances of approximately 17.37 acres. Such activities have the potential to adversely affect the quality of stormwater runoff through increases in turbidity, sedimentation, and construction-related pollutants.

Because land disturbance for Project construction activities would exceed one acre, a General Construction Activity Stormwater Permit (Construction General Permit, Order 2009-0009-DWQ), issued by the SWRCB, would be required prior to the start of construction on the Project site. Specifically, the Construction General Permit requires that the following be kept on-site at all times: (i) a copy of the Notice of Intent to Comply with Terms of the General Permit to Discharge Water Associated with Construction Activity; (ii) a waste discharge identification number issued by the SWRCB; (iii) a SWPPP and Monitoring Program Plan for construction activity; and (iv) records of all inspections, compliance and non-compliance reports, evidence of self-inspection, and good housekeeping practices.

The SWPPP requires the construction contractor to implement water quality BMPs to ensure that water quality standards are met, and that stormwater runoff from the construction work areas do not cause degradation of water quality in receiving water bodies (in this case the regional storm drain system and Rio Hondo). The SWPPP must describe the type, location, and function of stormwater BMPs to be implemented, and must demonstrate that the combination of BMPs selected are adequate to meet the discharge prohibitions, effluent standards, and receiving water limitations contained in the Construction General Permit.

Implementation of an approved construction SWPPP would reduce impacts associated with erosion-induced siltation of downstream drainages and incidental spills of petroleum products, by providing preventative and management BMPs, such that impacts would be less than significant. These BMPs would be further refined and/or added to as necessary by a qualified SWPPP professional to meet the performance standards in the Construction General Permit.

Compliance with the Construction General Permit, particularly with the implementation of a SWPPP and associated BMPs, would ensure that stormwater runoff from the site during construction would not violate water quality standards or waste discharge requirements, and impacts, therefore, would be **less than significant**. No mitigation is required.

Long Term Impacts of Project Operation and Maintenance

Land uses on-site that could contribute pollutants to stormwater runoff in the long term include uncovered parking areas (through small fuel and/or fluid leaks), uncovered refuse storage/management areas, landscape/open space areas (if pesticides/herbicides and fertilizers are improperly applied), and general litter/debris (e.g., generated during facility loading/unloading activities). In addition, as described in Section 3.8, Hazards and Hazardous Materials, there is the potential for wastes to be generated, stored and/or handled on-site. To the extent these wastes are stored in areas exposed to stormwater runoff, there could be water quality impacts as a result. Implementation of the Remedial Action Plan, besides ensuring proper characterization and disposal, would also ensure such wastes are not exposed to stormwater runoff. This Plan is further described in Section 3.8.

During storm events, the first few hours of moderate to heavy rainfall could wash a majority of pollutants from the paved areas where, without proper stormwater controls and BMPs, they could enter the municipal storm drain system before eventually being discharged into Rio Hondo and the Los Angeles River. The majority of pollutants entering the storm drain system in this manner would be dust, litter, and possibly residual petroleum products (e.g., motor oil, gasoline, diesel fuel). Certain metals, along with nutrients and pesticides from landscape areas, can also be present in stormwater runoff. Between periods of rainfall, surface pollutants tend to accumulate, and runoff from the first significant storm of the year ("first flush") will likely have the largest concentration of pollutants. Given the large size (130.5 square miles) and highly urbanized character of the Rio Hondo watershed, the Project site contribution to pollutant loads in receiving waters would be negligible (even if uncontrolled). However, because water quality is a cumulatively significant issue in the region, even small contributions could be cumulatively significant.

However, as a permittee subject to the MS4 permit, the City of Commerce is responsible for ensuring that all new development and redevelopment projects comply with the City of Commerce LID Guidelines, as the Project would be considered a Planning Priority Project and a Redevelopment Project (City of Commerce 2013). Performance criteria contained in the MS4 Permit is enforced through the Commerce City Municipal Code Ordinance No. 676 (Stormwater and Runoff Pollution Control). The proposed Project would be required to control pollutants, pollutant loads, and runoff volume/rates emanating from the Project site by: (1) minimizing the impervious surface area and implementing source control measures, (2) controlling runoff from impervious surfaces using structural BMPs (e.g., infiltration, bioretention and/or rainfall harvest and re-use), and (3) ensuring all structural BMPs are monitored and maintained for the life of the Project. More specifically, to ensure that these requirements are met, the applicant would implement water quality-related design features, such as water-efficient landscaping, stormwater capture and reuse, and stormwater BMPs intended to filter out pollutants prior to discharge from the Project properties.

Structural BMPs to address water quality could include bioswales, bioretention basins, mechanical biofiltration systems and associated cisterns, rain gardens, green roofs, and rain barrels that will store, evaporate, detain, and/or treat runoff. Non-structural BMPs to address water quality would include:

- Regular sweeping of all open and planter areas, at a minimum, on a weekly basis in order to prevent dispersal of pollutants that may collect on those surfaces;
- Regular pruning of the trees and shrubs in the planter areas to avoid formation of dried leaves and trigs, which can clog surface inlets and drains;
- Trash and recycling containers would be used such that, if they are to be located outside, are fully enclosed and watertight in order to prevent contact of stormwater with wastewater, which can be a potential source of bacteria and other pollutants in runoff;
- Educational training materials for the owners, to be made aware of the structural BMPs installed in the project, their maintenance requirements; and materials to brief owners about chemical management and proper methods of handling and disposing of wastes; and
- Minimization of pesticide and fertilizer use, to the maximum extent practicable with on-site landscaping.

Implementation of these structural and non-structural BMPs, in combination with the implementation of water quality-related features such as zoned irrigation, water-efficient landscaping, and stormwater reuse, would reduce potential operational water quality impacts by filtering out pollutants prior to discharge from the Project property, such that Project operations and maintenance would not violate any water quality standards or waste discharge requirements. Therefore, the Project's water quality impacts would be **less than significant.** No mitigation is required.

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

As discussed in Section 3.8, Hazards and Hazardous Materials, 11 groundwater monitoring wells located at the intersection of Slauson Avenue and Telegraph Road contained groundwater at depths between 72 and 110 feet below ground surface, as measured between 2002 and 2010. Since the Project site currently and once built will continue to discharge stormwater runoff to permeable flood control basins located between the Project site and Rio Hondo Channel, groundwater recharge will continue to occur mainly off-site. Therefore, the Project is not expected to negatively affect groundwater recharge in the area, or the general direction and velocity of groundwater movement within the underlying groundwater table.

The Project does not propose to directly extract groundwater during the construction or operation of the proposed Project, and no direct adverse impacts to groundwater are expected to occur. As discussed in more detail in Section 3.17, Utilities and Service Systems, the Project site is located within the California Water Service Company (Cal Water) East Los Angeles District. In 2015, water supply in the Cal Water East Los Angeles District was derived from 63% groundwater and 37% purchased water. Cal Water receives groundwater from the adjudicated Central Basin. The Project is estimated to generate a potable water demand of 225,322 gallons per day (gpd), which is equivalent to 252.56 acre-feet per year (AFY). The existing water demand for the Project site is estimated to be 13,654 gpd (15.3 AFY), resulting in a net increase in water demand of approximately 211,668 gpd (237.26 AFY).

The 2015 Cal Water East Los Angeles District Urban Water Management Plan (UWMP) has planned for growth within the East Los Angeles service area over the next 20 years. Cal Water has made an allowance for future demand estimates. Future demand services are based on historical growth rates in the service area. Based on these projections, it would appear that Cal Water has adequately made allowance for water supply demand increases for both domestic and commercial water supply over the next 20 years. In addition, based on a water service and water supply will-serve letter (Appendix I), Cal Water will have sufficient supplies to provide potable water for the proposed Project (see Section 3.17, Utilities and Service Systems for more information).

As long-term water supply is a significant concern in California, Cal Water East Los Angeles District can increase supply to meet future demands increasing production of groundwater based of safe yield allocation and utilization of water in storage, increasing imported water purchases, if available and there is sufficient storage capacity, and by purchasing additional recycled water, if available. Collectively, these additional options would enable water supply to meet or exceed water demand for Cal Water East Los Angeles for now and into the future. Collectively, the UWMP identities a sufficient and reliable water supply for Cal Water East Los Angeles District's service area, now and into the future, including a sufficient water supply for the proposed Project. Based on this fact, in combination with the will-serve letter from Cal Water (Appendix I), impacts to groundwater supplies or groundwater recharge would be **less than significant**. No mitigation is required.

Threshold C: 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;

The Project would include development of the previously undeveloped eastern parcel, while replacing Veterans Memorial Park with mixed-use residential housing, roads, and a synthetic turf public park. By removing current permeable surfaces, especially the baseball field and undeveloped plot, and replacing these with rooftops, paved areas, and artificial turf, the Project has the potential to increase the rate and

amount stormwater runoff. Because most of the Project site would be paved following construction, soil erosion would not occur onsite. However, in the absence of stormwater LID features, such as velocity reducers and filtration systems, the potential for off-site erosion exists as a result of increased runoff.

As previously discussed, as a permittee subject to the MS4 permit, the City of Commerce is responsible for ensuring that all new development and redevelopment projects comply with the performance criteria contained in the MS4 Permit, and does so primarily through enforcement of Commerce City Municipal Code Ordinance No. 676 (Stormwater and Runoff Pollution Control). The proposed Project meets the definition of a Redevelopment Project and Planning Priority Project and thus will be required to implement LID strategies, including controlling pollutants, pollutant loads, and runoff volume emanating from the Project site by: (1) minimizing the impervious surface area and implementing source control measures, (2) controlling runoff from impervious surfaces using structural BMPs (e.g., infiltration, bioretention and/or rainfall harvest and re-use), and (3) ensuring all structural BMPs are monitored and maintained for the life of the Project.

As specified in Section 3.9.2, Regulatory Framework, LID requirements impose stormwater control strategies with goals to mitigate the impacts of increased runoff and stormwater pollution as close to its source as possible. LID promotes the use of natural infiltration systems, evapotranspiration, and the reuse of stormwater. The goal of these LID practices is to remove nutrients, bacteria, and metals from stormwater while also reducing the quantity and intensity of stormwater flows. Through the use of various infiltration strategies, LID is aimed at minimizing impervious surface area. Where infiltration is not feasible, the use of bioretention (including biofiltration systems and associated cisterns), rain gardens, green roofs, and rain barrels that will store, evaporate, detain, and/or treat runoff may be used.

As indicated in the City of Commerce LID Guidelines, the Project would be required to retain the Stormwater Quality Design Volume (SWQDv) through appropriately sized LID BMPs. These permanent BMPs may include vegetated bioswales, rain gardens, rain cisterns, green roof, permeable pavements and curb cuts, among others. Per the City of Commerce LID Guidelines, the Project LID Plan must demonstrate that these BMPs have been sized sufficiently to retain the SWQDv, which is defined as :1) the runoff created by the 85th percentile 24-hour storm (as determined from the Los Angeles County isohyetal map and calculated using the Modified Rational Method) or 2) the volume of runoff produced from a 0.75-inch, 24-hour rain event, whichever is greater (County of Los Angeles 2006; City of Commerce 2013). Given that the LID Plan is a required element of the permitting process, it is not considered additional mitigation. Construction of structural BMPs such as these would reduce stormwater runoff volumes and rates, such that off-site erosion would not occur. Therefore, the Project would not result in substantial alteration of drainages, including through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation. Impacts would be **less than significant.** No mitigation is required.

II. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;

As discussed for Threshold A-I, the Project has the potential to increase the rate and amount stormwater runoff. However, per City Ordinance No. 676, the City of Commerce adopted the Los Angeles County MS4 permit, which requires implementation of LID strategies to limit increases in stormwater runoff. Specifically, as indicated in the City of Commerce LID Guidelines, the Project would be required to retain the SWQDv through appropriately sized LID BMPs. Construction of LID BMPs would result in a decrease in stormwater runoff volumes and rates, such that the Project would not substantially increase the rate or amount of surface runoff in a manner that would

result in flooding on- or off-site. Given that incorporation of these LID features is a required element of the permitting process, it is not considered additional mitigation. Therefore, upon submission and approval of an LID Plan as part of the permitting process, in compliance with the MS4 permit and City Ordinance No. 676, impacts would be **less than significant.** No mitigation is required.

III. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

As stated above, as a Redevelopment Project and Planning Priority Project, the proposed Project would be required to incorporate LID BMPs as a necessary condition for permitting. Per City Ordinance No. 676, the City of Commerce adopted the Los Angeles County MS4 permit, which requires implementation of LID strategies to limit increases in stormwater runoff and reduce adverse water quality impacts. LID BMPs would be sized so as to retain the SWQDv, thus mitigating against any increase in stormwater discharge from the site through planned stormwater drainage systems. Given that implementation of LID BMPs is a required element of the permitting process, it is not considered additional mitigation. Therefore, upon submission and approval of an LID Plan as part of the permitting process, in compliance with the MS4 permit and City Ordinance No. 676, the Project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems, or provide substantial additional sources of polluted runoff. Impacts would be **less than significant.** No mitigation is required.

IV. impede or redirect flood flows?

As previously stated, the Project is not located within an area identified for flood risk in the FEMA Flood Insurance Rate Map. To the south of the Project site lies an area of 0.2% flood risk between the Project site and the Rio Hondo Channel. As the Project site lies adjacent and parallel to the direction of flood flow, but outside the zone of flood risk, the impact of the Project to impede or redirect flood flows would be **less than significant**. No mitigation is required.

Threshold D: In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

Seiches are seismically induced water oscillations that occur in enclosed bodies of water. There are no enclosed bodies of water located within one mile of the Project, and therefore, no adverse impacts would result from the Project associated with pollutants released due to seiches.

Tsunamis are seismically induced tidal phenomena that affect low-lying coastal areas. The Project site is located approximately 18 miles east of the Pacific Ocean, at an elevation of approximately 150 feet above mean sea level. Therefore, the Project site is not located within a designated tsunami hazard area or susceptible to inundation by tsunami. No adverse impacts would result from the Project associated with pollutants released by tsunamis.

According to the FEMA Flood Insurance Rate Map, the Project is located in an area of minimal flood risk, separated from the Rio Hondo channel by a low-lying flood control area located 25 feet lower than the Project site. Being that the risk of flooding as determined by FEMA is less than 0.2%, no impacts would results from the Project associated with pollutants released by flooding. Therefore, impacts related release of pollutants due to flooding would be **less significant.** No mitigation is required.

Threshold E: Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The Project overlies the Central sub-basin of the Coastal Plain of Los Angeles Groundwater Basin, California DWR Basin No. 4-011.04 (DWR 2018). However, the DWR has designated the Basin as very low priority with respect to requiring completion of a Groundwater Sustainability Plan (DWR 2019). Additionally, the Central Basin was adjudicated in 1965 and the judgement was amended in 1991. Thus, the Central Basin and any groundwater extracted from the basin would not be subject to creation of a GSA and completion of a Groundwater Sustainability Plan, as mandated by SGMA for DWR basins determined to be of medium to high priority.

As noted above, the Project is not expected to violate any water quality standards and measures would be taken both during construction and throughout operation to prevent potential contaminants from being discharged from the site by runoff. Through compliance with RWQCB requirements and a NPDES permit, and implementation of a SWPPP (construction phase) and LID Plan (operational phase), the Project would not conflict with or obstruct implementation of the Los Angeles RWQCB Basin Plan. Thus, the proposed Project would not result in substantial conflict nor obstruction of the implementation of a water quality control plan or sustainable groundwater management plan. Impacts would be **less than significant.** No mitigation is required.

3.9.6 Cumulative Impacts

The cumulative effects of past projects – both point sources of pollution and non-point sources caused by urbanization – have resulted in substantial water quality problems in the region's major waterways. The existing impairments identified under Section 303(d) of the CWA and Table 3.9-2 represent cumulative impacts of urban development within the watersheds draining to Rio Hondo, the Los Angeles River and eventually to the Pacific Ocean. The pollutants causing impairments include copper, cadmium, lead, zinc, bacteria, trash, toxicity, pH, ammonia, nutrients/algae, oil, cyanide, PCBs, chlordane, and DDT. Therefore, the overall cumulative impact is significant.

For the most part, the primary pollutants of concern for the proposed Project do not include those for which the downstream receiving waters are impaired. Pollutants of concern associated with the proposed Project would be associated with the construction phase (e.g., sediment, fuels, litter), private vehicle use (e.g., any leakage of grease or oils), landscaping and grounds work (e.g., improper or excessive use of pesticides, herbicides and/or fertilizers), and/or trash (e.g., due to improper waste disposal). Trash and/or fertilizers, however, could indirectly contribute to a bacteria, pathogen or dissolved oxygen problem by contributing to excessive algae growth and/or eutrophication. The release of such pollutants, however, would be highly localized, periodic in nature, and minor in magnitude, especially when compared to the total volume of stormwater discharges that would be entering the Project's receiving waters from the whole watershed (i.e., Rio Hondo and the Los Angeles River). Furthermore, such impacts would be avoided or substantially minimized through compliance and implementation of a SWPPP and LID Plan.

For these reasons, the proposed Project's contribution to impacts on hydrology and water quality would not be cumulatively considerable. Cumulative impacts are considered **less than significant.** No mitigation is required.

3.9.7 Mitigation Measures

Impacts would be **less than significant**. No mitigation measures are required.

3.9.8 Level of Significance After Mitigation

Impacts would be **less than significant**.

3.9.9 References

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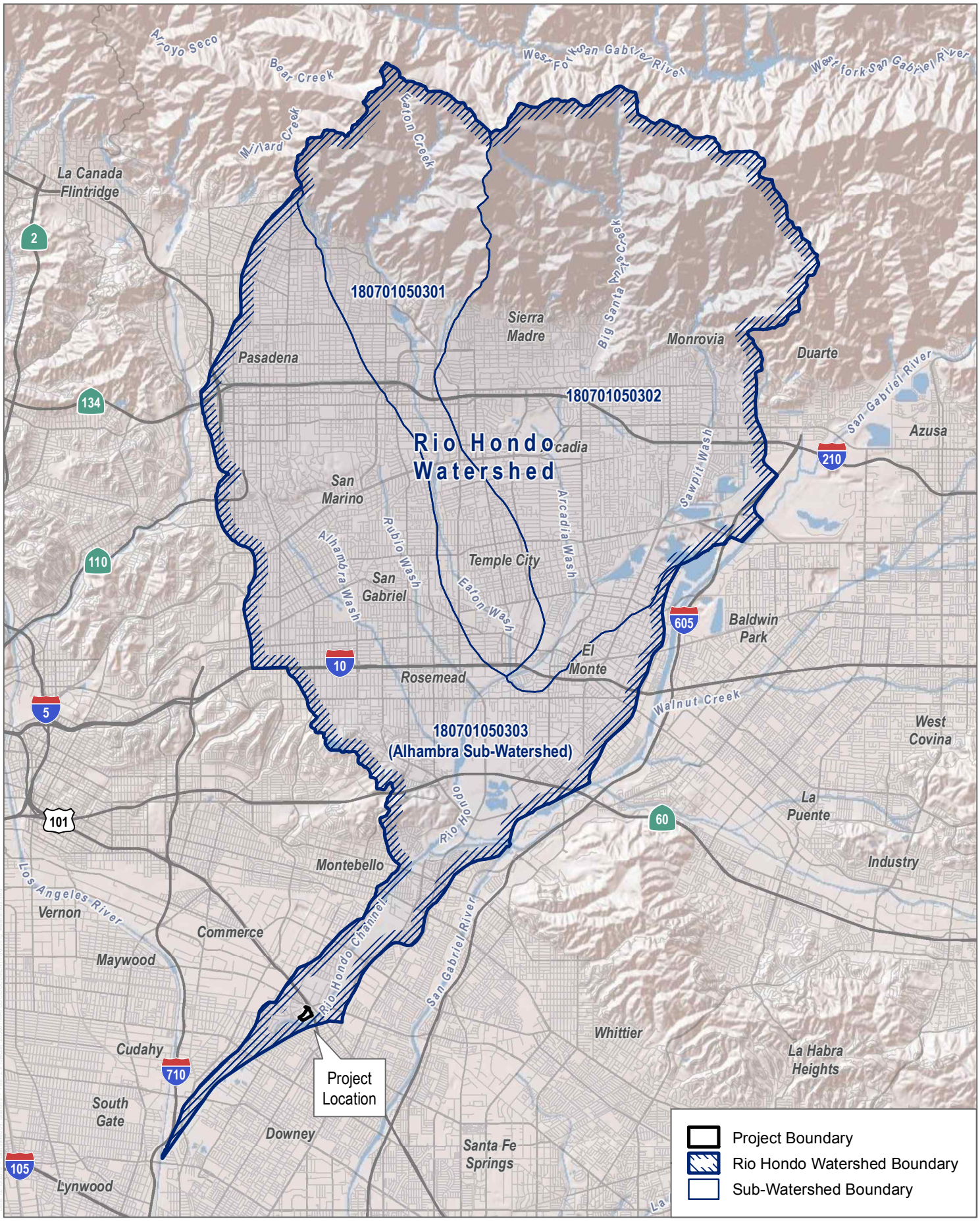

SOURCE: Esri, Digitial Globe, Open Street Map

DUDEK

0 8,000 16,000 Feet

FIGURE 3.9-1

USGS Watersheds

Modelo Project

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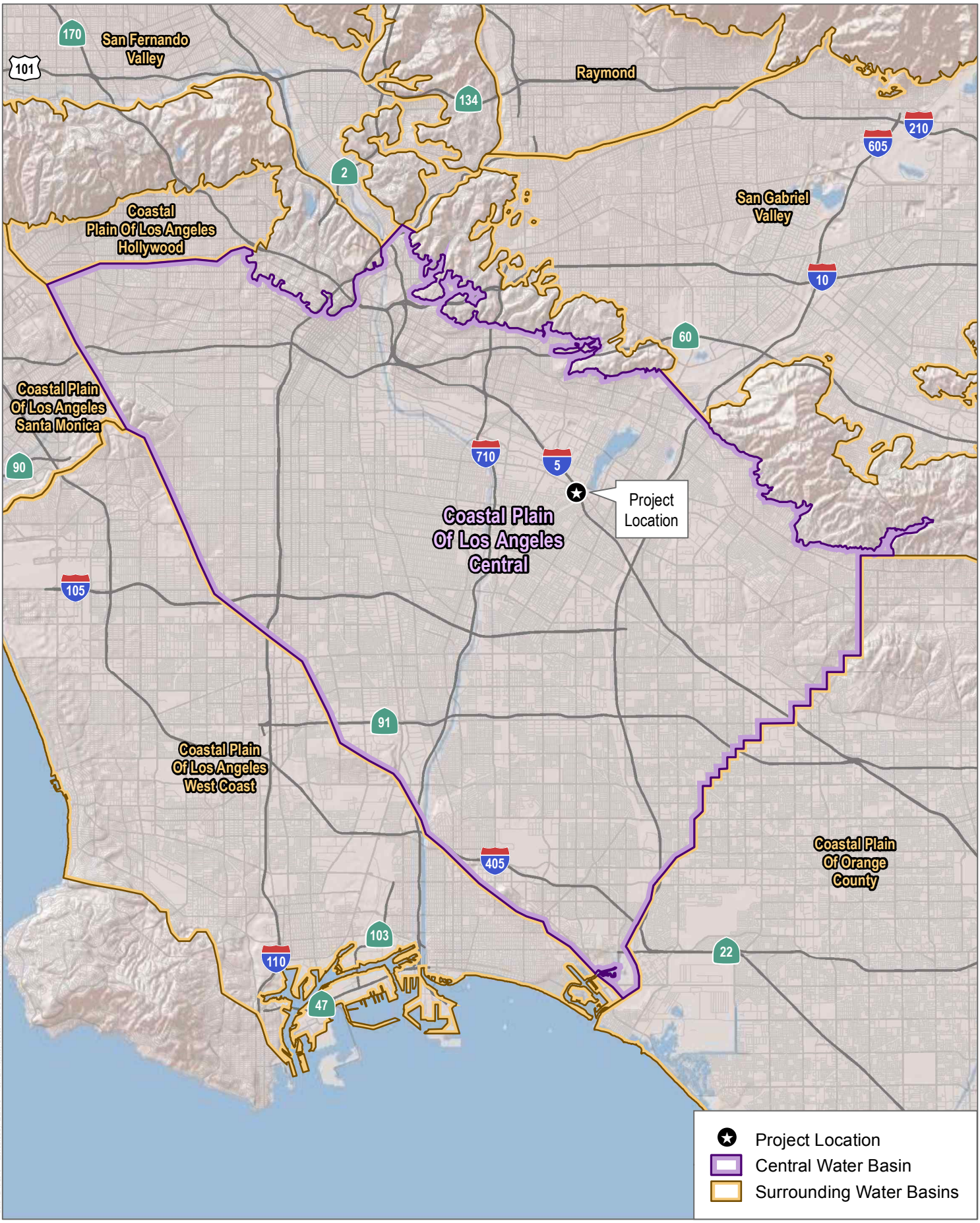

SOURCE: Esri, Open Street Map

DUDEK

0 12,000 24,000 Feet

FIGURE 3.9-2

RWQCB Hydrologic Areas

Modelo Project

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SOURCE: Esri, Digitial Globe, Open Street Map, LA County FCD

DUDEK

0 150 300 Feet

FIGURE 3.9-3

Flood Zones and Stormwater Drainage Infrastructure

Modelo Project

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SOURCE: Esri, Open Street Map

FIGURE 3.9-4

Regional 303d List Quality Impaired Water Bodies

Modelo Project

DUDEK

0 6,250 12,500 Feet

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3.10 Land Use and Planning

This section describes the existing land use conditions of the Project site and vicinity, identifies associated regulatory requirements, and evaluates potential impacts related to implementation of the proposed Project.

Comments received in response to the Notice of Preparation (see Appendix A) included concerns regarding compliance with the City of Commerce's (City's) General Plan, particularly in regards to housing.

Documentation used in this analysis is based on the City's General Plan and Municipal Code. Other sources consulted are listed in Section 3.10.9 References.

3.10.1 Environmental Setting

This section describes the existing conditions of the Project site and surrounding land uses, identifies the current general plan designation and zoning, and the discretionary approvals sought for the proposed Project.

Existing Land Uses

As described in Section 2.3, Existing Setting, of this EIR, the Project site currently consists of the Veterans Memorial Park and a vacant lot. The parcels comprising the Project site were previously part of a construction borrow-pit type of landfill created for, and during, the construction of the Interstate 5 (I-5) freeway.

The Veterans Memorial Park was constructed between 1965 and 1970, and consists of a baseball diamond, two basketball courts, a community center, a parking lot, and miscellaneous outdoor recreational spaces. Due to the age of Veterans Memorial Park, the utility of the improvements made are deteriorating and the outdoor recreational spaces are aging. In addition, the existing community center has been shuttered due to structural and safety issues, and temporary trailers are used in lieu of the community center. Over time, much of the ground surface at the Veterans Memorial Park, which is sitting atop the landfill material from 1954, has settled over the weight of different types of debris. The vacant lot to the east of Veterans Memorial Park has been vacant since 1988, at which time an industrial structure that was formerly the International Paper (grocery bag) factory was demolished. The vacant lot is paved with asphalt and concrete.

Surrounding Land Uses

As described in Section 2.3, Existing Setting, of this EIR, the Project site is in a highly urbanized area and is surrounded by a mix of residential, commercial, industrial, and open space land uses. To the east, across the I-5 freeway, within the City of Montebello, are various commercial businesses. To the north, is a Denny's, Best Western Plus Commerce Hotel, a warehouse (east of Zindell Avenue), and single-/multi-family dwellings (west of Zindell Avenue). To the west, is a single-family residential neighborhood and neighborhood commercial center. To the south, is the Rio Hondo River and Path, and single-family dwellings within the City of Downey.

General Plan and Zoning

The City of Commerce General Plan Land Use Plan was adopted in January 2008 to establish and maintain an orderly pattern of development in the City, utilize land use classification as a means to implement the City's land use policies, identify permitted land uses and their location and distribution, and establish standards for

development density and intensity. The City is currently in the process of updating its General Plan; however since the new General Plan has not yet been adopted, this discussion will only refer to the General Plan adopted in 2008. The City's General Plan Land Use Map designates the Veterans Memorial Park as Public Facilities and the vacant lot as Commercial Manufacturing (City of Commerce 2009). School sites, government offices, utility and transportation easements, and libraries all fall within the General Plan's Public Facilities land use designation. This designation corresponds with the Public Facility (PF) zone designation. The Commercial Manufacturing designation is designed to encourage a balanced mix of commercial, office professional, and light manufacturing uses along a number of high visibility traffic corridors. This land use designation corresponds to the Commercial/Manufacturing (C/M1) zone district (City of Commerce 2008).

The Veterans Memorial Park is zoned PF and the vacant lot is zoned C/M1 (City of Commerce 2015). The PF zone is intended to provide adequate space for public and quasi-public community facilities. Permitted uses within the PF zone include municipal and other government buildings, public educational facilities, religious facilities, and recreational areas (City of Commerce 2018). The C/M-1 zone is intended to concentrate commercial and light industrial uses along major arterials and in other areas that are easily accessible. The industrial uses considered appropriate in the C/M-1 zone are limited to support services, such as machine shops and some light manufacturing. Commercial or industrial uses that might create offensive levels of noise, air pollution, glare, radioactivity or other nuisances are prohibited from this zone.

Proposed Project Approvals

The City has the principal responsibility for approving the proposed Project. The required discretionary approvals sought by the City consist of the following:

1. Development Agreement
2. General Plan Amendment (to change the land use designation from Public Facilities and Commercial Manufacturing to Public Open Space, Commercial Retail, and Residential with the corresponding Specific Plan zone)
3. An associated Zone Amendment in the official City of Commerce Zoning Map and other exhibits to reflect the new zoning for the Project site.
4. Approval of the Specific Plan for the Project site
5. Master Sign Plan
6. Vesting Tentative Tract Map
7. Approval of the Project and Certification of the Final EIR
8. Construction, Building, Grading, and Occupancy Permits

3.10.2 Relevant Plans, Policies, and Ordinances

Federal

There are no federal regulations pertaining to land use and planning that would apply to the proposed Project.

State

The following state regulations pertaining to land use and planning would apply to the proposed Project.

Regional Transportation Plan/Sustainable Communities Strategy

Southern California Association of Governments (SCAG) is the designated Metropolitan Planning Organizations (MPOs) for six Southern California counties (Los Angeles, Ventura, Orange, San Bernardino, Riverside, and Imperial), and is federally mandated to develop plans for transportation, growth management, hazardous waste management, and air quality. The City of Commerce is one of the many jurisdictions that fall under SCAG.

The 2016–2040 Regional Transportation Plan/ Sustainable Communities Strategy (RTP/ SCS) was adopted in April 2016, and presents the land use and transportation vision for the region through the year 2040, providing a long-term investment framework for addressing the region's challenges. The RTP/SCS includes goals to increase mobility and enhance sustainability for the region's residents and visitors. The RTP/SCS encompasses three principles to improve the region's future: mobility, economy, and sustainability. The RTP/SCS 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.

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 RTP/SCS 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 GHG emissions. Overall, the strategies and policies in the RTP/SCS are projected to exceed the GHG emission-reduction targets set forth by the California Air Resources Board under SB 375 (SCAG 2016). Goals of the RTP/SCA that are relevant to the proposed Project are as follows:

Goal 1
Align the plan investments and policies with improving regional economic development and competitiveness.

Goal 2
Maximize mobility and accessibility for all people and goods in the region.

Goal 3
Ensure travel safety and reliability for all people and goods in the region.

Goal 4
Preserve and ensure a sustainable regional transportation system.

Goal 6
Protect the environment and health of our residents by improving air quality and encouraging active transportation (e.g., bicycling and walking).

Goal 8
Encourage land use and growth patterns that facilitate transit and active transportation.

The remaining goals and policies not listed were related to SCAG's actions and policies, and thus, were not directly applicable to the proposed Project.

Local

The following local/regional regulations pertaining to land use and planning would apply to the proposed Project.

General Plan

The City of Commerce 2020 General Plan (General Plan) serves as the blueprint for future growth and development in the City. The adopted General Plan Land Use Map (City of Commerce 2009) indicates the location and extent of permitted uses in the City. The General Plan consists of seven elements as required per California Government Code Section 65300, et. seq, including the Community Development Element, Transportation Element, Housing Element, Resources Management Element, Safety Element, Air Quality Element, and Implementation Element (City of Commerce 2008). The following General Plan Policies are directly applicable to the proposed Project:

Community Development Policy 1.3
The city of Commerce will continue to implement specific standards for new commercial developments located adjacent to residential neighborhoods in order to ensure that adequate buffers are provided so that negative impacts such as noise, light pollution, truck use, and traffic may be mitigated.

Community Development Policy 2.3
The city of Commerce will promote the development of larger, more efficient, commercial retail shopping centers as opposed to smaller "strip commercial" centers.

Community Development Policy 4.1
The city of Commerce will explore the feasibility of developing an area devoted to active family recreation.

Community Development Policy 4.2
The city of Commerce will promote the development of commercial enterprises that provide family entertainment.

Community Development Policy 5.1
The city of Commerce will promote the development of new housing for all income groups.

Community Development Policy 5.2
The city of Commerce will continue to explore new opportunities for housing and services to meet the needs of the labor force, and as a means to attract new business and industry to the city.

Community Development Policy 6.3
The city of Commerce will require new commercial and industrial development to employ architectural and site design techniques that will promote quality and efficient development.

Transportation Policy 3.1
The city of Commerce will continue to encourage the use of alternate transportation modes (e.g., shuttles, etc.).

Transportation Policy 3.4
The city of Commerce will promote the development of safe and convenient pedestrian access between residential neighborhoods and the parks and schools that serve those neighborhoods.

Transportation Policy 3.5
The city of Commerce will encourage the maintenance and improvement of "pedestrian-safe" oriented facilities to ensure safe pedestrian movement.

Transportation Policy 5.1
The city of Commerce will ensure that adequate off-street parking and loading facilities are provided for businesses and residences in the city.

Transportation Policy 5.3
The city of Commerce will require all new developments to provide on-site parking in compliance with existing zoning regulations.

Housing Policy 1.1
The city of Commerce will strive to provide a diverse inventory of housing that meets the needs of those who desire to reside in the city.

Housing Policy 1.2
The city of Commerce will promote the development of a wide range of housing by location, type, and price to meet the existing and future needs of the city.

Housing Policy 1.4
The city of Commerce will promote the development of new housing for low-through upper-income households.

Housing Policy 1.5
The city of Commerce will explore opportunities for new residential development within those areas of the city occupied by vacant, obsolete commercial and industrial uses.

Housing Policy 1.7
The city of Commerce will work to ensure that potential sites for residential development, located in those areas that were previously occupied by nonresidential land uses, are investigated to determine whether or not previous on-site uses present potential health risks.

Housing Policy 2.1
The city of Commerce will continue to promote, maintain, and enhance the character and identity of the residential neighborhoods.

Housing Policy 4.1
The city of Commerce will ensure that new higher-density residential projects are kept at a scale (number of units, height, etc.) compatible in design with adjacent residential areas.

Housing Policy 4.2
The city of Commerce will ensure that those areas developed in higher densities shall be buffered from adjacent lower-density residential development with medium-density residential development.

Housing Policy 4.3
The city of Commerce will encourage quality construction in new residential development and require all properties to be maintained to the greatest extent possible.

Housing Policy 4.4
The city of Commerce will ensure that new homes are constructed with sufficient separation between the units to promote quality design and privacy.

Resource Management Policy 1.4
The city of Commerce will encourage the conservation of water resources in residential, commercial, and industrial developments through the use of drought-tolerant plant materials and water-saving irrigation systems.

Resources Management Policy 4.1
The city of Commerce will encourage the preservation of the existing plant resources in the city.

Resources Management Policy 4.4
The city of Commerce will review existing landscaping standards for public and private developments so as to increase the green space throughout the city.

Resources Management Policy 5.1
The city of Commerce will maintain the existing park and recreational facilities to the extent that they can continue to provide residents with the best possible recreational opportunities.

Resources Management Policy 5.3
The city of Commerce will continue to upgrade existing facilities to improve park appearance and utility.

Resources Management Policy 5.4
The city of Commerce will expand Veteran's Park and Bristow Park to include such facilities as soccer fields and basketball courts.

Resources Management Policy 6.1
The city of Commerce will strive to ensure that park and open space is preserved and maintained for the use of existing and future residents of the city.

Safety Policy 4.1
The city of Commerce will ensure that appropriate mitigation measures relative to soil contamination and soils characteristics (subsidence, erosion, etc.) are required for development and redevelopment in order to reduce hazards.

Safety Policy 6.7
The city of Commerce will require additional landscaping in industrial and commercial projects to help reduce noise impacts through increased setbacks.

Air Quality Policy 1.2
The city of Commerce will encourage the applicants for sensitive land uses (e.g., residences, schools, daycare centers, playgrounds and medical facilities) to incorporate design features (e.g., pollution prevention, pollution reduction, barriers, landscaping, ventilation systems, or other measures) in the planning process to minimize the potential impacts of air pollution on sensitive receptors.

Air Quality Policy 2.5
The city of Commerce will collaborate with local, regional, state and federal agencies to create incentives or "job/housing opportunity zones," to promote housing in job-rich areas and jobs in housing-rich areas. The Housing Opportunity areas identified in the Community Development Element are consistent with this policy.

Air Quality Policy 2.6

The city of Commerce will design safe and efficient vehicle access to commercial land uses from arterial streets to ensure efficient vehicular ingress and egress.

The remaining goals and policies not listed were related to City's actions and policies, and thus, were not directly applicable to the proposed Project.

Zoning Code

The Zoning Code, Title 19, of the City's Municipal Code, provides the purpose, permitted land use, and regulations associated with each of the City's zones. The Zoning Code is a primary tool for implementing the City's General Plan. The purpose of the Zoning Code is to protect public health, safety, comfort, and welfare and to ensure that the growth and development of the city is orderly and provides maximum benefit to its residents by establishing land use districts and regulations which prevent the misuse or abuse of the land. The City has three residential zones established to provide residents with a comfortable, healthy, safe, and pleasant living environment. These zones should be separated from incompatible and disruptive activities that may conflict with this purpose. The various zones are designed to accommodate specific types of living situations, such as single-family and multifamily housing, in sufficient supply to serve the needs of the city's residents. Additionally, the City has commercial zones to allow for the establishment and operation of retail and business uses in conveniently located areas of the city. These uses are intended to provide a variety of goods and services necessary to meet the needs of the resident and business populations. Further, the City identifies public facility zones to provide adequate space for public and quasi-public community facilities. These facilities are to be conveniently located to serve the needs of the community and protected from intrusion of other land uses. The types of uses allowed include municipal and other government buildings, public educational facilities, religious facilities, and recreational areas (Title 19 of the City's Municipal Code).

Per Chapter 19.39 of the City's Municipal Code, the City recognizes that certain parcels may benefit from focused planning efforts whereby infrastructure, land use relationships, land use intensities, and public service needs can be carefully examined and planned in a comprehensive manner. A specific plan provides the mechanism by which such planning efforts can be carried out. The application requirements for a specific plan as specified in Section 19.39.990 of the City's Municipal Code:

A. A minimum project size of two cares is required for a specific plan.
B. A pre-application conference with the community development director or his designee is required prior to the formal submission of a specific plan application. The purpose of the meeting is to review with the applicant the city's requirements for specific plan content, applicable policies, infrastructure needs, and other information as determined by the community development director.
C. In addition to a formal application completed pursuant to Division 2 of this Chapter 19.39, the applicant shall submit a draft specific plan containing text and diagrams with all information specified in Section 65451 and 65452 of the Government Code, as well as information, standards, requirements, etc., required by the city.

The City's Municipal Code also establishes requirements for adoption of a specific plan:

A. Adoption of a specific plan and subsequent amendments thereto shall be processed in the manner required for a general plan amendment, as set forth in Division 6 of this Chapter 19.39.

B. No application for a specific plan amendment will be accepted unless accompanied by a development proposal for all or a portion of the area included within the proposed amendment area.

C. The city may initiate amendments to any portion of a specific plan. In the case of such a city-initiate amendment, no associate project is required.

3.10.3 Thresholds of Significance

The significance criteria used to evaluate the Project impacts to land use and planning are based on Appendix G of the State CEQA Guidelines. Through the analysis in the Initial Study (Appendix A), it was determined that the proposed Project would not have a substantial adverse effect related to physical division of an established community (Threshold A). Accordingly, this issue is not further analyzed in the EIR. Based on the remaining, threshold, a significant impact related to land use and planning would occur if the Project would:

B. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

3.10.4 Methodology

Land use and planning impacts are assessed based on whether the proposed Project would conflict with plans, policies, and regulations that have been adopted for the purpose of avoiding or mitigating an environmental effect. State CEQA Guidelines Section 15125(d) requires that an EIR include a discussion of any inconsistencies with applicable plans. Additionally, a conflict between a project and an applicable plan is not necessarily a significant impact under CEQA unless the inconsistency will result in an adverse physical change to the environment that is a "significant environmental effect" as defined by State CEQA Guidelines Section 15382. An excerpt from the legal practice guide, Continuing Education of the Bar, Practice Under the California Environmental Quality Act, Section 12.34 illustrates the point:

> …if a project affects a river corridor, one standard for determining whether the impact is *significant* might be whether the project violates plan policies protecting the corridor; the environmental *impact,* however, is the physical impact on the river corridor.

Analysis of conflicts and consistency with applicable plans is included in this impact section. Under State Planning and Zoning law (Government Code Section 65000, et seq.) strict conformity with all aspects of a plan is not required. Generally, plans reflect a range of competing interests and agencies are given great deference to determine consistency with their own plans. A proposed project should be considered consistent with a general plan or elements of a general plan if it furthers one or more policies and does not obstruct other policies. Generally, given that land use plans reflect a range of competing interests, a project should be compatible with a plan's overall goals and objectives but need not be in perfect conformity with every plan policy.

The following set of documents are the land use documents that are applicable to the Project site and are used to evaluate the consistency of the proposed Project with adopted plans and regulations:

- SCAG 2016-2040 RTP/SCS
- City of Commerce 2020 General Plan
- City of Commerce Zoning Code

Consistency with plans addressing a specific environmental resource area are addressed in the associated topical section of this EIR (e.g., consistency with the Air Quality Management Plan is addressed in the air quality section [Section 3.2] and consistency with the Congestion Management Program is addressed in the transportation section [Section 3.15]).

3.10.5 Impacts Analysis

Threshold B: Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

To evaluate the proposed Project's impacts related to land use and planning, this analysis examines the proposed Project's consistency with both regional and local plans, policies, and regulations that regulate uses on the Plan area. These plans are as follows:

- SCAG 2016-2040 RTP/SCS
- City of Commerce 2020 General Plan
- City of Commerce Zoning Code

Regional Transportation/Sustainable Communities Strategy Consistency

Table 3.10-1 outlines the applicable policies identified in the RTP/SCS and the proposed Project's consistency with each of these policies. As shown below, the proposed Project would be consistent with applicable goals of the RTP/SCS. For those RTP/SCS goals that do not specifically pertain to the proposed Project, the Project would not impede SCAG's ability to meet those goals and policies.

Table 3.10-1. RTP/SCS Consistency Analysis

Goal/Policy	Analysis
Goal 1: Align the plan investments and policies with improving regional economic development and competitiveness.	Consistent. The proposed Project would include the construction of 850 residential units, 249,500 square feet of commercial uses, an 80,000-square-foot community center, a 5,000-square-foot museum, and approximately 4.75 acres of parks and open space. The proposed commercial and recreational uses associated with the Project would improve regional economic development and competitiveness. Additionally, the Project's proximity to I-5 and the proposed Washington Boulevard Metro Gold Line Extension would enhance regional connectivity. Further, one of the Project's objectives is to enhance transit connections between the City and surrounding municipalities by creating a transit oriented Project that takes advantage of both the existing Metro bus service and the future Metro Gold Line extension planned for Washington Boulevard in Pico Rivera.
Goal 2: Maximize mobility and accessibility for all people and goods in the region.	Consistent. The Project's proximity to both the existing Metro bus service and the future Metro Gold Line extension planned for Washington Boulevard in Pico Rivera would increase transit accessibility of jobs, housing, and recreational opportunities for the City and region.
Goal 3: Ensure travel safety and reliability for all people and goods in the region.	Consistent. The Project's internal circulation would ensure safety for residents and patrons within the Project site. See Section 3.15, Transportation, for further details regarding safety and access.
Goal 4: Preserve and ensure a sustainable regional transportation system.	Consistent. As described in Section 3.12, the City is "jobs-rich" meaning that enough jobs are available such that residents are not required to commute outside the City for employment. However, employees within the City are likely required to commute into the City for work. The proposed Project would introduce 850 residential units in close proximity to both the existing Metro bus service and the future Metro Gold Line

Table 3.10-1. RTP/SCS Consistency Analysis

Goal/Policy	Analysis
	extension planned for Washington Boulevard in Pico Rivera. Thus, the Project would provide housing opportunities within a job-rich area, and promote the use of the existing and proposed regional transit system.
Goal 6: Protect the environment and health of our residents by improving air quality and encouraging active transportation (e.g., bicycling and walking).	Consistent. One of the objectives of the proposed Project is to create a welcoming pedestrian-friendly contemporary village that will complement and enhance the City and the surrounding community. The mix of land uses within the Project site would be consistent with this goal through enhancing pedestrian connections. Additionally, the proposed Project would provide connections to the Rio Hondo River and Path for bicycling and walking.
Goal 8: Encourage land use and growth patterns that facilitate transit and active transportation.	Consistent. The proposed Project would redevelop areas near the anticipated extension of the Metro Gold Line. To further facilitate transit and active transportation, the land use designations of the Project site are designed to mix employment and residential uses with supporting amenities so that employees and residents do not need to use a car to access basic needs throughout the day.

Source: SCAG 2016

General Plan Consistency

Table 3.10-2 outlines the applicable policies identified in the General Plan and the proposed Project's consistency with each of these policies. As shown below, the proposed Project would be consistent with applicable goals and policies of the General Plan. For those General Plan goals and policies that do not specifically pertain to the proposed Project, the Project would not impede the City's ability to meet those goals and policies.

Table 3.10-2. General Plan Consistency Analysis

Goal/Policy	Analysis
Community Development Element	
Community Development Policy 1.3: The city of Commerce will continue to implement specific standards for new commercial developments located adjacent to residential neighborhoods in order to ensure that adequate buffers are provided so that negative impacts such as noise, light pollution, truck use, and traffic may be mitigated.	Consistent. As described in Section 2.7, Intended Uses of This EIR, of this EIR, the proposed Project is seeking several discretionary approvals. During the approval process, the City would review the Project to ensure implementation of specific standards for new commercial developments located adjacent to residential neighborhoods in order to ensure that adequate buffers are provided.
Community Development Policy 2.3: The city of Commerce will promote the development of larger, more efficient, commercial retail shopping centers as opposed to smaller "strip commercial" centers.	Consistent. The proposed Project includes 249,500 square feet of commercial uses. Thus, the Project is consistent with the City's policy related to promoting development of larger, more efficient commercial retail shopping centers.
Community Development Policy 4.1: The city of Commerce will explore the feasibility of developing an area devoted to active family recreation.	Consistent. The proposed Project includes an 80,000-square-foot community center, a 5,000-square-foot museum, and approximately 4.75 acres of parks and open space. Thus, the Project would be consistent with the City's policy for creating a development devoted to family recreation.

Table 3.10-2. General Plan Consistency Analysis

Goal/Policy	Analysis
Community Development Policy 4.2: The city of Commerce will promote the development of commercial enterprises that provide family entertainment.	Consistent. As previously discussed, the proposed Project includes retail, commercial, community center, museum, and parks and open space uses. The uses proposed within the entertainment retail structures would include approximately 92,000 square feet for a movie theatre, approximately 30,000 square feet for restaurant uses, approximately 20,000 square feet for an entertainment/arcade, approximately 15,000 square feet for a grocery store, and approximately 6,000 square feet for a pharmacy. The movie theatre, restaurant, and entertainment/arcade uses would promote commercial enterprises that provide family entertainment.
Community Development Policy 5.1 The city of Commerce will promote the development of new housing for all income groups.	Consistent. The Project would include the construction of 850 new residential units, comprised of a mixture of 25-50 townhomes for sale, and the rest for-rent apartment and townhouse style units. A mix of housing products would diversify the City's existing housing stock and promote development of new housing for all income groups.
Community Development Policy 5.2: The city of Commerce will continue to explore new opportunities for housing and services to meet the needs of the labor force, and as a means to attract new business and industry to the city.	Consistent. As described in Section 3.12, the City is "jobs-rich" meaning that enough jobs are available such that residents are not required to commute outside the City for employment. However, employees within the City are likely required to commute into the City for work. The proposed Project would introduce 850 residential units, along with employment opportunities to an underutilized parcel in the City. Thus, the Project provides new opportunities for housing and services to meet the labor force. Additionally, the new retail uses and housing opportunities may attract new business and industry to the City.
Community Development Policy 6.3: The city of Commerce will require new commercial and industrial development to employ architectural and site design techniques that will promote quality and efficient development.	Consistent. As described in Section 2.7, Intended Uses of This EIR, of this EIR, the proposed Project is seeking several discretionary approvals. During the approval process, the City would review the Project to ensure new commercial uses proposed would employ architectural and site design techniques to promote quality and efficient development.
Transportation Element	
Transportation Policy 3.1: The city of Commerce will continue to encourage the use of alternate transportation modes (e.g., shuttles, etc.).	Consistent. The proposed Project seeks to enhance transit connections between the City and surrounding municipalities by creating a transit oriented Project that takes advantage of both the existing Metro bus service and the future Metro Gold Line extension planned for Washington Boulevard in Pico Rivera. The Project's 850 residential units, 249,500 square feet of commercial uses, an 80,000-square-foot community center, a 5,000-square-foot museum, and approximately 4.75 acres of parks and open space, would encourage residents and visitors to utilize the surrounding transit connections.

Table 3.10-2. General Plan Consistency Analysis

Goal/Policy	Analysis
Transportation Policy 3.4: The city of Commerce will promote the development of safe and convenient pedestrian access between residential neighborhoods and the parks and schools that serve those neighborhoods.	Consistent. The proposed Project would provide adequate pedestrian access throughout the Project site and between the Project site and the existing residential neighborhood. Further, as part of approvals required for the proposed Project, the City would review the Vesting Tentative Tract Map to ensure adequate pedestrian access is provided.
Transportation Policy 3.5: The city of Commerce will encourage the maintenance and improvement of "pedestrian-safe" oriented facilities to ensure safe pedestrian movement.	Consistent. One of the Project objectives is to create a welcoming pedestrian-friendly contemporary village that will complement and enhance the City and the surrounding community. With an emphasis on pedestrian-friendly uses, the proposed Project would be consistent with the City's policy to create "pedestrian-safe" oriented facilities.
Transportation Policy 5.1: The city of Commerce will ensure that adequate off-street parking and loading facilities are provided for businesses and residences in the city.	Consistent. The Project's Vesting Tentative Tract Map would be reviewed prior to approval to ensure the Project is consistent with the City's parking requirements.
Transportation Policy 5.3: The city of Commerce will require all new developments to provide on-site parking in compliance with existing zoning regulations.	Consistent. The proposed Project seeks discretionary approvals from the City, which requires review of site plans and other applicable Project materials. During this review process, the City would ensure the proposed Project is developed to provide on-site parking in compliance with existing zoning regulations.
Housing Element	
Housing Policy 1.1: The city of Commerce will strive to provide a diverse inventory of housing that meets the needs of those who desire to reside in the city.	Consistent. The Project would include the construction of 850 new residential units, comprised of a mixture of 25-50 townhomes for sale, and the rest for-rent apartment and townhouse style units. A mix of housing products would diversify the City's existing housing stock and provide a diverse inventory that meets the needs of those who desire to live in the City.
Housing Policy 1.2: The city of Commerce will promote the development of a wide range of housing by location, type, and price to meet the existing and future needs of the city.	Consistent. The Project would contribute to the City's housing needs by providing 850 new residential units, comprised of a mixture of 25-50 townhomes for sale, and the rest for-rent apartment and townhouse style units.
Housing Policy 1.4: The city of Commerce will promote the development of new housing for low-through upper-income households.	Consistent. The proposed Project would result in the construction of 850 residential dwelling units. As previously addressed, the Project would include the construction of 850 new residential units, comprised of a mixture of 25-50 townhomes for sale, and the rest for-rent apartment and townhouse style units. The diversified housing types proposed as part of the Project would promote the development of new housing for multiple income level households.

Table 3.10-2. General Plan Consistency Analysis

Goal/Policy	Analysis
Housing Policy 1.5: The city of Commerce will explore opportunities for new residential development within those areas of the city occupied by vacant, obsolete commercial and industrial uses.	Consistent. The Project involves the demolition of the existing Veterans Memorial Park (which is currently in an advanced state of disrepair) and an adjacent vacant parcel and the redevelopment of the Project site to accommodate a mixed-use development. As such, the proposed Project would involve a new residential development within a park in a state of disrepair and vacant, formerly industrial, parcel.
Housing Policy 1.7: The city of Commerce will work to ensure that potential sites for residential development, located in those areas that were previously occupied by nonresidential land uses, are investigated to determine whether or not previous on-site uses present potential health risks.	Consistent. The approximately 17.37-acre Project site currently consists of the Veterans Memorial Park and a vacant lot. As described further in Section 3.8, Hazards and Hazardous Materials, a Limited Environmental Assessment, Phase I Environmental Site Assessment, and Remediation Action Plan have been prepared for the Project site to identify potential health risks. The Project site would undergo remediation in accordance with all applicable federal, state, and local requirements governing hazards materials to ensure contaminated soils associated with the former landfill do not pose health risks to the Project's residents and visitors.
Housing Policy 2.1: The city of Commerce will continue to promote, maintain, and enhance the character and identity of the residential neighborhoods.	Consistent. The proposed Project seeks to create open and green public spaces that will integrate the Project's community space with the mixed-use entertainment/retail and residential structures. Thus, the Project would be designed to enhance the City and surrounding community through a pedestrian-friendly contemporary village.
Housing Policy 4.1: The city of Commerce will ensure that new higher-density residential projects are kept at a scale (number of units, height, etc.) compatible in design with adjacent residential areas.	Consistent. The Project site is in a highly urbanized area and is surrounded by a mix of residential, commercial, industrial, and open space land uses. Given the Project site's proximity to existing residential areas, the proposed Project would be designed to integrate the Project's mix of uses with the adjacent residential areas.
Housing Policy 4.2: The city of Commerce will ensure that those areas developed in higher densities shall be buffered from adjacent lower-density residential development with medium-density residential development.	Consistent. To ensure the Project is buffered from adjacent low-density residential development, the Project would include a mix of housing types, along with expansive open space and recreational areas.
Housing Policy 4.3: The city of Commerce will encourage quality construction in new residential development and require all properties to be maintained to the greatest extent possible.	Consistent. The proposed Project would encourage new residential development through construction of 850 units where no existing residential development exists.
Housing Policy 4.4: The city of Commerce will ensure that new homes are constructed with sufficient separation between the units to promote quality design and privacy.	Consistent. As described in Section 2.7, Intended Uses of This EIR, of this EIR, the proposed Project is seeking several discretionary approvals. During the approval process, the City would review the Project to ensure new homes are constructed with sufficient separation between units to promote quality design and privacy.

Table 3.10-2. General Plan Consistency Analysis

Goal/Policy	Analysis
Resources Management Element	
Resource Management Policy 1.4: The city of Commerce will encourage the conservation of water resources in residential, commercial, and industrial developments through the use of drought-tolerant plant materials and water-saving irrigation systems.	Consistent. The proposed Project would include energy-saving and sustainability goals, including reclaimed water usage in landscaping and outdoor space irrigation; low-water usage and native planting throughout the landscaping; and turf versus living grass. These water-conserving measures would assist the City in meeting its policy of encouraging conservation of water resources in residential and commercial developments through the use of drought-tolerant plant materials and water-saving irrigation.
Resources Management Policy 4.1: The city of Commerce will encourage the preservation of the existing plant resources in the city.	Consistent. Under the existing conditions, the Project site consists of the Veterans Memorial Park and a vacant, formerly industrial-use parcel. While there are existing plant resources within the Veterans Memorial Park, the community facilities and the park itself is in a state of disrepair. The Project proposes new structures as part of the new Veterans Memorial Park would include a four-story, 80,000-square-foot Community Center. The proposed Project would maintain the green space and enhance community use of Veterans Memorial Park, and thus, would assist the City in meeting its policy related to reserving existing plant resources.
Resources Management Policy 4.4: The city of Commerce will review existing landscaping standards for public and private developments so as to increase the green space throughout the city.	Consistent. The Project proposes new structures as part of the new Veterans Memorial Park, including a Community Center, green space, and art to assist the City to increase the green space throughout the City. Additionally, as described in Section 2.7, Intended Uses of This EIR, of this EIR, the proposed Project is seeking several discretionary approvals. During the approval process, the City would review the Project to ensure there is adequate landscaping provided throughout the Project site.
Resources Management Policy 5.1: The city of Commerce will maintain the existing park and recreational facilities to the extent that they can continue to provide residents with the best possible recreational opportunities.	Consistent. The proposed Project would not remove recreational facilities and the existing Veterans Memorial Park. Rather, one of the Project objectives is to provide a revitalized Veterans Memorial Park with new structures, an all-inclusive playground, a contemporary soccer and baseball youth sports complex, a contemporary library, and ample outdoor green space to maximize opportunities for community events and services.
Resources Management Policy 5.3: The city of Commerce will continue to upgrade existing facilities to improve park appearance and utility.	Consistent. The proposed Project itself would upgrade the existing facilities at Veterans Memorial Park. The proposed Project would replace the aging structures with new facilities, which includes the Community Center, inclusive of indoor sports courts and offices, a library, and a ballroom/event space as well as supporting amenities. Further, a playground and open space would be located adjacent to the Community Center for public use.

Table 3.10-2. General Plan Consistency Analysis

Goal/Policy	Analysis
Resources Management Policy 5.4: The city of Commerce will expand Veteran's Park and Bristow Park to include such facilities as soccer fields and basketball courts.	Consistent. As described in Section 2.3, Existing Setting, of this EIR, the Veterans Memorial Park was constructed between 1965 and 1970, and consists of a baseball diamond, two basketball courts, a community center, a parking lot, and miscellaneous outdoor recreational spaces. Due to the age of Veterans Memorial Park, the utility of the improvements made are deteriorating and the outdoor recreational spaces are aging. In addition, the existing community center has been shuttered due to structural and safety issues, and temporary trailers are used in lieu of the community center. Over time, much of the ground surface at the Veterans Memorial Park, which is sitting atop the landfill material from 1954, has settled over the weight of different types of debris.
Resources Management Policy 6.1: The city of Commerce will strive to ensure that park and open space is preserved and maintained for the use of existing and future residents of the city.	Consistent. The proposed Project seeks to improve the Veterans Memorial Park, currently in a state of disrepair for the existing and future residents of the City. The Project is consistent with the City's policy to ensure use of this remaining open space within the City.
Safety Element	
Safety Policy 4.1: The city of Commerce will ensure that appropriate mitigation measures relative to soil contamination and soils characteristics (subsidence, erosion, etc.) are required for development and redevelopment in order to reduce hazards.	Consistent. A Remedial Action Plan for the vacant lot on the Project site was approved in August 2016 by the Los Angeles Regional Quality Control Board (RWQCB), and would be amended and expanded to include remediation of the entire Project site. Remediation of the Project site involves the excavation and removal of all former landfill debris and contaminated soils to an approximately 20-foot depth. The excavation of soils is estimated to be approximately 380,000 cubic yards (cy) that would be transferred to a RWQCB-approved landfill site in Southern California. Upon removal, the Project's soil-bottoms and sidewalls would be tested to ensure all contaminants and debris have been removed. Thus, appropriate mitigation measures relative to soil contamination and soil characteristics would be implemented. See Section 3.8, Hazards and Hazardous Materials, for further details.
Safety Policy 6.7: The city of Commerce will require additional landscaping in industrial and commercial projects to help reduce noise impacts through increased setbacks.	Consistent. As previously described in Section 2.7, Intended Uses of This EIR, of this EIR, the proposed Project is seeking several discretionary approvals. During the approval process, the City would review the Project to ensure the Project commercial uses implement appropriate setbacks to help reduce noise. Additionally, see Section 3.11, Noise, for further details regarding noise impacts associated with the proposed Project.
Air Quality Element	
Air Quality Policy 1.2: The city of Commerce will encourage the applicants for sensitive land uses (e.g., residences, schools, daycare centers, playgrounds and medical facilities) to incorporate design features (e.g., pollution	Consistent. As previously described in Section 2.7, Intended Uses of This EIR, of this EIR, the proposed Project is seeking several discretionary approvals. During the approval process, the City would review the Project to

Table 3.10-2. General Plan Consistency Analysis

Goal/Policy	Analysis
prevention, pollution reduction, barriers, landscaping, ventilation systems, or other measures) in the planning process to minimize the potential impacts of air pollution on sensitive receptors.	ensure the Project incorporates design features to minimize potential impacts of air pollutants on sensitive receptors. Additionally, see Section 3.2, Air Quality, for further details regarding potential impacts on sensitive receptors.
Air Quality Policy 2.5: The city of Commerce will collaborate with local, regional, state and federal agencies to create incentives or "job/housing opportunity zones," to promote housing in job-rich areas and jobs in housing-rich areas. The Housing Opportunity areas identified in the Community Development Element are consistent with this policy.	Consistent. As described in Section 3.12, the City is "jobs-rich" meaning that enough jobs are available such that residents are not required to commute outside the City for employment. However, employees within the City are likely required to commute into the City for work. The proposed Project would introduce 850 residential units, along with employment opportunities to an underutilized parcel in the City. Thus, the Project provides new opportunities for housing and services to meet the labor force. Additionally, the new retail uses and housing opportunities may attract new business and industry to the City.
Air Quality Policy 2.6: The city of Commerce will design safe and efficient vehicle access to commercial land uses from arterial streets to ensure efficient vehicular ingress and egress.	Consistent. As described in Section 2.5, of this EIR, passenger vehicle access to the Project site would occur from either the Gage Avenue driveway on the eastern parcel, or from the end of Zindell Avenue into the western parcel. Vehicular traffic from retail and park services would be routed through the Gage Avenue driveway, and directed away from residential uses. Bicycle path traffic from the Rio Hondo Bike Path would be encouraged to utilize the Project's internal circulation to access Project amenities and Bicycle parking for visitors and residents would be provided throughout the Project site. Thus, the proposed Project would design site access for safe and efficient vehicle access to commercial land uses.

Source: City of Commerce 2008

Zoning Code Consistency

The City's Zoning Code (Title 19) regulate land use development in the City. In each zone, the City identifies the intent and purpose, use regulations, development standards, and other applicable regulations. Upon approval of the Project, the land use designation of the Project site would change from Public Facilities (PF) and Commercial Manufacturing (C/M1), to Public Open Space, Commercial Retail, and Residential with the corresponding Specific Plan zone.

Chapter 19.39 of the City's Municipal Code provides that an application for a zone change and/or a specific plan is heard by the Planning Commission and City Council. It should be noted the Planning Commission as a hearing body is only advisory to the City Council and does not have the authority to approve or deny a zone change and/or a specific plan application. The City Council is the final authority for approval of a zone change and/or a specific plan, and a public hearing is required.

Prior to the Planning Commission and City Council hearing in consideration of a project, the City has set forth processes applicants must follow for discretionary approvals. Applicants are required to attend a pre-application conference with the community development director or a designee. The purpose of the conference shall be to advise the applicant of the development regulations applicable to the property for which the application is to be

filed, and to review a preliminary site plans or other development plans. The applicant is then required to file the project application in accordance with Section 19.39.070 of the City's Municipal Code. Requirements include a list applicable project information to be submitted to the community development director or a designee. The application is deemed complete by the community development director or a designee. For applications requiring a public hearing, the community development director shall set the time and place of a public hearing and follow the procedures identified in Section 19.39.170 of the City's Municipal Code.

For a zone change and/or a specific plan, a public hearing before the Planning Commission shall be noticed and conducted to review the application and either recommend to the City Council approval, approval with modifications, or denial of the project. Upon receipt of a Planning Commission resolution recommending approval, or denial of a zoning ordinance text amendment, the City Clerk shall set the matter for hearing before the City Council. At the City Council hearing, the City Council shall review the Planning Commissions' recommendation and approve or deny the application.

Approval of the proposed Project, in accordance with the provisions outlined in the City's Municipal Code, would ensure compliance with applicable development standards. Additionally, through the application process, the City would thoroughly review all plans for the proposed Project to ensure compliance with the City's Municipal Code, and other relevant plans, policies, and regulations. Therefore, the proposed Project would not conflict with the Zoning Code.

In summary, the Project would not 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. Impacts would be **less than significant**. No mitigation is required.

3.10.6 Cumulative Impacts

As defined in the State CEQA Guidelines, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for land use. The cumulative study area used to assess potential cumulative land use impacts include the areas and land uses surrounding the Project area.

Continued development in the City, including that which might occur as a result of the proposed Project, and the surrounding region could result in increased urbanization, including the density of residential, commercial, office, recreational, and public uses. Under cumulative conditions, conflicts between land uses may occur. 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 EIR. Land use conflicts are also typically site-specific and not cumulative in nature; in other words, despite the number of cumulative projects in a given area, they wouldn't 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 proposed Project have been addressed in the technical sections of this EIR. This impact would **not be cumulatively considerable**.

3.10.7 Mitigation Measures

Impacts would be **less than significant**. No mitigation measures are required.

3.10.8 Level of Significance After Mitigation

Impacts would be **less than significant**.

3.10.9 References

City of Commerce. 2008. *City of Commerce 2020 General Plan*. Adopted January 2008. Accessed, November 7, 2019. http://www.ci.commerce.ca.us/DocumentCenter/Home/View/152.

City of Commerce. 2009. *City of Commerce 2020 General Plan* "Land Use Map" [map]. Printed August 6, 2009. Accessed, November 7, 2019. http://www.ci.commerce.ca.us/DocumentCenter/Home/View/349.

City of Commerce. 2015. "Zoning Map." Revision December 29, 2015. Accessed, November 7, 2019. http://www.ci.commerce.ca.us/DocumentCenter/View/4486.

SCAG. 2016. *2016–2040 Regional Transportation Plan/Sustainable Communities Strategy.* Adopted April 2016. http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx.

3.11 Noise

This section presents the potential noise and vibration impacts of the proposed Project, which includes the environmental setting and existing ambient noise conditions, regulatory framework, potential short-term and long-term noise and vibration impacts, and proposed measures to mitigate any identified significant impacts.

Comments received in response to the Notice of Preparation (see Appendix A) included concerns regarding impacts on noise and vibration. One of the comments simply stated that noise associated with the Project was a concern; one comment sought measures that would be put in place to control construction noise and vibration; and, the final comment stated the Project should consider physical buffers as mitigation.

Information contained in this section is based on proposed Project plans, the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) and the FHWA Traffic Noise Model (TNM 2.5) used to estimate Project noise emissions, the California Department of Transportation (CalTrans) Technical Noise Supplement to the Traffic Noise Analysis Protocol (Caltrans 1998), and the Federal Transit Authority (FTA) Transit Noise and Vibration Impact Assessment (FTA 2006). The ambient noise environment is described on the basis of six (6) short-term measurements completed in the vicinity of the Project site, the results of which are presented in Appendix G. The analysis and findings are based on noise and vibration modeling, which can also be found in Appendix G. Other sources consulted are listed in Section 3.11.9 References.

3.11.1 Environmental Setting

Vibrations, traveling as waves through air from a source, exert a force perceived by the human ear as sound. Sound pressure level (referred to as sound level) is measured on a logarithmic scale in decibels (dB) that represent the fluctuation of air pressure above and below atmospheric pressure. Frequency, or pitch, is a physical characteristic of sound and is expressed in units of cycles per second or hertz (Hz). The normal frequency range of hearing for most people extends from about 20 to 20,000 Hz. The human ear is more sensitive to middle and high frequencies, especially when the noise levels are quieter. As noise levels get louder, the human ear starts to hear the frequency spectrum more evenly. To accommodate for this phenomenon, a weighting system to evaluate how loud a noise level is to a human was developed. The frequency weighting called “A” weighting is typically used for quieter noise levels which de-emphasizes the low frequency components of the sound in a manner similar to the response of a human ear. This A-weighted sound level is called the “noise level” and is referenced in units of dBA.

Since sound is measured on a logarithmic scale, a doubling of sound energy results in a 3 dBA increase in the noise level. Changes in a community noise level of less than 3 dBA are not typically noticed by the human ear. Changes from 3 to 5 dBA may be noticed by some individuals who are extremely sensitive to changes in noise. A 5 dBA increase is readily noticeable (EPA 1973). The human ear perceives a 10 dBA increase in sound level as a doubling of the sound level (i.e., 65 dBA sounds twice as loud as 55 dBA to a human ear).

An individual’s noise exposure occurs over a period of time; however, noise level is a measure of noise at a given instant in time. Community noise sources vary continuously, being the product of many noise sources at various distances, all of which constitute a relatively stable background or ambient noise environment. The background, or ambient, noise level gradually changes throughout a typical day, corresponding to distant noise sources, such as traffic volume, as well as changes in atmospheric conditions.

Noise levels are generally higher during the daytime and early evening hours when traffic (including airplanes), commercial, and industrial activity is the greatest. However, noise sources experienced during nighttime hours when background levels are generally lower can be potentially more conspicuous and irritating to the receiver. In order to evaluate noise in a way that considers periodic fluctuations experienced throughout the day and night, a concept termed "community noise equivalent level" (CNEL) was developed, wherein noise measurements are weighted, added, and averaged over a 24-hour period to reflect magnitude, duration, frequency, and time of occurrence. A complete definition of CNEL and other terminology used to describe noise is provided in Table 3.11-1.

Table 3.11.1. Definitions of Acoustical Terminology

Term	Definition
Decibel (dB)	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of two like quantities
Sound Pressure Level (SPL)	10 times the logarithm to the base 10 of the ratio between the square of the sound to the square of the reference sound pressure of 20 μPascals. Sound pressure level is the quantity that is measured by a sound level meter, expressed in dB.
Frequency (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz.
A-Weighted Sound Level (dBA)	SPL in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de- emphasizes low and high frequency components of frequency components of sound in a manner similar to the frequency response of the human ear and correlates well with subjective response to sound. All sound levels in this report are A-weighted.
Noise	Unwanted sound.
Equivalent Sound Level (Leq)	The average A-weighted sound level during the measurement period. For this CEQA evaluation, Leq refers to a one-hour period unless otherwise stated.
Lmax, Lmin	The maximum and minimum A-weighted sound level during the measurement period.
L01, L10, L50, L90	The A-weighted sound levels that are exceeded l%, l0%, 50%, and 90% of the time during the measurement period.
Day/Night Noise Level (Ldn)	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured during the night between 10pm and 7 am.
Community Noise Equivalent Level (CNEL)	The average A-weighted sound level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7 p.m. to 10 p.m. and after addition of 10 decibels to sound levels during the night between 10 p.m. and 7 a.m.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Impulsive Noise	Noise loud enough to disrupt normal activities and usually lasting less than one second.

Exterior Noise Distance Attenuation

Noise sources are classified in two forms: (1) point sources, such as stationary equipment or a group of construction vehicles and equipment working within a spatially limited area at a given time, and (2) line sources, such as a roadway with a large number of pass-by sources (motor vehicles). Sound generated by a point source typically diminishes (attenuates) at a rate of 6.0 dBA for each doubling of distance from the source to the receptor at acoustically "hard" sites and at a rate of 7.5 dBA for each doubling of distance from source to receptor at

acoustically "soft" sites. Sound generated by a line source (i.e., a roadway) typically attenuates at a rate of 3 dBA and 4.5 dBA per doubling distance, for hard and soft sites, respectively. Sound levels can also be attenuated by man-made or natural barriers. For the purpose of sound attenuation discussion, a "hard" or reflective site does not provide any excess ground-effect attenuation and is characteristic of asphalt or concrete ground surfaces, as well as very hard-packed soils. An acoustically "soft" or absorptive site is characteristic of unpaved loose soil or vegetated ground.

Fundamentals of Vibration

Vibration is an oscillatory motion that can be described in terms of displacement, velocity, or acceleration. The response of humans to vibration is very complex. However, it is generally accepted that human response is best approximated by the vibration velocity level associated with the vibration occurrence.

Heavy equipment operation, including stationary equipment that produces substantial oscillation or construction equipment that causes percussive action against the ground surface, may be perceived by building occupants as perceptible vibration. It is also common for ground-borne vibration to cause windows, pictures on walls, or items on shelves to rattle. Although the perceived vibration from such equipment operation can be intrusive to building occupants, the vibration is seldom of sufficient magnitude to cause even minor cosmetic damage to buildings.

When evaluating human response, ground-borne vibration is usually expressed in terms of root mean square (RMS) vibration velocity. RMS is defined as the average of the squared amplitude of the vibration signal. As for sound, it is common to express vibration amplitudes in terms of decibels defined as:

$$L_v = 20 \log \left(\frac{v_{rms}}{v_{ref}} \right)$$

Where vrms is the RMS vibration velocity amplitude in inches/second and vref is the decibel reference of 1x10-6 inches/second.

To avoid confusion with sound decibels, the abbreviation VdB is used for vibration decibels. The vibration threshold of perception for most people is around 65 VdB (which is equivalent to 0.0018 in/sec RMS). Vibration levels in the 70 to 75 VdB range are often noticeable, but generally deemed acceptable, and levels in excess of 80 VdB are often considered unacceptable (FTA 2006).

Vibration impacts to buildings are generally discussed in terms of peak particle velocity (PPV) that describes particle movement over time (in terms of physical displacement of mass, expressed as inches/second or in/sec). Groundborne vibration generated by construction projects is usually highest during pile driving, rock blasting, soil compacting, jack hammering, and demolition-related activities. Next to pile driving and soil compacting, grading activity has the greatest potential for vibration impacts if large bulldozers, large trucks, or other heavy equipment are used. A conservative maximum vibration level standard is 0.2 in/sec PPV for the prevention of structural damage to typical residential buildings (Caltrans 2013).

Existing Noise Conditions

Project Site Noise Levels

The Project site currently consists of vacant land (formerly industrial) and adjacent Veterans Memorial Park, which today has a baseball field, two basketball courts, a temporarily closed community center and other recreational spaces. The site is located immediately west of Interstate 5 (I-5) freeway, south of Zindell Avenue and east of a single-family residential neighborhood located west of Avenida Aguascalientes, and immediately north of Rio Hondo River and Path. Residential properties are located adjacent to the west and northwest of the proposed Project, as well as approximately 800 feet to the south; the closest existing residences are located at distances from 15 feet to 40 feet from the subject property boundaries. Commercial properties are located along Zindell Avenue and Gage Avenue (approximately 75 feet to the north).

Existing noise levels were measured at the Project site boundaries in order to establish baseline noise conditions against which to compare Project operational noise levels, as shown in Figure 3.11-1. A total of six (6) short-term noise measurements were performed; one along the eastern property boundary, one along the northern property boundary, two within the adjacent single-family residential neighborhood along Zindell Avenue and Kuhl Drive, and one along E Gage Avenue. Sound-level measurements were performed using SoftdB Piccolo 1 Models (ANSI Type II). ANSI Type II sound-level meters have sufficient accuracy to be used for environmental noise evaluation. The sound-level meters were calibrated before and after the short-term measurements using a BSWA Tech CA114 calibrator.

Table 3.11.2 summarizes the dates and start/stop times for each short-term measurement, as well as the measured average sound level (Leq) and calculated 24-hour weighted average noise level (CNEL). See Appendix G for field data sheets for each of the short-term measurement periods.

Table 3.11.2. Existing Ambient Noise Measurement Results

Location	Date	Start Time	Stop Time	Leq (dBA)	CNEL (dBA)
ST-1	10/22/2019	9:48	9:58	77	76
ST-2		10:17	10:27	71	71
ST-3		10:46	11:01	66	67
ST-4		11:08	11:23	64	64
ST-6		12:02	12:07	67	68
ST-5	10/24/2019	14:42	15:12	65	67

As shown in Table 3.11.2, existing noise levels on site, and immediately adjacent to neighboring residential land uses, are well within the City's maximum exterior noise exposure limit of 55 - 70 dBA CNEL for residential land uses; however, ST-1 and ST-2 are currently marginally above the City's exterior noise exposure limit. (Refer to Section 3.11.2 – Local, below).

3.11.2 Relevant Plans, Policies, and Ordinances

Federal

The following federal regulations pertaining to noise would apply to the proposed Project.

Federal Highway Administration (FHWA) Standards

CFR Title 23, Part 772 sets procedures for the abatement of highway traffic noise and construction noise. Title 23 is implemented by the Federal Department of Transportation (DOT) Highway Administration (FHWA). The purpose of this regulation is to provide procedures for noise studies and noise abatement measures to help protect the public health and welfare, to supply noise abatement criteria, and to establish requirements for information to be given to local officials for use in the planning and design of highways. All highway projects which are developed in conformance with this regulation shall be deemed to be in conformance with the DOT-FHWA Noise Standards. Title 23 establishes a 67 dBA L_{eq}(h) standard applicable to federal highway projects for evaluating impacts to land uses including residences, recreational uses, hotels, hospitals, and libraries [23 CFR Chapter 1, Part 772, Section 772.19].

Federal Transit Administration and Federal Railroad Administration Standards

Although the FTA standards are intended for federally funded mass transit projects, the impact assessment procedures and criteria included in the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (FTA 2006) are routinely used for projects proposed by local jurisdictions. The FTA and Federal Railroad Administration (FRA) have published guidelines for assessing the impacts of ground-borne vibration associated with rail projects, which have been applied by other jurisdictions to other types of projects. The FTA measure of the threshold of architectural damage for conventional sensitive structures is 0.2 inch/second perturbation projection vector (PPV).

State

The following state regulations pertaining to noise would apply to the proposed Project.

California Noise Control Act of 1973

Sections 46000 through 46080 of the California Health and Safety Code, known as the California Noise Control Act of 1973, declares that excessive noise is a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also identifies a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the State to provide an environment for all Californians free from noise that jeopardizes their health or welfare.

California Noise Insulation Standards (CCR Title 24)

In 1974, the California Commission on Housing and Community Development adopted noise insulation standards for hotels, motels, dormitories, and multi-family residential buildings (CCR Title 24, Part 2). Title 24 establishes standards for interior room noise (attributable to outside noise sources). The regulations also specify that acoustical studies must be prepared whenever a multi-family residential building or structure is proposed to be located in an area with CNEL (or L_{dn}) of 60 dBA or greater. Such acoustical analysis must demonstrate that the residence has been designed to limit intruding noise to an interior CNEL (or L_{dn}) of at least 45 dBA (California's Title 24 Noise Standards, Chap. 2-35). The City of Sacramento applies the interior noise criterion of CNEL 45 dBA for single-family residences, in addition to multi-family residential structures.

Local

The following local/regional regulations pertaining to noise would apply to the proposed Project.

City of Commerce 2020 General Plan

The Safety Element of the *City of Commerce 2020 General Plan* provides objectives, policies, and programs regarding Noise, including the following:

> Safety (Element) Policy 6.1
> The city of Commerce will ensure that residents are protected from harmful and irritating noise sources to the greatest extent possible.
>
> Safety (Element) Policy 6.2
> The city of Commerce will work with businesses in the city and other public agencies to identify ways to reduce noise impacts throughout the city.
>
> Safety (Element) Policy 6.3
> The city of Commerce will continue to enforce the existing city's noise control ordinance.
>
> Safety (Element) Policy 6.4
> The city of Commerce will incorporate noise considerations into land use planning decisions.
>
> Safety (Element) Policy 6.5
> The city of Commerce will prohibit noise-intensive land uses adjacent to or near residential areas, schools, convalescent homes, and other noise-sensitive receptors.
>
> Safety (Element) Policy 6.6
> The city of Commerce will encourage acoustical design in all new construction.
>
> Safety (Element) Policy 6.7
> The city of Commerce will require additional landscaping in industrial and commercial projects to help reduce noise impacts through increased setbacks.
>
> Safety (Element) Policy 6.8
> The city of Commerce will evaluate and implement measures to control stationary non-transportation noise impacts.
>
> Safety (Element) Policy 6.9
> The city of Commerce will continue to use the Sheriff's Department or expand the responsibility of the city's Code Enforcement Division to monitor and respond to noise complaints.
>
> Safety (Element) Policy 6.10
> The city of Commerce will establish and maintain coordination among city agencies involved in noise abatement.
>
> Safety (Element) Policy 7.3
> The city of Commerce will provide for measures to reduce noise impacts from transportation-related noise sources.

Safety (Element) Policy 7.8
The city of Commerce will mitigate noise impacts related to truck loading and unloading (including garbage trucks) by requiring trash pick-up to be changed to daytime periods.

The *City of Commerce General Plan Noise Exposure and Land Use Compatibility Guidelines* for land uses in the City reflect the former California Office of Noise Control prepared *Guidelines for the Preparation and Content of Noise Elements and General Plans*. The guidelines indicate the compatibility of noise-sensitive land uses in areas subject to noise levels of 55 to 80 dB CNEL or L_{dn}. Residential uses are normally unacceptable in areas exceeding 70 dB CNEL; and conditionally acceptable between 55 - 70 dB CNEL for low-density single-family dwelling units, duplexes, and mobile homes, and between 60 - 70 dB CNEL for multiple-family units. Schools, libraries, hospitals, and nursing homes are treated as noise-sensitive land uses, requiring acoustical studies within areas exceeding 60 dB CNEL. Commercial/professional office buildings and industrial land uses are normally unacceptable in areas exceeding 75 dB CNEL, and are conditionally acceptable within 67 to 78 dB CNEL (for commercial/professional offices only).

City of Commerce Municipal Code

The *City of Commerce Municipal Code Title 19 – Zoning, Chapter 19.19 – Site Planning and General Development Standards, Section 19.19.160 – Noise*. This section describes the noise standards that are applicable to the various types of zoning. The following excerpts from the municipal code are applicable to the Project:

19.19.160. E

No person shall, at any location within the city, create nor allow the creation of noise on property owned, leased, occupied, or otherwise controlled by such person that causes the noise level when measured on any property to exceed the ambient noise level or the noise standards set forth in Table 19.19160.A, whichever is greater.

Table 19.19.160A. Noise Standards

Zone	Time	Allowable Noise Level - dBA
Residential	7 a.m. - 7 p.m. (day)	55
Residential	7 p.m. - 10 p.m. (evening)	50
Residential	10 p.m. - 7 a.m. (night)	45
Commercial	7 a.m. - 10 p.m. (day/evening)	65
Commercial	10 p.m. - 7 a.m. (night)	55
Industrial	Anytime	70

Source: City of Commerce Municipal Code

19.19.160. F

Increases in permitted noise levels prescribed in Table 19.19.160A may be permitted in accordance with the standards outlined in Table 19.19.160B.

Table 19.19.160B. Permitted Increases in Noise Levels

Permitted Increase (dBA)	Duration of Increase (cumulative minutes/hour)
5	15
10	5
15	1
20	Less than one minute

Source: City of Commerce Municipal Code

19.19.160. K

The following acts, or the causing thereof, are declared to be in violation of this subsection:

1. No person shall, within any residential zone in the city, use or operate any radio receiving set, musical instrument, phonograph, tape player, compact disk player, television set, or other machine or device that produces, reproduces, or amplifies sound, between the hours of ten p.m. and seven a.m. such that it exceeds the exterior noise standards set forth in subsection L of this section.
2. No person shall create any noise on any street, sidewalk, or public place adjacent to any school, institution of learning, or church while the same is in use or adjacent to any hospital, that exceeds the interior noise standards set forth in subsection L of this section.
3. No person or organization within any residential zone, or within a radius of five hundred feet of a residential zone, shall operate equipment or perform any outside construction or repair work on buildings, structures, or projects, or operate any pile driver, steam shovel, pneumatic hammer, derrick, steam, electric hoist, or other construction type device between the hours of ten p.m. and seven a.m., unless a permit has been obtained from the city.
4. No person within any residential zone shall repair, rebuild, or test any motor vehicle between the hours of ten p.m. and seven a.m. in a manner that exceeds the noise levels set forth in subsection L of this section.
5. No person or organization shall use or operate for any noncommercial purpose any loudspeaker, public address system, or similar device between the hours of ten p.m. and seven a.m. in a manner that exceeds the noise levels set forth in subsection L of this section.
6. No person or organization shall use or operate for any commercial purpose any loudspeaker, public address system, or similar device in a manner that creates noise in any residential zone in excess of the noise levels set forth in subsection L of this section.
7. Loading, unloading, opening, closing, or other handling of boxes, crates, containers, building materials, garbage cans, or similar objects between the hours of ten p.m. and seven a.m. in such a manner as to cause noise in excess of the noise standards in any residential zone is unlawful.

3.11.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts related to noise are based on Appendix G of the State CEQA Guidelines. Through the analysis in the Initial Study (see Appendix A), it was determined that the proposed Project would not have a substantial adverse effect with respect to the exposure of persons to airport-related noise (i.e., Threshold C). Accordingly, this issue is not further analyzed in the EIR. Based on the remaining thresholds (Thresholds A and B), according to Appendix G of the State CEQA Guidelines, a significant impact related to noise would occur if the Project would:

A. 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.
B. Result in generation of excessive groundborne vibration or groundborne noise levels.

3.11.4 Methodology

Methods of Analysis

The analysis of existing and future noise environments is based on observations, noise level measurements, and computer modeling. Existing noise levels were monitored at selected on-site and off-site locations using ANSI Type II sound level meters for general environmental noise measurement instrumentation. Traffic noise modeling involved the calculation of existing and future traffic noise levels along roadway sections where the proposed Project would contribute additional vehicle trips, as provided by the traffic impact study, using the FHWA model. Vibration from transportation sources was not evaluated in detail because it is not common for vibration from motor vehicles traveling on paved roads to cause disturbance or substantial annoyance in these areas. The calculation of on-site operational noise was calculated from noise level data for specified mechanical equipment and outdoor noise attenuation rates.

Construction Noise

Construction noise levels were determined using the FHWA RCNM construction noise prediction model. For construction noise, this analysis assumed that compliance with conditions specified in the City's Noise Ordinance. Specifically, prohibiting construction between the hours of 10 p.m. to 7 a.m.

For the purposes of modeling, it was assumed that construction of the proposed Project would occur over a period of approximately 15 months. Construction scenario assumptions, including phasing, equipment mix, and vehicle trips, were based on information provided by the applicant and CalEEMod generated default values. Complete detailed construction assumptions are included in Appendix G. Implementation of the proposed Project would include construction of 850 residential units (including 85 studios, 298 1-bedroom units, 340 2-bedroom units, 127 3-bedroom units, and a lobby), seven (7) commercial facilities (including a movie theatre, arcade, fitness center, restaurant, general retail, grocery and food hall, and a pharmacy), five (5) green spaces (including open green space, children's playground, youth sports field, grass amphitheater, and benches/stands), as well as a tower, community center, and museum.

As described in Chapter 3, Project Description, the proposed Project would grade an approximately 17-acre site. Cut-and-fill quantities would be balanced on site and no external soil export would be required. Soil balance would occur within each

subset area and hauling would not be required between subset areas. Balancing activities are anticipated to be performed through the use of off-road construction equipment (e.g., excavators and dozers). The construction equipment mix used for estimating the construction noise emissions of the proposed Project is shown in Table 3.11.3. Notably, because detailed specific information regarding the construction equipment fleet is unknown at the time of analysis, the analysis is based on the default construction equipment fleet provided by CalEEMod.

Table 3.11.3. Construction Equipment List by Phase

Construction Phase	Equipment	Quantity
Demolition	Crushing/Proc. Equipment	3
	Dumpers/Tenders	4
	Excavators	5
	Generator Sets	3
	Rubber Tired Dozers	2
	Rubber Tired Loaders	4
Site Prep	Crushing/Proc. Equipment	3
	Dumpers/Tenders	4
	Excavators	5
	Generator Sets	3
	Rubber Tired Dozers	2
	Rubber Tired Loaders	4
Grading	Crushing/Proc. Equipment	3
	Dumpers/Tenders	4
	Excavators	5
	Generator Sets	3
	Rubber Tired Dozers	2
	Rubber Tired Loaders	4
Building Construction	Cranes	1
	Forklifts	3
	Generator Sets	1
	Tractors/Loaders/Backhoes	3
	Welders	1
Paving	Pavers	2
	Paving Equipment	2
	Rollers	2
Architectural Coating	Air Compressors	1

3.11.5 Impacts Analysis

Threshold A: Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

On-Site Construction (Short-Term) Noise

Construction of the proposed Project would generate noise that could expose nearby receptors (i.e., residences and hotel guests) to elevated noise levels that may disrupt communication and routine activities. The magnitude of the impact would depend on the type of construction activity, equipment, duration of the construction phase, distance between the noise source and receiver, and intervening structures. Noise from construction equipment generally exhibits point source acoustical characteristics. A point source sound is attenuated (or reduced) at a rate of 6 decibels per doubling of distance from the source for "hard site" conditions and at 7.5 decibels per doubling of distance for "soft site" conditions. These rules apply to the propagation of sound waves with no obstacles between source and receivers, such as topography (ridges or berms) or structures. The range of maximum noise levels for various types of construction equipment is provided in Table 3.11.4. Typical operating cycles may involve two minutes of full power, followed by three or four minutes at lower levels.

Table 3.11.4. Construction Equipment Noise Emission Levels

Equipment	Typical Sound Level (dB) - 50 feet from Source
Air Compressor	81
Backhoe	80
Compactor	82
Concrete Mixer	85
Crane, Mobile	83
Dozer	85
Generator	81
Grader	85
Loader	85
Paver	89
Pneumatic Tool	85
Pump	76
Roller	74
Saw	76
Scraper	89
Truck	88

Source: FTA 2006

The nearest point of construction activities to the closest noise-sensitive receivers (single-family residences located to the north/west) would be approximately 15 feet and the furthest would be approximately 1,305 feet. With respect to the hotel northeast of the Project site, the shortest distance to construction would be 135 feet, and the furthest distance would be 935 feet. For construction noise, a concept called the "acoustic center" is useful in describing average noise levels across the entire construction period for adjacent receivers. The acoustic center is the idealized point from which the energy sum of all construction activity noise near and far would originate, and it is derived by taking the square root of the product of the shortest distance multiplied by

the furthest distance. The nearest noise-sensitive residential receivers are located approximately 140 feet away from the acoustic center of construction activity. Thus, the distance to the nearest construction activities would be approximately 15 feet, but average construction noise levels at the closest residential receivers would be approximated by the acoustic center 140 feet away, because equipment would be operated across the whole site rather than remaining only along the closest boundary to adjacent receivers. For the hotel, the closest distance is 135 feet and the acoustic center is 355 feet.

The Federal Highway Administration's Roadway Construction Noise Model (RCNM) (FHWA 2008) was used to estimate construction noise levels at these noise-sensitive land uses. Although the model was developed by the FHWA, RCNM is often used for non-roadway projects, because the same types of construction equipment used for roadway projects are also used to construct other project types. Input variables for RCNM consist of the receiver/land use types, the equipment type and number of each (e.g., two graders, a loader, a tractor), the duty cycle for each piece of equipment (e.g., percentage of each hour the equipment typically works per day), and the distance between the construction activity and noise-sensitive receivers. No topographical or structural shielding was assumed in the modeling of construction noise (i.e., the receivers are modelled with no obstacles to the travel of sound between the construction activity and receiver location, a worst-case assumption). The noise levels from the proposed construction activities are summarized in Table 3.11-5 and 3.11-6. The complete set of RCNM input and output data for construction noise is provided in Appendix G. As shown, at the nearest residences, noise levels would range from approximately 84 to 102 dBA Leq when construction is taking place at or near the Project site boundary. More typical construction noise levels (represented by the acoustic center distance noise levels) at the closest residences to the north/west would range from approximately 65 to 83 dBA Leq. These noise levels are based on surveys, conducted by the United States Environmental Protection Agency in 1971. In the time since 1971, regulations have been enforced to improve noise generated by certain types of equipment to meet worker noise exposure standards. Also, because of stringent air quality emissions standards, newer, cleaner, and quieter equipment is used on most construction projects in California. Thus, construction phase noise levels indicated in Table 3.11.5 represent "worst-case" conditions. As the table shows, the highest noise levels are expected to occur during the demolition, site prep, and grading phases of construction.

Table 3.11.5. Outdoor Construction Noise Levels by Phase at Adjacent Residences

Construction Phase	Adjacent Residence 15 Feet	Acoustic Center 140 Feet
Demolition	102.1	82.7
Site Prep	102.1	82.7
Grading	102.1	82.7
Building Construction	96.7	77.3
Paving	91.5	72.1
Architectural Coating	84.1	64.7

Source: RCNM, See Appendix G

As shown in Table 3.11.6, at the adjacent hotel site, noise levels would range from approximately 65 to 83 dBA Leq when construction is taking place at or near the Project site boundary. More typical construction noise levels (represented by the acoustic center distance noise levels) at the hotel to the northeast would range from approximately 57 to 75 dBA Leq.

Table 3.11.6. Outdoor Construction Noise Levels by Phase at Adjacent Hotel

Construction Phase	Adjacent Hotel 135 Feet	Acoustic Center 355 Feet
Demolition	83	74.6
Site Prep	83	74.6
Grading	83	74.6
Building Construction	77.6	69.2
Paving	72.4	64
Architectural Coating	65.1	56.7

Source: RCNM, See Appendix G

The City of Commerce exempts construction activity noise from standard exterior noise exposure limits, if conducted during specific limited daytime hours. The Ordinance requires noise generating construction activities (including demolition, excavation, and building construction), be restricted to the hours between 7 a.m. and 10 p.m. (City of Commerce, Chapter 19.19.160). This ensures that sensitive receptors are not disturbed by early morning or late night activities. However, the City's 2020 General Plan includes implementing Safety Policy 6.6, which states "The City of Commerce will encourage acoustical design in all new construction."

The recorded average sound levels in Table 3.11.2 ranged from 64 to 77 dBA L_{eq} during the day. Based on the acoustic center noise level values, which would represent more typical noise exposure over the construction cycle, construction noise would range up to 17 dBA higher than ambient levels at adjacent residences and up to 10 dBA higher at the hotel property. Due to the proximity of residences and a hotel to the Project site, and the potential for construction noise to be an annoyance, construction noise is considered a potentially significant impact. However, with the implementation of mitigation measures **MM-NOI-1** and **MM-NOI-2** during construction, impacts are considered **less than significant with mitigation incorporated**.

Construction Traffic Noise (Short-Term Impacts)

Construction-related traffic would include trips for workers, involving passenger cars or light duty trucks, and trips for hauling dirt and building materials involving heavy trucks. The Construction Traffic Analysis (Gibson 2020) indicates that daily construction worker trips would peak during the building construction phase, with a maximum of 1,334 worker trips per day. This number of trips is lower than the daily average trip generation during long-term operation of the Project (discussed below) and would, therefore, not be anticipated to result in substantial increases in traffic noise levels along roadways used for construction worker commuting. In particular, access at the construction site is expected to be most direct via the driveway and informal cul-de-sac currently connecting to Gage Avenue, adjacent to the entrance to the Best Western Hotel. Parking along the cul-de-sac section would be available for workers, and this roadway section is substantially wider than Zindell Avenue. Consequently, no more than half of the construction worker trips would be expected to use Zindell Avenue (662 daily trips). This number of additional automobile and light truck trips during construction would result in an increase of approximately 3 dBA CNEL over existing traffic noise levels along Zindell Avenue, which would result in a less than significant impact.

The Construction Traffic Analysis (Gibson 2020) indicates daily construction heavy truck trips would peak during the remediation/demolition phase, with a maximum of 95 heavy trucks per day, or 190 single direction truck trips. The construction management plan is expected to prohibit heavy trucks in the morning and evening peak hours, which leaves a total of 12 hours available per day for construction-related truck trips, in accordance with the City's construction hour limitations. Heavy truck traffic during the peak construction period would therefore average 16 trips per hour. The construction management plan will also prohibit construction site access via Zindell Avenue for

heavy trucks, requiring them to use the afore-mentioned driveway and cul-de-sac adjacent to the Best Western Hotel. Heavy trucks would travel to and from the Project area via the I-5 freeway, given building materials and soil disposal sites distant from the Project site. The most direct route from the I-5 freeway to the Project site for those arriving from the south is the Slauson Avenue interchange, while those arriving from the north would use the Gage Avenue off-ramp and Telegraph Road on-ramp.

Noise-sensitive land uses along the heavy truck haul routes between the I-5 freeway and the Project site include a handful of residences on Todd Avenue and Wellman Street, adjacent to the I-5 freeway southbound Gage Avenue off-ramp, and the Best Western Hotel adjacent to the northwestern portion of the Project site. Assuming that all of the heavy truck trips during construction use the I-5 freeway southbound Gage Avenue off-ramp, the increase in traffic noise for the adjacent residences would be 3 dBA CNEL (refer to spreadsheets containing the inputs and outputs for the traffic noise modelling in Appendix G). Also assuming that all of the heavy truck trips during construction use the driveway and cul-de-sac connecting to Gage Avenue near the Best Western Hotel, the increase in traffic noise at the closest façade of the Best Western Hotel would be 1 dBA CNEL (refer to Appendix G). These increases are well below the significance threshold of a 5 dBA CNEL increase. Therefore, construction traffic noise impacts are considered **less than significant**. No mitigation is required.

Operational Noise (Long-Term Impacts)

The implementation of the Project would also result in changes to existing noise levels on the Project site by developing new stationary sources of noise, including introduction of HVAC equipment, loading docks, and outdoor sound amplification systems. These sources may affect noise-sensitive vicinity land uses off the Project site. The following analysis evaluates noise from exterior mechanical equipment and activities.

HVAC Equipment

The proposed underground garage would be equipped with 13 exhaust fans within the main portion of the site. In addition, each of the proposed structures would include heating ventilation and air conditioning (HVAC) equipment. Generally, commercial structures would be outfitted with 50-ton package units, while residences would each be served by a 2-ton split system. Refer to Appendix G for the list of representative HVAC equipment to be included, as well as a site plan indicating proposed locations of the systems.

The HVAC units would be installed on the building roofs, and it is expected that screen would be provided to shield the equipment from view. However, with the details for such screening, we have assumed a worst case where no barrier would be provided. In order to assess noise levels from mechanical equipment operations along the common property boundary of the Project site and neighboring noise-sensitive uses, distance measurements were completed from the mechanical equipment locations to these property lines. Standard acoustic calculations were then performed to determine the distance attenuated noise level at the closest noise-sensitive sensitive receptor property lines.

The noise calculations were performed to consider the contribution of all mechanical equipment at the closest noise-sensitive property boundary to the northwest (residences) and to the north (motel) of the Project site. The average noise levels (Leq) from the combined noise levels of all of the roof-mounted HVAC equipment and ground mounted garage exhaust fans are indicated in Table 3.11-7. These average noise levels assume operation of all of the HVAC units and garage exhaust fans simultaneously. When all of the HVAC equipment and garage exhaust fans operate continuously throughout a given hour, the calculated noise levels at the closest noise-sensitive property

boundaries would represent the hourly average. This would be a worst-case assumption, in that all HVAC units would not be anticipated to operate simultaneously for extended periods.

Table 3.11-7. Mechanical Equipment Operation Noise Summary of Results

Noise Level at Property Boundary	
Property Line / Land Use	*Average Noise Level: (dBA L_{eq})*
Northeast - Hotel	61
Northwest - Residences	59

The results of the mechanical equipment operations noise analysis indicate that mechanical equipment operations noise from the proposed Project would exceed the City municipal code noise restrictions during the daytime and overnight at the residential property boundary, as well as exceeding the overnight restrictions at the commercial hotel property line. Screen walls around roof-top equipment is an excellent method to reduce noise, and would be anticipated to lower mechanical equipment noise to below the thresholds. Nonetheless, mechanical equipment noise is considered potentially significant without mitigation.

Loading Docks

Noise impacts due to retail store loading dock activities include truck traffic arrivals and departures, back-up alarm use while backing into the loading dock, and truck off-loading activities at the loading dock area. The loading area for the retail component of the Project would be inset into the eastern building façade, such that loading dock noise would be shielded by the structure to the north, west, and south. The closest noise-sensitive property line (the motel to the north) is located approximately 365 feet north of the northern edge of the loading dock. Because the loading dock is inset, the building would provide a barrier against loading dock activity noise traveling northward toward the hotel. Noise from trucks backing into or departing the loading dock would have a clear travel path along the road at the eastern edge of the site, where the property line is not closer than 365 feet from the loading dock.

To determine typical loading dock and truck circulation noise levels associated with the loading dock component, Dudek used reported noise level measurement data collected at a Safeway Store loading dock during a peak morning hour (County of Shasta 2009). The Safeway Store is considered an applicable conservative representation due to the truck activity level during the measurement. For the Safeway project, noise level measurements were conducted at a distance of 50 feet from the loading dock. During the one hour sample of loading dock noise levels, there were three semi-truck arrivals (including back-up alarm use to approach the loading dock) and four semi-truck departures, unloading activities, and delivery by four step side delivery trucks. This level of activity over a typical 12-hour delivery window would equate to approximately 48 semi-truck deliveries and 48 side step van deliveries per day, a volume which should conservatively account for truck delivery activities associated with the commercial components of the Project.

Again, the noise level measurements were conducted for a one hour period, during a busy hour of loading dock operations. The analysis indicated that during a busy hour of loading dock operations, the measured hourly Leq noise level was 60 dBA at a distance of 50 feet from the loading dock, with a peak noise level of 80 dBA (associated with back-up alarm use). The closest neighbor to the proposed loading dock is at a distance of 365 feet to the north, and the loading dock itself would be shielded by a building wall to the north. However, truck maneuvering could occur on the road area adjacent to the loading dock. Using the entire loading dock sound level of 60 dBA at 50 feet, and standard exterior attenuation rates for a point source (a 6 dBA decrease with each doubling of distance between source and receiver),

maximum noise from trucks maneuvering in and out of the loading dock would be no greater than 43 dBA Leq at the closest property line of a noise-sensitive land use (motel). This loading dock noise level would comply with the most restrictive level of the City's Municipal Code (Section 19.19.160), which limits exterior noise levels at commercial properties to 55 dBA (from 10 p.m. to 7 a.m.).

Outdoor Amplified Sound Systems

The proposed Project includes exterior sound amplification systems associated with several outdoor activity areas. A proposed public movie screen is proposed in the southeastern corner of the site, with the opening of the area oriented north. The retail center, food court, and commercial buildings would each shield amplified sound in this area from reaching the hotel property to the north, several rows of buildings to the west would block sound travel in this direction toward the existing adjacent residences. Amplified sound is also proposed for the baseball field, oriented toward the stands along the south and east sides of the baseball field. There are no noise-sensitive land uses off-site in these directions. Speakers for the soccer field are anticipated to be oriented toward the fields, or southward and eastward. There are no noise-sensitive off-site receptors in these directions, and the retail center buildings would additionally block sound travel toward the east and southeast. A proposed amphitheater would also employ an amplification system, and the opening for this facility is oriented northward. The food court would partially block sound travel to the north, but some sound would be expected to migrate around the west side of the food court to reach the northern property boundary. The minimum distance from the amphitheater to the hotel property boundary is approximately 215 feet.

In order to characterize the noise level associated with exterior speaker operation, Dudek performed a short-term noise measurement of one speaker included in a public address system at a facility with outdoor exhibit areas (Dudek 2014). The announcement was made with all normal system settings, and with a duration of 30 seconds. A Larson Davis Model 820 Type I Integrating Sound Level Meter was used to record the sound level from one speaker during the announcement. The sound level meter was positioned at five feet above the ground and 13 feet from the speaker, directly in the center-line of the speaker projection. The average sound level produced by the speaker was 72 dBA Leq at 13 feet, directly in-line with the center of the speaker.

The concept of directionality is very important in regard to sound levels produced by loudspeakers. The direction the speaker is pointed, specifically the center of the speaker cone, receives the greatest sound levels from speaker operation. At an angle 60 degrees from the center of the speaker cone, sound levels from speaker operation are 9 dBA less than those in-line with the center of the speaker. At an angle of 90 degrees from the center of the speaker (perpendicular to the speaker direction) sound levels from speaker operation are negligible (Sound System Design Reference Manual, JBL, 1999). With a speaker on the stage oriented directly at the northern property line, sound from a single speaker would attenuate to approximately 47 dBA Leq at the closest residential property line. A total of 5 speakers are oriented directly at the northern property and would generate a sound level of approximately 55 dBA Leq. Thus amphitheater noise levels would not be expected to exceed the most restrictive level of the City's Municipal Code (Section 19.19.160), which limits exterior noise levels at commercial properties to 55 dBA (from 10 p.m. to 7 a.m.).

Off-Site Traffic Noise Levels

The proposed Modelo Mixed-Use Development would generate traffic along roadways in the community surrounding the Project site. Many of the roadways evaluated in the Transportation Impact Study (Gibson 2019) serve commercial and industrial areas, which are not considered noise-sensitive in relation to noise from roadway traffic. However, a total of 18 roadway segments evaluated in the TIS are aligned along existing residential areas. Potential noise effects from vehicular

traffic were assessed using the Federal Highway Administration's Traffic Noise Model version 2.5 (FHWA 2004). Information used in the model included the site geometry, existing, existing plus project, future without project, and future with project traffic volumes (provided in the Transportation Impact Study [Appendix H]) and posted traffic speeds. Noise levels were modeled at a uniform distance from the roadway center-line along roadway segments with residences exiting along the right-of-way.

Noise model results are summarized in Table 3.11-8, Off-Site Traffic Noise Modeling Results. Spreadsheets containing the inputs and outputs for the traffic noise modelling are contained in Appendix G. The City does not have a specific criterion for evaluating the significance of Project-related increases in off-site traffic noise levels at residences or noise-sensitive areas. For the purposes of this analysis, traffic noise level increases are considered significant if they exceed ambient traffic noise levels by five dB or more, or cause noise levels to exceed the 65 dBA CNEL noise threshold. An increase or decrease in noise level of three dBA is the minimum before any noticeable change in community response would be expected (Caltrans 1998).

Table 3.11-8. Off-Site Traffic Noise Modeling Results

Roadway Segment	Existing Noise Level (dBA CNEL)	Existing with Project Noise Level (dBA CNEL)	Future without Project Noise Level (dBA CNEL)	Future with Project Noise Level (dBA CNEL)	Maximum Noise Level Increase (dB)
Washington East of Rosemead	70	70	70	70	0
Rosemead South of Washington	69	69	70	70	0
Slauson East of Greenwood	68	69	69	69	1
Slauson East of Rosemead	70	70	70	70	0
Slauson West of Rosemead	70	70	70	70	0
Rosemead South of Slauson	69	69	69	69	0
Gage East of Eastern	69	69	69	69	0
Gage East of Garfield	68	69	69	69	0
Gage West of Greenwood	70	71	71	71	1
Greenwood North of Gage	62	62	62	62	0
Greenwood South of Gage	62	62	62	62	0
Gage West of Zindell	70	71	70	71	1
Zindell South of Gage	57	64	57	64	7
Project Drive South of Gage	67	68	68	68	1
Florence East of Eastern	70	70	70	71	1
Florence East of Garfield	68	68	68	68	0
Paramount North of I-5	62	62	62	62	0
Telegraph West of Paramount	71	72	72	72	1
Paramount North of Telegraph	71	72	72	72	1
Telegraph West of Rosemead	72	72	72	72	0
Rosemead North of Telegraph	72	72	73	73	0

Table 3.13-8- shows that the maximum noise level increase would be 1 dB at every studied road segment *except Zindell Avenue.* Along Zindell Avenue, the Project would result in an increase of 7 dBA CNEL both in the existing plus project scenario and in the 2040 plus project scenario. While overall exterior noise exposure would remain within the City's

maximum exterior limits, the increase in traffic noise would be clearly noticeable to residents along this block. Project-related traffic noise increases along Zindell Avenue, are therefore, considered potentially significant.

In summary, with the implementation of mitigation measure **MM-NOI-3** during operation of the proposed Project, which would ensure that proper noise controls are incorporated into final building design to avoid elevated mechanical equipment noise on neighboring properties, impacts are considered less than significant with mitigation incorporated. The implementation of mitigation measure **MM-NOI-4** would help ensure that interior noise levels created by Project traffic are not increased inside residences located along Zindell Avenue. However, because the City is not able to ensure acceptance/compliance of a window upgrade offer by property owners, Project-related traffic noise exposure level increases for residences along Zindell Avenue would remain **significant and unavoidable**.

Threshold B: Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Construction (Short-Term) Vibration

For construction vibration, this analysis used FTA thresholds for structural damage (vibration-peak-particle velocities greater than 0.2 inches per second) and FTA's threshold for human annoyance within residences (80 vibration velocity level in decibels (VdB) at residences where people normally sleep, for infrequent events).

During demolition, land clearing, and construction activities for the proposed Project ground-borne vibration would be produced by heavy-duty construction equipment. The most important equipment relative to generation of vibration, and the vibration levels produced by such equipment, is illustrated in Table 3.11.9.

Table 3.11.9. Vibration Velocities for Typical Construction Equipment

Equipment	PPV at 25 Feet (Inches Per Second)	Approximate Ground Vibration Level 25 feet (VdB)
Large Bulldozer	0.089	87
Loaded Trucks	0.076	86
Drill Rig / Auger	0.089	58
Jackhammer	0.035	87
Small Bulldozer	0.003	79

Source: FTA 2006

As shown in Table 3.11.9, use of heavy equipment (e.g., a large bulldozer) generates vibration levels of 0.089 inches per second PPV at a distance of 25 feet. The nearest residences to the Project site would be approximately 15 feet from ground disturbance from structural foundations, and could experience vibration levels of 0.19 inches per second PPV. Vibration levels at these receptors would remain just below the FTA building damage threshold of 0.2 inches per second PPV. A large bulldozer has a vibration level of 87 VdB measured at 25 feet, at the nearest residences (15 feet) this level would be increased to approximately 90 VdB, which is marginally greater than the FTA's threshold of 80 VdB. Vibration between 80 and 90 VdB could be noticeable, but is generally not considered destructive or highly annoying. However, since vibration could exceed the threshold, strict adherence to the daytime only construction schedule be must be followed in order to avoid night-time annoyance associated with vibration. As such, construction-related vibration associated with the proposed Project would result in a potentially significant impact. However, with the implementation of mitigation measures **MM-NOI-1** and **MM-NOI-2** during construction, impacts are considered **less than significant with mitigation incorporated**.

3.11.6 Cumulative Impacts

The cumulative context for traffic noise is the traffic volume increases on roadways within Commerce as a result of buildout of the City's 2020 General Plan and the anticipated increase in traffic volumes along these roadways. The Project traffic analysis considered the addition of traffic trips from cumulative projects as identified by the City.

Non-transportation noise sources (e.g., Project operation) and construction noise impacts are typically project-specific and highly localized (i.e., these do not generally affect the community noise level at distances beyond several hundred feet). Construction activities associated with proposed or future development within the area would contribute to cumulative noise levels, but in a geographically limited and temporary manner. As other development occurs in the area, noise from different types of uses (e.g., traffic, aircraft, and fixed noise sources) would continue to combine, albeit on a localized basis, to cause increases in overall background noise conditions within the area. As a result, such sources do not significantly contribute to cumulative noise impacts at distant locations and are not evaluated on a cumulative level.

The analysis of off-site Project-related traffic noise levels included an evaluation of traffic volumes and resulting roadway traffic noise levels from cumulative projects. Table 3.13-8 shows that the maximum noise level increase for the cumulative versus cumulative plus project scenario would be 1 dB at every studied road segment *except* Zindell Avenue. Along Zindell Avenue, the Project would result in an increase of 7 dBA in the cumulative (2040) plus project scenario. While overall exterior noise exposure would remain within the City's maximum exterior limits, the increase in traffic noise would be clearly noticeable to residents along this block. Project contributions to cumulative traffic noise increases along Zindell Avenue, are therefore, considered potentially significant. Mitigation measure **MM-NOI-4** would help ensure that interior noise levels created by Project traffic are not increased inside residences located along Zindell Avenue. Other roadways would experience less than significant traffic noise increases under existing and cumulative scenarios (with Project). However, because the City is not able to ensure acceptance/compliance of a window upgrade offer by property owners along Zindell Avenue, Project-related traffic noise exposure level increases for residences along Zindell Avenue would remain **significant and unavoidable**. As such, cumulative noise impacts to which the Project would contribute are considered **significant and unavoidable**.

3.11.7 Mitigation Measures

To reduce potential noise impacts, the following mitigation measures shall be implemented:

MM-NOI-1 Construction activities for the Modelo Project shall take place during the permitted time and day per Chapter 19.19.160. of the City's Municipal Code. The applicant shall ensure that construction activities are limited to the hours of 7 a.m. to 10 p.m. Monday through Saturday, and not at all during other hours or on Sundays or public holidays. This condition shall be listed on the final designs for Modelo Project to the satisfaction of the City of Commerce Engineering Department.

MM-NOI-2 The City of Commerce shall require the applicant to adhere to the following measures as a condition of approving the grading permit for the Modelo Project:

- The Project contractor shall, to the extent feasible, schedule construction activities to avoid the simultaneous operation of construction equipment so as to minimize noise levels resulting from operating several pieces of high noise level emitting equipment.

- All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers. Enforcement shall be accomplished by random field inspections by applicant personnel during construction activities, to the satisfaction of the City of Commerce Engineering Department.
- Construction noise reduction methods such as shutting off idling equipment, construction of a temporary noise barrier, maximizing the distance between construction equipment staging areas and adjacent residences, and use of electric air compressors and similar power tools, rather than diesel equipment, shall be used where feasible.
- During construction, stationary construction equipment shall be placed such that emitted noise is directed away from or shielded from sensitive receptors.
- Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted at all construction entrances to allow surrounding property owners to contact the job superintendent if necessary. In the event the City of Commerce receives a complaint, appropriate corrective actions shall be implemented and a report of the action provided to the reporting party.

The following mitigation measure is required in order to address potentially significant mechanical equipment operations noise levels:

MM-NOI-3 Prior to issuance of building permits, the City shall require a detailed noise analysis of the final mechanical equipment specifications to review shielding, enclosures, and/or the location of proposed equipment to verify sound levels will comply with the limits dictated by Chapter 19.19.160. of the City's Municipal Code. It is anticipated that proper screening around roof-mounted equipment would offer sufficient shielding to achieve compliance with the noise ordinance.

The following mitigation is required in order to address potentially significant impacts from traffic noise along Zindell Avenue:

MM-NOI-4 The Project applicant shall offer to upgrade windows on the façades of homes facing Zindell Avenue. Increasing the sound attenuation of these windows would more than offset the increases in traffic noise from Project-generated trips along Zindell Avenue.

3.11.8 Level of Significance After Mitigation

Implementation of the above mitigation measures would reduce the overall potential noise impacts to below a level of significance, except for the increase in Project-related traffic noise exposure level for residences along Zindell Avenue. Mitigation measures **MM-NOI-1** and **MM-NOI-2** would minimize construction noise levels, and ensure that no night-time construction activities occur, thus avoiding the greatest potential for annoyance. Mitigation measure **MM-NOI-1** would also address potential vibration impacts upon sensitive persons, by again avoiding such vibration overnight when neighbors are attempting to relax and sleep. Mitigation measure **MM-NOI-3** ensures proper noise controls are incorporated into final building design to avoid elevated mechanical equipment noise on neighboring properties. Mitigation measure **MM-NOI-4** would ensure that interior noise levels do not increase inside residences located along Zindell Avenue. However, because the City is not able to ensure acceptance/compliance of a window upgrade offer by property owners, Project-related traffic noise exposure level increases for residences along Zindell Avenue would remain **significant and unavoidable**.

3.11.9 References

Caltrans. 1987. *California Vehicle Noise Emission Levels.* Report No. FHWA/CA/TL-87/03. January 1987. http://www.dot.ca.gov/hq/env/noise/pub/CA%20Vehicle%20Noise%20Emission%20Levels.pdf.

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City of Commerce. 2008. *City of Commerce 2020 General Plan*. City of Commerce Planning Department. Adopted January 2008. Accessed December 2019. https://www.ci.commerce.ca.us/DocumentCenter/Home/View/152.

County of Shasta. 2009. *Draft Environmental Impact Report, Knighton & Churn Creek Commons Retail Center*. SCH no. 2009012088.

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SOURCE: Esri, Digitial Globe, Open Street Map

DUDEK

0 175 350 Feet

FIGURE 3.11-1

Noise Measurement Locations

Modelo Project

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3.12 Population and Housing

This section describes the existing population and housing conditions of the Project site and vicinity, identifies associated regulatory requirements, and evaluates potential impacts related to implementation of the proposed Project.

Comments received in response to the Notice of Preparation (see Appendix A) included concerns regarding consistency with regional plans.

Information contained in this section is based on population growth forecast for the Southern California Association of Governments (SCAG) region and the City of Commerce (City). Other sources consulted are listed in Section 3.12.9 References Cited.

3.12.1 Environmental Setting

This section describes the existing conditions on the Project site, presents existing United States (U.S.) Census population data for the City, and identifies population, housing, and employment projections for the City and the SCAG region.

Project Site

The approximately 17.32-acre Project site currently consists of the Veterans Memorial Park and a vacant lot. The Veterans Memorial Park was constructed between 1965 and 1970, and consists of a baseball diamond, two basketball courts, a community center, a parking lot, and miscellaneous outdoor recreational spaces. The vacant lot to the east of Veterans Memorial Park has been vacant since 1988, at which time an industrial structure that was formerly the International Paper (grocery bag) factory was demolished. The vacant lot is paved with asphalt and concrete. There are no residential populations nor housing units currently on the Project site.

United States Census Data

The U.S. Census is taken and published every 10 years and includes population and housing data for the entire U.S. Census data is the baseline from which most demographic projections are calculated. According to the 2000 U.S. Census data, the population of the City was 12,568 persons. In 2010, the population was 12,823 persons, a 2.0% increase from its 2010 population (U.S. Department of Commerce 2019).

Demographic and Growth Forecasts

SCAG is a federally designated Metropolitan Planning Organization for six counties in Southern California, including Ventura, Orange, San Bernardino, Riverside, Imperial, and Los Angeles. SCAG develops long-range regional transportation plans including sustainable communities strategy and growth forecast components, regional transportation improvement programs, regional housing needs allocations, and a portion of the South Coast Air Quality Management District's plans.

SCAG's 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) develops a regional growth forecast, which reflects recent and past trends; key demographic and economic assumptions; and local, regional, and state policies (SCAG 2016a). Table 3.12-1 presents the projected population, housing, and employment forecasts from SCAG's most recent RTP/SCS for the City and the entire SCAG region.

Table 3.12-1. Projected Growth Forecast

	City of Commerce			SCAG Region		
	Year 2020	*Year 2035*	*Year 2040*	*Year 2020*	*Year 2035*	*Year 2040*
Population	13,000	13,400	13,500	19,663,000	22,091,000	22,138,000
Households	3,400	3,500	3,600	6,456,000	7,325,000	7,412,300
Employment	46,900	48,200	49,100	8,414,000	9,441,000	9,871,500

Source: SCAG 2016b

As shown in Table 3.12-1, the City is projected to experience a population growth of 500 persons, an increase in 200 households, and an increase in 2,200 jobs between 2020 and 2040. The SCAG region is projected to experience a population growth of 2,475,000 persons, an increase in 956,300 households, and an increase in 1,457,500 jobs between 2020 and 2040. Thus, the City represents 0.02%, of the projected population growth, 0.02% of the projected households, and 0.15% of the projected jobs in the SCAG region.

In addition to the growth forecast, SCAG prepares a Local Profiles report for each city within the SCAG region about every two years. The Local Profile reports provide a variety of demographic, economic, education, housing, and transportation information for each city. Table 3.12-2 presents the actual 2018 population, 2018 households, and 2017 employment for the City and SCAG Region.

Table 3.12-2. Local Profiles Report for Commerce, CA

	City of Commerce	SCAG Region
2018 Population	13,067	19,145,421
2018 Households	3,384	6,132,943
2017 Employment[1]	53,492	8,465,304

Source: SCAG 2019.

[1] Local Profiles did not provide employment for 2018, and thus, the 2017 employment is listed.

As shown on Tables 3.12-1 and 3.12-2, the City's 2018 population has exceeded the 2020 projected population by 67 persons, the City's 2018 households is below the 2020 projected households by 16 households, and the City's 2017 employment has exceeded the 2020 projected employment by 6,592 jobs. In comparison, the SCAG region's 2018 population is below the 2020 projected population by 517,579 persons, the SCAG region's 2018 households is below the 2020 projected households by 323,057 households, and the SCAG region's 2017 employment has exceeded the 2020 projected employment by 51,304 jobs.

Jobs-to-Housing Ratio

The "jobs-to-housing ratio" measures the extent to which job opportunities in a given geographic area are sufficient to meet the employment needs of areas residents. An area with a jobs-to-housing ratio that is lower than the regional ratio would be considered a "jobs poor" area, indicating that many of the residents must commute to places of employment outside of the area. Alternatively, an area with a jobs-to-housing ratio that is higher than the regional ration would be considered a "jobs rich" area, indicating the majority of persons that have jobs in the City are commuting from outside the City. Table 3.12-3 shows past and future anticipated jobs-to-housing ratios, based on SCAG's 2016–2040 RTP/SCS, for the City and SCAG region.

Table 3.12-3. Projected Jobs-to-Housing Ratios (2020 and 2040)

	Year 2020			Year 2040		
	Jobs	*Households*	*Ratio*	*Jobs*	*Household*	*Ratio*
City of Commerce	46,900	3,400	13.79	49,100	3,600	13.64
SCAG	8,414,000	6,456,000	1.3	9,871,500	7,412,300	1.3

Source: SCAG 2016b

As shown on Table 3.12-3, the City's jobs-to-housing ratio was substantially higher than the SCAG regions' (greater than 10 times the SCAG regions' ratio for Years 2020 and 2040). Thus, the City is considered a "jobs-rich" area. While the City's ratio is expected to decrease in the future, it would still remain a jobs-rich area under the SCAG projections, meaning that enough jobs would continue to be available such that residents would not be required to commute outside the City for employment. However, due to the low housing stock, it is anticipated that employees within the City are not also residents in the City. Further, as shown on Table 3.12-2, the City has exceeded the projected employment for 2020 and is within the current household projections for 2020. Therefore, the jobs-to-housing ratio would likely be higher than projected for 2020 and 2040, resulting in greater numbers of commuters into the City.

3.12.2 Relevant Plans, Policies, and Ordinances

Federal

There are no federal regulations pertaining to population and housing that would apply to the proposed Project.

State

The following state regulations pertaining to population and housing would apply to the proposed Project.

Regional Housing Needs Assessment

A Regional Housing Needs Assessment (RHNA) is mandated by state law as part of the periodic process of updating local housing elements of general plans. The most recently completed SCAG RHNA planning period was January 1, 2006 to June 30, 2014. The fifth cycle RHNA Allocation Plan, which covers the planning period from October 2013 to October 2021, was adopted by the SCAG Regional Council on October 4, 2012. Communities use the RHNA for land use planning; prioritizing local resource allocation; and deciding how to address identified existing and future housing needs resulting from population, employment, and household growth (SCAG 2012). Based on a methodology that weighs a number of factors (e.g., projected population growth, employment, commute patterns, and available sites), SCAG determines quantifiable needs for dwelling units in the region according to various income categories. In its RHNA, SCAG identifies affordable housing needs for the City of Commerce the County of Los Angeles, and the SCAG region as follows: 46 new housing units (City of Commerce), 179,881 new housing units (County of Los Angeles), and 412,137 new housing units (SCAG region) for the 2014–2021 Housing Element Cycle (SCAG 2012).

Regional Transportation Plan/Sustainable Communities Strategy

The RTP/SCS sets broad goals for the region and provides strategies to reduce problems associated with congestion and mobility. In recognition of the close relationship between traffic and air quality issues, the

assumptions, goals, and programs contained in the RTP parallel those used to prepare the Air Quality Management Plan (AQMP) for the South Coast Air Quality Management District. As part of its RTP/SCS document, SCAG develops population and housing forecasts for the SCAG region and for the jurisdictions that make up the SCAG region. Table 3.12-1 presents the projected population, housing, and employment forecasts from SCAG's most recent RTP/SCS for the City and the entire SCAG region.

Local

The following local regulations pertaining to population and housing would apply to the proposed Project.

General Plan

The Housing Element of the City's General Plan designates the location and extent of residential development throughout the City. The Housing Element promotes the development of new housing in certain areas, specifically through a Housing Opportunity Overlay area located along Atlantic Boulevard. According to the Housing Element, nearly all of the land area within the City's boundary was developed prior to the City's incorporation in 1960. Thus, the City has made an effort to provide housing for its growing population. Although redevelopment projects have led to improvements in the quantity and quality of housing, the average household size continues to grow, placing increased pressure on the existing housing stock (City of Commerce 2008).

The Housing Element of the City's General Plan provides objectives, policies, and programs regarding population and housing including the following:

Housing Policies

- To improve the quality of the existing housing stock;
- To provide new housing wherever possible; and
- To ensure the highest possible quality of living for all social and economic groups.

Policy 1-1
The city of Commerce will strive to provide a diverse inventory of housing that meets the needs of those who desire to reside in the city.

Policy 1-2
The city of Commerce will promote the development of a wide range of housing by location, type, and price to meet the existing and future needs of the city.

Policy 1-4
The city of Commerce will promote the development of new housing for low-through upper-income households.

Policy 1-5
The city of Commerce will explore opportunities for new residential development within those areas of the city occupied by vacant, obsolete commercial and industrial uses.

Policy 1-6
The city of Commerce will ensure that housing provided for lower-income level households will not be concentrated in any single area or neighborhood of the city.

Policy 1-7
The city of Commerce will work to ensure that potential sites for residential development, located in those areas that were previously occupied by nonresidential land uses, are investigated to determine whether or not previous on-site uses present potential health risks.

Policy 4-1
The city of Commerce will ensure that new higher-density residential projects are kept at a scale (number of units, height, etc.) compatible in design with adjacent residential areas.

Policy 4-2
The city of Commerce will ensure that those areas developed in higher densities shall be buffered from adjacent lower density residential development with medium density residential development.

Policy 4-3
The city of Commerce will encourage quality construction in new residential development and require all properties to be maintained to the greatest extent possible.

Policy 4-4
The city of Commerce will ensure that new homes are constructed with sufficient separation between the units to promote quality design and privacy.

Policy 4-5
The city of Commerce will ensure that all new housing will have the same standards for design, construction, and maintenance found in more expensive housing.

3.12.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to population and housing are based on Appendix G of the State CEQA Guidelines. Through the analysis in the Initial Study (Appendix A), it was determined that the Proposed Project would not have a substantial adverse impact on displacement of substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere (Threshold B). Accordingly, this issue is not further analyzed in the EIR. Based on the remaining threshold (Threshold A), according to Appendix G of the State CEQA Guidelines, a significant impact would occur if the Project would:

A. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

3.12.4 Methodology

The focus of environmental analysis prepared under CEQA is a project's potential to cause effects on the physical environment. This analysis provides an assessment of the population, households, and employment that would be generated by the proposed Project to gauge whether there could be possible physical impacts from this population growth. The proposed Project's population, households, and employment generation is assessed against growth forecasts for the City.

The Project involves reconstruction of Veterans Memorial Park and an adjacent vacant parcel into a mixed-use development, including public community uses, 850 residential units, and approximately 165,000 square feet of entertainment retail uses. To determine the residential population, SCAG's average household size was used, and

to determine the anticipated employment opportunities, the employment density factors derived from the SCAG employment base was used. According to SCAG's 2016-2040 RTP/SCS, there was an increase in average household size in the SCAG region from 3.0 in 2010 to 3.1 in 2015, but it is anticipated the average household size will decline from 3.1 in 2015 to 3.0 in 2040 (SCAG 2016a). Using a factor of 3.0 persons per household and considering the Project's proposed 850 residential units, the Proposed Project could support a residential population of approximately 2,550 persons.[1] According to SCAG's Employment Density Report, the average square foot per employee in Los Angeles County is 424 square feet per employee for retail (SCAG 2001). Thus, the Proposed Project's 165,000 square feet of retail would generate approximately 390 persons. For the purposes of this assessment, it was determined the proposed Project would generate a residential population of 2,550 persons, 850 units, and 390 jobs. Assuming all employees of the Project moved to the City, the proposed Project would generate a population of 2,940 persons.

3.12.5 Impacts Analysis

Threshold A: Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Construction

The proposed Project consists of the reconstruction of the Veterans Memorial Park and an adjacent vacant parcel into a mixed-use development. The Project would generate part-time and full-time jobs associated with the construction of the Project between the start and end of construction. Construction of the Project is anticipated to commence in May 2020 and would terminate in 2024. However, given the relatively temporary nature of the construction period, the demand for construction employment would likely be met within the existing and future labor market in the City and in Los Angeles County. If construction workers live outside of the City, these workers would likely commute during the temporary construction period. The construction employment generated by the Project is not expected to increase the residential population of the City and would not induce population growth or require permanent housing. Therefore, the Proposed Project's population growth impacts related to construction activities are considered **less than significant**. No mitigation is required.

Operation

As previously discussed in Section 3.12.4, it was determined the proposed Project would generate a residential population of 2,550 persons, 850 units, and 390 jobs. Assuming all employees of the Project moved to the City, the proposed Project would generate a population of 2,940 persons.

Population

Demographic projections developed as part of the SCAG's adopted 2016–2040 include the Project site and regional vicinity. As shown on Table 3.12-1, the City's population is anticipated to increase from 13,000 persons in 2020 to 13,500 persons in 2040, an increase in 500 persons. The SCAG region's population is anticipated to increase from 19,663,000 persons in 2020 to 22,138,000 persons in 2040, an increase in 2,475,000 persons (SCAG 2016b).

[1] The 2,550 persons represents a conservative estimate and assumes that all residents of the proposed Project would be new transplants to the City. Under a more realistic scenario, it is probable that a portion of the proposed Project's residential population will have already been living within the City prior to moving onto the Project site.

Existing City residents could move to the residential units within the proposed mixed-use building upon Project completion. However, for the purposes of a conservative population growth analysis, it is assumed that all 2,550 potential residents would move to the proposed units from a location outside the City, resulting in a population growth of 2,550 people within the City. An additional 2,550 residents would be approximately 19.5% of the City's 2018 population. As described above, SCAG has projected that the City will undergo in increase in 500 people from 2020 to 2040. The proposed Project would exceed this projected growth. Nonetheless, the proposed Project would not exceed the population growth projections for the SCAG region.

Other factors are also taken into consideration in regards to a project's ability to substantially increase population growth. For instance, the removal of impediments to growth (e.g., constructing utility infrastructure and service systems in a previously undeveloped region) can induce growth. However, the proposed Project would not have the potential induce growth via infrastructure development or expansion. The Project site is in a highly urbanized area and is surrounded by a mix of residential, commercial, industrial, and open space land uses. The surrounding area is developed and supported by existing infrastructure. Thus, the proposed Project would include connections to existing utilities and infrastructure and would not result in the extension of infrastructure or roads into an undeveloped area leading to substantial population growth.

Housing

Based on SCAG's growth projections for housing, the proposed Project's 850 dwelling units would represent 42.5% of the 2,000 households projected to be added to the City between 2020 and 2040. As previously discussed in Section 3.12.2, Relevant Plans, Policies, and Ordinances, nearly all of the land area within the City's boundary was developed prior to the City's incorporation in 1960. Thus, the City has made an effort to provide housing for its growing population. Although redevelopment projects have led to improvements in the quantity and quality of housing, the average household size continues to grow, placing increased pressure on the existing housing stock (City of Commerce 2008). As such the City has been experiencing a population growth at a rate that is inconsistent with the rate of housing stock growth. The proposed Project would provide relief to the growing pressure on the existing housing stock, and meet the City's Housing Policies related to improving the quality of the house stock, providing new housing wherever possible, and ensuring the highest possible quality of living for all social and economic groups.

Additionally, the proposed Project would contribute to state-mandated RHNA housing goals and would be consistent with regional efforts to boost housing growth to meet regional housing needs. In its RHNA, SCAG identifies the City, County, and SCAG region's share of housing needs as 46 new units, 179,881 new units, and 412,137 new units, respectively (SCAG 2012).

Employment

As previously discussed in Section 3.12.4, the proposed Project would generate approximately 390 new employees. Based on SCAG's projected employment growth, the proposed Project's 390 employees would represent approximately 17.7% of the 2,200 jobs that the City is expected to add between 2020 and 2040. As such, the proposed project is consistent with the projected employment growth for the City. However, it should be noted that the actual employment rate based on SCAG's Local Profile for the City in 2017 was 53,492. Thus, the City has surpassed its projected employment for 2040 by 4,392 jobs. As such, the Proposed Project would contribute to the City's exceedance of projected employment growth.

Jobs-to-Housing Ratio

The City is considered to be jobs rich, given the jobs-to-housing ratio is substantially higher than the ratio for the SCAG region. The Proposed Project would add 850 residential units and approximately 390 jobs. Since the proposed Project would add more housing units than jobs to the Project site, the proposed Project would lower the City's job-to-housing ration to meet the projected value and provide greater housing opportunities for existing employees within the City. Thus, the Project would positively contribute to the attainment of the jobs-to-housing ratio of 13.64, as identified in Table 3.12-3. In addition, due to the mixed-use nature of the proposed Project, the proposed Project would not cause an imbalance among jobs, housing, and population.

Summary

Once operational, the proposed 850 units associated with the proposed Project would generate approximately 2,550 new residents to the City. The proposed Project would exceed the projected growth for the City between 2020 and 2040. However, the Proposed Project would represent 0.10% of the projected growth for the SCAG region between 2020 and 2040, and thus, is within the SCAG projections. In addition, the Project's 850 residential units would contribute to the City's Housing Element objectives and policies. The proposed Project would also add approximately 390 new employees. Although the City has exceeded its projected employment for 2040 by 4,392 jobs, due to the mixed-use nature of the proposed Project, the proposed Project would not cause an imbalance among jobs, housing, and population.

As further discussed in Section 5, Other CEQA Considerations, the Project site is in a highly urbanized area and is surrounded by a mix of residential, commercial, industrial, and open space land uses. Given the developed nature of the surrounding area the proposed internal roadway network, utility connections, and utility infrastructure would not induce population growth by removal of impediments to growth (e.g., constructing utility infrastructure and service systems in a previously undeveloped region). Further, the proposed Project's infrastructure plan would support the development of the proposed Project, and would not accommodate the growth beyond what is proposed. Any such future proposals would be subject to environmental analysis pursuant to CEQA, and must include the level of detail required for a future project-level review process. Therefore, given the urbanized nature of the City, the proposed Project would not stimulate substantial growth outside of the Plan area. Impacts related to population growth would be **less than significant**. No mitigation is required.

3.12.6 Cumulative Impacts

As defined in the State CEQA Guidelines Section 15130, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, present, and probable future projects within the cumulative impact area for population, housing, and employment. The cumulative study area used to assess potential cumulative population and housing impacts includes the City of Commerce, and the SCAG region because employees of the Proposed Project may live within or outside the City's jurisdictional boundaries.

SCAG's 2016-2040 RTP/SCS services as a regional guide for future development in the counties of San Bernardino, Imperial, Los Angeles, Orange, Riverside, and Ventura. As previously discussed in Section 3.12.5, Impacts Analysis, the Proposed Project would not exceed the SCAG population and housing growth projections for the City; however, the City has exceeded its projected employment for 2040 by 4,392 jobs. As such, the proposed Project would contribute to the City's exceedance of projected employment growth. However, due to the mixed-use nature of the proposed Project, the proposed Project would not cause an imbalance among jobs, housing, and population. Additionally, based on SCAG's growth projections for employment, the proposed Project's

approximately 390 employees would represent 0.03% of the 1,457,500 households projected to be added to the SCAG region between 2020 and 2040. Therefore, the proposed Project would represent a nominal percentage of the overall employment projections for the SCAG region. The proposed Project would contribute to the RHNA housing production targets for the City. Additionally, the proposed Project is consistent with increasing the number of households compared to jobs within the City. Although the proposed Project's employment would exceed the SCAG's employment growth projections for the City, the proposed 850 residential units aims to create a balance of jobs and housing within the City, and help the region meet housing projections. Further, as discussed previously, the Project would not create unplanned growth through extension of roadways or infrastructure. Therefore, the Project would not have the potential to contribute to any cumulative impacts. **Impacts would not be cumulatively considerable**. No mitigation is required.

3.12.7 Mitigation Measures

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

3.12.8 Level of Significance After Mitigation

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

3.12.9 References

City of Commerce. 2008. *City of Commerce 2020 General Plan.* Adopted January 2008. www.ci.commerce.ca.us/DocumentCenter/Home/View/152.

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3.13 Public Services

This section describes the existing public services for the Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Project.

Comments received in response to the Notice of Preparation (see Appendix A) included concerns regarding impacts on fire and emergency services, fire access, compliance with applicable code and ordinance requirements, and availability of sufficient water supplies for firefighting operations.

Information contained in this section is based on the City's General Plan and available online resources. Other sources consulted are listed in Section 3.13.9 References.

3.13.1 Environmental Setting

The approximately 17.32-acre Project site currently consists of the Veterans Memorial Park and a vacant lot. The Veterans Memorial Park was constructed between 1965 and 1970, and consists of a baseball diamond, two basketball courts, a community center, a parking lot, and miscellaneous outdoor recreational spaces. The vacant lot to the east of Veterans Memorial Park has been vacant since 1988, at which time an industrial structure that was formerly the International Paper (grocery bag) factory was demolished. The vacant lot is paved with asphalt and concrete. There are no residential populations nor housing units currently on the Project site.

The Project involves the demolition of the existing Veterans Memorial Park and an adjacent vacant parcel, and the redevelopment of the Project site to accommodate a mixed-use development. The proposed Project would include the construction of 850 residential units, 165,000 square feet of commercial uses, a 77,050-square-foot community center, a 5,000-square-foot museum, and approximately 4.75 acres of parks and open space. The Project site is in a highly urbanized area and is surrounded by a mix of residential, commercial, industrial, and open space land uses. The surrounding area is developed and supported by existing infrastructure and public services that would also serve the proposed Project.

Fire Protection

The Los Angeles County Fire Department (LACFD) provides fire protection services in the Project area. The services offered by the LACFD include firefighting, paramedic and first aid treatment, hazardous material response, lifeguard patrol, forestry management, and emergency preparedness coordination.

LACFD serves 4,087,714 residents in 59 district cities and all unincorporated communities within 2,306 square miles. Nine LACFD Divisions cover the 2,306 square miles of service area, and include 22 Battalions and 174 Fire Stations. LACFD Division IX services the City of Commerce. Additionally, LACFD includes an Air and Wildland Division, Lifeguard Division, Health and Hazardous Materials Division, and a Forestry Division. LACFD is staffed by approximately 3,905 uniformed fire personnel that provide protection and services related to fire prevention, firefighting, emergency medical care, technical rescue, hazardous materials mitigation, disaster response, public education and community service. Additionally, LACFD is staffed by approximately 945 non-sworn administrative support personnel, which provide technical and administrative expertise. In 2017, LACFD responded to 394,585 total incidents, including fire incidents, emergency medical responses, and miscellaneous incidents (LACFD 2017).

There are three fire stations serving City of Commerce residents and businesses including Station 22 located at 928 South Gerhart Avenue; Station 27 located at 6031 Rickenbacker Road; and Station 50 located at 2327 Saybrook Avenue. The nearest station in the City to the Project site is Station 27, located approximately 1.8 miles northwest of the Project site. Table 3.13-1 below outlines the details of the three fire stations in the Project area.

Table 3.13-1. Project Area Fire Resources

Station	Location	Distance to Project Site	Apparatus
Station 22	928 South Gerhart Avenue	Approximately 3.3 miles northwest of the Project site.	Engine 22
Station 27	6031 Rickenbacker Road	Approximately 1.8 miles northwest of the Project site.	Engine 27, Quint 27, Utility 3, Battalion Chief 3, Battalion Chief 527
Station 50	2327 Saybrook Avenue	Approximately 2.1 miles north of the Project site.	Squad 50, Engine 50

Source: FireDepartment.net 2015

The LACFD has several standards to maintain adequate fire protection within their service area. The current standards for response times are: 5 minutes or less for response times for urban areas; 8 minutes or less for suburban areas; and 12 minutes or less for rural area (County of Los Angeles 2014). The City of Commerce General Plan has adopted a response time objective of 5 minutes or less for all in-City emergency incidents (City of Commerce 2008).

According to the California Department of Forestry and Fire Protection's Fire Hazard Severity Zones maps, the entire City of Commerce and the Project site is neither moderately, highly, or very highly susceptible to fire (CAL FIRE 2019).

Police Protection

The Los Angeles County Sheriff's Department (LASD) provides police protection services in the Project area. The LASD serves an area totaling approximately 4,084 square miles with a population of almost 10 million people. It is the largest Sheriff's Department in the world, with approximately 18,000 employees. LASD provides general law enforcement services to 42 contract cities, 141 unincorporated communities, 216 facilities, hospitals, and clinics located throughout the County, nine community colleges, the Metropolitan Transit Authority, and 37 Superior Courts. LASD also provides services such as laboratories and academy training to smaller law enforcement agencies within the County. Additionally, LASD is responsible for securing approximately 18,000 inmates daily in 7 custody facilities, which includes providing food and medical treatment (LASD 2017).

The LASD has established an optimal service response time of 10 minutes or less for emergency response incidents (a crime that is presently occurring and is a life or death situation), 20 minutes or less for priority response incidents (a crime or incident that is currently occurring but which is not a life or death situation), and 60 minutes or less for routine response incidents (a crime that has already occurred and is not a life or death situation). These response times represent the range of time required to handle a service call, which is measured from the time a call is received until the time a patrol car arrives at the incident scene (County of Los Angeles 2014). As stated above, the City of Commerce General Plan has adopted a response time objective of 5 minutes or less for all in-City emergency incidents (City of Commerce 2008).

The City of Commerce has utilized the services of the LASD since incorporation. The closest Sheriff's Department to the Project site is the East Los Angeles Station, located approximately 4.8 miles northwest at 5019 East 3rd Street within the City of Los Angeles (City of Commerce 2008).

Schools

The City is served by the Montebello Unified School District (District). The District is composed of 18 elementary schools, 6 intermediate schools, 3 high schools, 4 adult schools and 1 continuation high school. It serves a student population of more than 35,500 Kindergarten through 12th grade (K-12) students and 34,000 adult students, and employs approximately 1,500 classified and 1,900 certificated employees. The District is located about 10 miles east of downtown Los Angeles and encompasses all of the Cities of Montebello and Bell Gardens and portions of the Cities of Monterey Park, Commerce, Pico Rivera, East Los Angeles and South San Gabriel (Montebello Unified School District 2019).

Elementary and Intermediate schools within the City of Commerce include Rosewood Park School (K-8th grade) located approximately 2.6 miles northwest of the Project site at 2353 S Commerce Way; and Bandini Elementary (K-5th grade) located approximately 3.2 miles northwest of the Project site at 2318 Couts Avenue. There are no high schools located within the City of Commerce. The District's grade schools located within a 4-mile radius of the Project site are outlined in Table 3.13-2 below. Suva Elementary School, Suva Intermediate School, and Bell Gardens High School are the closest K-12 schools to the Project site.

Table 3.13-2. Schools in the Project Area

School	Location	Distance from Project Site	Enrollment[a]
Elementary Schools			
Rosewood Park School	2353 S Commerce Way, Commerce	2.6 miles northwest	788
Bandini Elementary	2318 Couts Avenue, Commerce	3.2 miles northwest	391
Bell Gardens Elementary	5620 Quinn Street, Bell Gardens	2.5 miles southwest	965
Cesar Chavez Elementary	6139 Loveland Street, Bell Gardens	1.6 miles west	916
Fremont Elementary	200 Madison Avenue, Montebello	3.1 miles northeast	371
Garfield Elementary	7425 S Garfield Avenue, Bell Gardens	1.6 miles southwest	667
Greenwood Elementary	900 S Greenwood Avenue, Montebello	1.7 miles north	875
Joseph A. Gascon Elementary	630 S Leonard Avenue, Los Angeles	3.4 miles north	722
La Merced Elementary	724 N Poplar Avenue, Montebello	3.8 miles northeast	791
Montebello Gardens Elementary	4700 Pine Street, Pico Rivera	3.2 miles northeast	308
Montebello Park Elementary	6300 Northside Drive	2.9 miles north	490
Suva Elementary	6740 East Suva Street, Bell Gardnes	1.0 mile west	885
Washington Elementary	1400 W Madison Avenue, Montebello	3.0 miles north	886
Wilcox Elementary	816 Donna Way, Montebello	3.6 miles north	580
Winter Gardens Elementary	1277 S Clela Avenue, Los Angeles	3.6 miles northwest	576
Intermediate Schools			
Bell Gardens Intermediate	5841 Live Oak Street, Bell Gardens	2.1 miles west	1,155
Eastmont Intermediate	400 N Bradshawe Avenue, Montebello	3.7 miles north	747
La Merced Intermediate	215 E Avenida de La Merced, Montebello	3.9 miles northeast	1,091
Montebello Intermediate	1600 Whittier Boulevard, Montebello	2.7 miles north	967
Suva Intermediate	6660 East Suva Street, Bell Gardens	1.1 miles west	885

Table 3.13-2. Schools in the Project Area

School	Location	Distance from Project Site	Enrollment[a]
High Schools			
Applied Technology Center (ATC)	1200 W. Mines Avenue, Montebello	2.3 miles north	520
Bell Gardens High School	6119 Agra Street, Bell Gardens	1.6 miles west	2,628
Montebello High School	2100 W Cleveland Avenue, Montebello	2.9 miles north	2,397
Schurr High School	820 Wilcox Avenue, Montebello	3.8 miles north	2,723

Source: Montebello Unified School District 2019b; GreatSchools 2019
Note:
[a] Enrollment is based on data provided at GreatSchools.org

Parks

A portion of the Project site currently consists of the Veterans Memorial Park, which was constructed between 1965 and 1970, and consists of a baseball diamond, two basketball courts, picnic shelter, a children's wading pool, a playground, a community center, a parking lot, and miscellaneous outdoor recreational spaces. Veterans Memorial Park is one of four neighborhood parks in the City.

Bristow Park, located at 1466 S. McDonnell Avenue, offers outdoor activities such as organized youth sports in basketball, flag football, soccer, softball, and volleyball. Bristow Park also offers picnic shelters, playgrounds and a children's wading pool open during the summer. Bristow Park is located approximately 3.7 miles northwest of the Project site.

Rosewood Park, located at 5600 Harbor Street, offers outdoor activities such as organized youth sports in basketball, flag football, soccer, softball, and volleyball. Facilities at Rosewood Park include picnic shelters, playgrounds, and a community center, which offers recreational programs and activities for all age levels. Rosewood Park is located approximately 2.7 miles northwest of the Project site.

Bandini Park and Batres Community Center, located at 4725 Astor Avenue, offers recreational programs and activities for all age levels. Activities include a preschool program, children and adult arts and crafts, an after-school recreational program, ceramics, exercise and a variety of organized youth programs. The community center has a kitchen and meeting area, which is available for authorized use for parties and other social occasions. Bandini Park offers outdoor activities such as organized youth sports, playgrounds, a children's wading pool and picnic shelters. Bandini Park is located approximately 3.6 miles northwest of the Project site (City of Commerce 2019).

Additionally, located just outside of the City limits, Treasure Island Park in the City of Downey is located 0.25 mile southwest of the Project site; and Bell Gardens Park, and John Anson Ford Park in the City of Bell Gardens are located 1.2 and 1.8 miles southwest of the Project site, respectively.

3.13.2 Relevant Plans, Policies, and Ordinances

Federal

There are no federal regulations, plans, or standards related to public services that are relevant to the Project.

State

California Code of Regulations Title 24, Part 2, and Part 9

The 2016 California Building Standards Code was published July 1, 2016, with an effective date of January 1, 2017. Part 2 of Title 24 of the California Code of Regulations (CCR) refers to the California Building Code, which contains regulations and general construction building standards of state agencies, including administrative, fire, and life safety, and field inspection provisions. Part 2 was updated in 2017 to reflect changes in the base document from the Uniform Building Code to the International Building Code. Part 9 refers to the California Fire Code, which contains fire-safety-related building standards referenced in other parts of Title 24. This code is preassembled with the 2000 Uniform Fire Code of the Western Fire Chiefs Association. This code was revised in January 2017 with a change in the base model/consensus code from the Uniform Fire Code series to the International Fire Code.

California Fire Code

The California Fire Code and Office of the State Fire Marshal provides regulations and guidance for local agencies in the development and enforcement of fire safety standards. The California Fire Code also establishes minimum requirements that would provide a reasonable degree of safety from fire, panic, and explosion (24 CCR 9).

Senate Bill 50 School Financing and Mitigation Requirements

Currently, school financing and developer mitigation obligations are governed by SB 50 (Government Code Section 65995 et seq.), which was passed in 1998 and has been amended several times since then. SB 50 was enacted to provide comprehensive school facility finance and mitigation reform, which assists in providing school facilities to serve students generated by new development projects. SB 50 allows school districts to collect school facilities fees from developers of new residential and commercial/industrial building space.

SB 50 substantially revamped prior statutory and regulatory methods of providing state monies for school construction by eliminating the apportionment of state funds method used by the State Allocation Board (SAB) under the old system originally enacted as part of the Leroy F. Greene State School Building Lease Purchase - Law of 1976 and replacing it with the Leroy F. Greene School Facilities Act of 1998. SB 50, among other things, established a new state program by which the SAB provides state per-pupil grant funding for new school facilities construction and reconstruction, as well as modernization of existing facilities. An important objective of SB 50 was to provide, on a one-time basis, a baseline analysis of unhoused students and existing capacity in a local school district's school facilities to determine eligibility for new state school construction funding. In addition to providing 50% of the state funding and construction costs, which include construction cost containment mechanisms through limitations on the state per-pupil grant amounts (grant amounts are adjusted annually by the SAB to reflect construction cost changes), the state also provides funding for 50% of the site acquisition and site development costs for a school site.

SB 50 specifically provides that it is the exclusive method for financing school facilities, and provides the methods for mitigating environmental effects related to the adequacy of school facilities. Nevertheless, school districts and developers may enter into separate mitigation agreements to provide enhanced mitigation measures beyond the requirements of SB 50. SB 50 establishes three levels of developer fees that can be imposed upon new development that are deemed to be "full and complete facilities mitigation."

The school fees that are charged towards new residential development is a State mandate and are beyond the City's control. The Montebello Unified School District levies a school development fee for residential construction.

For new residential construction and additions to existing residences where the value of the increase space is $20,000 or more, the fee is $1.56 per square-foot of new construction (City of Commerce 2008).

Comprehensive School Safety Plan

It is the intent of the Comprehensive School Safety Plan that all California public schools that offer kindergarten and/or grades 1 through 12 are inclusive and are operated by school districts, and develop a comprehensive school safety plan that addresses the safety concerns identified through a systematic planning process. The schools must work in cooperation with local law enforcement agencies, community leaders, parents, pupils, teachers, administrators, and other persons who may be interested in the prevention of campus crime and violence (California Education Code, Title 1, Section 32280).

Quimby Act

Cities and counties have been authorized since the passage of the 1975 Quimby Act (California Government Code, Section 66477) to pass ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park improvements. Revenues generated through the Quimby Act cannot be used for the operation and maintenance of park facilities. The goal of the Quimby Act is to require developers to help mitigate the impacts of property improvements. The act gives authority for passage of land dedication ordinances only to cities and counties. Special districts must work with cities and/or counties to receive parkland dedication and/or in-lieu fees. The fees must be paid and land conveyed directly to the local public agencies that provide park and recreation services communitywide. Cities and counties with a high ratio of park space to inhabitants can set a standard of up to five acres per 1,000 people for new development. Cities and counties with a lower ratio can only require the provision of up to three aces of park space per 1,000 people. The calculation of a city or county's park space to population ratio is based on a comparison of the population count of the last federal census to the amount of city/county-owned parkland.

Local

The following local/regional regulations pertaining to public services would apply to the proposed Project.

City of Commerce General Plan

The City of Commerce General Plan contains goals, objectives, and policies that are intended to guide land use and development decisions in the future. The Safety Element of the City's General Plan provides objectives, policies, and programs regarding health and safety, and public services, including the following:

Emergency Services: Fire

Safety Policy 1.1

The City of Commerce will strive to respond to all in-City emergency incidents within a five-minute or less response time.

Safety Policy 1.2

The City of Commerce will continue to support the efforts of the fire department in the prevention and suppression of fires.

Safety Policy 1.3

The City of Commerce will ensure that the public and private water distribution and supply facilities have adequate capacity to meet both the domestic supply needs of the community and the required fire flow,

Safety Policy 1.6

The City of Commerce will ensure that the Fire Department will be included in the environmental review of any large development to ensure that fire prevention and suppression features have been considered in the overall design.

Emergency Services: Law Enforcement

Safety Policy 2.1

The City of Commerce will ensure that law enforcement services continue to meet the public safety needs of the community.

Safety Policy 2.4

The City of Commerce will require defensible space designs in all new developments.

Safety Policy 2.5

The City of Commerce will encourage existing developments to practice crime prevention by providing outdoor lighting, maintaining low-level landscaping, and supplying private on-site security patrols or security systems.

City of Commerce Municipal Code

Chapter 3.20 of the City of Commerce Municipal Code covers Fire Service fees. The City council declares that a fire protection service fee shall be established and assessed upon all owners of real property within the City for the purpose of producing revenue to maintain sufficient fire service levels. The Project would be required to comply with the City's fire protection service fee.

County of Los Angeles Fire Code (Title 32)

County programs for wildland fire prevention include the adoption of the State Fire Code for regulations and standards to be applied toward new development in "hazardous fire areas." Fire prevention items addressed in the County Fire Code include provision of fire apparatus access roads, adequate road widths, all-weather access requirement, fire flow requirement, fire hydrant spacing, and clearance of brush around structures located in hillside areas that are considered primary wildland fire risk areas (County of Los Angeles 2014).

County of Los Angeles Developer Fee Program

In response to increasing demands for new facilities, equipment, and staffing created by new development, the County has implemented a Developer Fee Program to fund the purchase of fire station sites, the construction of new stations, and the funding of certain capital equipment in the high-growth areas of Los Angeles County. The developer fees are paid to the Consolidated Fire Protection District of Los Angeles County (Fire District). This Fire District developer fee is adjusted annually and is charged on all new development, including residential buildings,

new detached residential accessory structures, new commercial buildings, and new additions over 2,000 square feet prior to building permit issuance (County of Los Angeles 2014).

Los Angeles County Code Section 21.24.340, 21.24.350, and 21.28.140

Los Angeles County Code Section 21.24.340 (Residential Subdivisions, Local Park Space Obligation, Formula) contains the methodology used to determine the amount of parkland required to be dedicated by the subdivider as a part of the subdivision map approval process. In accordance with Section 21.28.140, the developer may also choose to pay a fee in-lieu of the provision of parkland. Additionally, the developer may choose to provide less than the required amount of parkland, but develop it with amenities equal to the value of what the in-lieu fee would be. In order to determine the local park space obligation for a subdivision, a formula is used, which considers the number of dwelling units in the subdivision, the average household size by Park Planning Area (PPA) (which differs for single family, multifamily, and mobile home developments as well as by PPA), and the adopted ratio of three acres of parkland per 1,000 residents, per the Quimby Act. However, it should be noted that, as discussed in the Existing General Plan, as a condition of zone change approval, General Plan amendment, specific plan approval, or development agreement, the County may require a subdivider to dedicate land according to the General Plan goal of four acres of local parkland per 1,000 residents, and six acres of regional parkland per 1,000 residents.

Once the local park space obligation is determined, County Code Section 21.24.350 (Residential Subdivisions, Provision or Local Park Sites) contains regulations pertaining to the siting of park facilities as well as provisions that give the option to subdividers of 50 units or less to choose to provide the obligatory amount of parkland, any excess of which would be credited to the subdivision, or otherwise allow any remaining obligation to be satisfied by the payment of park fees in accordance with the provisions of Section 21.28.140. Additionally, since only the portions of the land dedicated for parkland that are suitable for park use can be counted against the obligation of the subdivider, attributes of the park space including the slope of the site are used to determine the amount of land which can be counted against the subdivider's obligation. For example, for the portions of the site in excess of 20 percent slope, only 10 percent of the acreage will be counted against the subdivider's obligation whereas all of the land that is less than three percent slope can be counted towards the obligation.

Section 21.28.140 (Park Fees Required When, Computation and Use) contains provisions regarding the payment of in-lieu fees for any portion of the dedication obligation not satisfied by the subdivider. These fees would be enforced as a condition of approval on the final approval of the subdivision. The in-lieu fee is determined by multiplying the amount of park space not satisfied by the representative land value for the appropriate PPA. This section also makes it the responsibility of the Los Angeles County Department of Parks and Recreation (DPR) to develop a schedule specifying how, when, and where it will use the land or fees, or both, from each subdivision to develop park or recreational facilities within the applicable PPA.

3.13.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to public services are based on Appendix G of the State CEQA Guidelines. Through the analysis in the Initial Study (see Appendix A), it was determined that the proposed Project could have a potentially significant impact to public services. Accordingly, all of the thresholds are further analyzed in the EIR. According to Appendix G of the State CEQA Guidelines, a significant impact related to public services would occur if the Project would:

A. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which

could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

I. Fire protection.
II. Police protection.
III. Schools.
IV. Parks.
V. Other public facilities.

3.13.4 Methodology

The analysis herein is based on information provided in the City's General Plan, the Los Angeles County General Plan Update Environmental Impact Report, and available information and data provided on websites including, but not limited to, the Los Angeles County Fire Department, the Los Angeles County Sheriff's Department, Montebello Unified School District, and the City of Commerce.

3.13.5 Impacts Analysis

Threshold A: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

Fire protection?

The proposed Project would involve redeveloping the Project site into a revitalized multi-use site with 850 dwelling units, commercial retail space, and park space. As described above, there are three fire stations in the City available to serve the Project within a 4-mile radius, the closest being LACFD Station 27, located approximately 1.8 miles northwest of the Project site at 6031 Rickenbacker Road.

Buildout of the proposed Project would increase population and housing within the Project area and on the Project site when compared to existing conditions. The increase in 2,550 residences and approximately 390 jobs would generate a population of 2,940 persons as a result of Project implementation. In 2019, LACFD dispatchers received approximately 403,000 calls, or approximately 1,105 average daily calls (LACFD 2020). As stated in Section 3.13.1 above, LACFD serves 4,087,714 residents. Based on LACFD's annual call data for calendar year 2019, the average call for service per resident in the service area is approximately 0.10. Therefore, it is estimated that the Project could generate approximately 290 calls for service annually. The addition of 290 calls per year is not anticipated to affect the existing service ratio, or the LACFD's response time of 5 minutes or less for urban areas.

Additionally, although the increase in population would increase the demands on LACFD to provide fire protection and emergency services, existing City and County policies and regulations are intended to reduce impacts associated with fire protection facilities. Specifically, Chapter 3.20 of the City of Commerce Municipal Code, and the County of Los Angeles Developer Fee Program, which produce revenue to maintain sufficient fire service levels.

The Project site is located in an urbanized area, immediately surrounded by single-family residences, multi-family residences, and commercial development. The Project site is accessible off the Interstate 5 (I-5)/Santa Ana Freeway, and off the State Route 710 (SR-710)/Long Beach Freeway via Gage Avenue. It should be noted that the

proposed Project site, and the entire City of Commerce is not located in a moderately, highly, or very highly susceptible area to fire (CAL FIRE 2019). Although increased intensities are proposed, the Project site is in an existing urban area with a low fire hazard. As such, implementation of the proposed Project is not likely to expose proposed structures or people to substantial fire risk.

Prior to construction, LACFD will review the development plans to ascertain the nature and extent of any additional requirements. Compliance with Fire Code requirements and the approval of the installation plan by the LACFD would mitigate any potential impacts to fire services. Additionally, the proposed Project applicant would be required to pay a development impact fee, which includes funding of additional resources for fire services, to off-set any potential impacts to response times as a result of Project development. Once operational, the proposed Project would be periodically inspected by LACFD. As such, redevelopment of the Project site would not necessitate the construction of new fire facilities or expansion of existing facilities to serve the Project. Therefore, impacts related to fire protection services would be **less than significant**. No mitigation is required.

Police protection?

The LASD contracts with the City to provide police protection. The nearest first response station to the Project site is the East Los Angeles County Sheriff's Station, located approximately 4.8 miles northwest of the Project Site at 5019 East 3rd Street within the City of Los Angeles. As described above, the Project site is located in an urbanized area, immediately surrounded by single-family residences, multi-family residences, and commercial development. The Project site and surrounding area are currently being served by the LASD.

Currently, the City has established a law enforcement service level that requires 20 Deputy Sheriff's to be assigned to patrol duties. These deputies currently service an area that includes approximately 12,947 residents (as of the 2017 US Census Bureau). This equates to a staffing density of 1.54 Deputies per 1,000 residents in the City. Implementation of the Project would result in an increase in the number of employees, residents, and park users on-site, which could increase the demand of police protection in the area. Considering the increase of approximately 2,550 residents on-site, as well as the generation of approximately 390 jobs, the patrol staffing for the City would have to increase by four (4) Deputy Sheriffs to maintain the current level of service provided to the rest of the City. This increase would result in a staffing density of 1.55 Deputies per 1,000 residents (Pers. Comm. Lieutenant Chadwick, 2019a).

Additionally, the number of service calls for police protection would increase as a result of Project implementation. Based on LASD's call data for calendar year 2018, the East Los Angeles Sheriff's Station responded to a total of 11,467 calls for service, which is an average of 0.88 call for service per resident in the service area. Using this 2018 call data, it is estimated that the Project could generate approximately 2,214 calls for service annually (Pers. Comm. Lieutenant Chadwick, 2019b).

LASD staff has indicated that an officer-to-population ratio of one officer to every 1,000 residents provides the desired level of service for its service area. This ideal standard typically is applied in EIRs for the proposed projects that are served by the Los Angeles County Sheriff's Department as a means to develop a rough assessment of the Project's impacts on law enforcement services (County of Los Angeles 2014). Implementation of the Project would result in construction of residences, and non-residential uses including commercial, retail, and open space areas. LASD would continue to provide general law enforcement for the Project site and Project area. The number of people at the Project site would substantially increase as a result of proposed residences and commercial use, in compared to existing conditions. Although an additional four Deputy Sheriffs (as calculated above) would be required to serve the Project and maintain the current level of service in the City, the addition of 4 new officers is not anticipated to result in the expansion or construction of new facilities.

Operational funding for LASD is derived from various types of tax revenue which are deposited in the County's General Fund. The County Board of Supervisors then allocates the revenue for various County-provided public services, including to LASD to maintain staffing and equipment levels to adequately serve Project-related increases in service-call demands (County of Los Angeles 2014). Provided that East Los Angeles County Sheriff's Station is able to maintain a sufficient staff level through the County's General Fund, to service the proposed Project and the City's current level of service, significant impacts to law enforcement are not anticipated. The addition of four Deputy Sheriffs at the East Los Angeles County Sheriff's Station is not anticipated to result in the construction of new police facilities or expansion of existing facilities to serve the Project. Therefore, impacts related to police protection services would be **less than significant**. No mitigation is required.

Schools?

The City is served by the Montebello Unified School District. The need for new school facilities is typically associated with a population increase that generates an increase in enrollment large enough to cause schools to be constructed or existing schools to be expanded. Based on the California Department of Education, Office of Public School Construction student generation rate of 0.7 student per housing unit (K-12), approximately 595 of the 2,550 Project residents would be students in grades K-12 (850 proposed units x 0.7 student generation rate = 595 students) (County of Los Angeles 2014). The Project's generation of approximately 595 students could result in an increase in school enrollment. However, it should be noted that not all of the estimated 595 students would be new to the Montebello Unified School District, as some students that would reside in the proposed housing units may be currently living within the District boundary and enrolled in a school within the District.

Dr. Martinez, Superintendent of Montebello Unified School District confirmed that all schools in the District, including elementary, intermediate and high schools closest to the Project, are currently under capacity and would be able to adequately serve the proposed Project (Pers. Comm. Dr. Martinez, 2019). Dr. Martinez provided a service letter for the proposed Project on December 18, 2019, outlining the schools considered to serve the Project, including Suva Elementary, Suva Intermediate, and Bell Gardens High School (Montebello Unified School District, 2019c).

Per state law, development projects are required to pay established school impact fees in accordance with SB 50 at the time of building permit issuance. 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 acct… on the provision of adequate school facilities" (Government Code Section 68998[h]). The fees authorized for collection under SB 50 are conclusively deemed full and adequate mitigation of impacts on school district facilities. Therefore, the Project would be subject to payment of applicable SB 50 fees, and the increase in demand for school facilities due to implementation of the proposed Project would be **less than significant**. No mitigation is required.

Parks?

As described in Section 3.13.1 above, the approximately 17.32-acre Project site currently consists of the Veterans Memorial Park and a vacant lot. The Veterans Memorial Park was constructed between 1965 and 1970, and consists of a baseball diamond, two basketball courts, a community center, a parking lot, and miscellaneous outdoor recreational spaces. Due to the age of Veterans Memorial Park, the utility of the improvements made are deteriorating and the outdoor recreational spaces are aging. In addition, the existing community center has been shuttered due to structural and safety issues, and temporary trailers are used in lieu of the community center. Over time, much of the ground surface at the Veterans Memorial Park, which is sitting atop the landfill material from 1954, has settled over the weight of different types of debris.

The increase in on-site population of 2,550 residences, lack of availability of the existing Veteran's Park during Project construction, and reduction in existing park space could result in the increased demand for recreational facilities, which has the potential to result in the deterioration of existing facilities. Due to the City's largely industrial character, as well as the City being built out, there is a lack of parkland and recreational facilities to provide amenities for those living and working in the City.

As described above, Veterans Memorial Park is one of four neighborhood parks in the City. The other three parks in the City include Bristow Park, Rosewood Park, and Bandini Park. All of the City's parks offer outdoor activities such as organized youth sports in basketball, flag football, soccer, softball, and volleyball. Additionally facilities at City parks include picnic shelters, playgrounds, community centers, recreational programs and activities for all age levels. Additionally, located just outside of the City limits, Treasure Island Park in the City of Downey and Bell Gardens Park, and John Anson Ford Park in the City of Bell Gardens are located just 1.2 and 1.8 miles southwest of the Project site, respectively. All of the parks within the City and the surrounding communities would be available for use during construction of the Project.

The Project involves the demolition of the existing Veterans Memorial Park and an adjacent vacant parcel, and the redevelopment of the Project site to accommodate a mixed-use development. The proposed Project would include the construction of 850 residential units, 165,000 square feet of commercial uses, a 77,050-square-foot community center, a 5,000-square-foot museum, and approximately 4.75 acres of parks and open space. The proposed revitalized park and open space would include 10,000 square feet of open green space, 20,000 square feet of children's playground area, 50,000 square feet of youth sports fields, a 3,600 square foot grass amphitheater, and 5,000 square feet of benches and stands. An objective for parkland development in the City's General Plan is to continue to maintain or exceed a parkland standard of one acre per 2,500 persons. The proposed Project would provide 4.75 acres of park and open space area, which would adequately serve the Project's 2,550 residents, and residents in the Project area.

Part of the proposed Project is to provide a revitalized Veterans Memorial Park with new structures, an all-inclusive playground, a contemporary soccer and baseball youth sports complex, a contemporary library, and ample outdoor green space to maximize opportunities for community events and services. Additionally, the Project would remediate the former on-site landfill to provide a safer environment for future park visitors, as well as residents living in the City. As such, since the Project is redeveloping a deteriorating park space with improved park and open space area of sufficient acreage to meet the City's parkland development objective, the Project would not require additional expansion of existing facilities or construction or new facilities. Therefore, impacts would be **less than significant**. No mitigation is required.

Other public facilities?

Other public facilities and services provided within the City include library services and City administrative services. An increase in demand for both library services and the City administrative services is generally associated with additional residential housing. Libraries within the City include Bandini Library located approximately 3.1 miles northwest of the Project site at 269 S. Atlantic Boulevard; Bristow Library located approximately 3.7 miles northwest of the Project site at 1466 McDonnell Avenue; Rosewood Library located 2.6 miles northwest of the Project site at 5655 Jillson Street; and Veterans Library located 0.25 mile northwest of the Project site at 6134 Greenwood Avenue. All four of these libraries within the City are ADA Accessible, offer homework help, and have public computers with internet access.

These libraries could experience a slight increase in use due to the anticipated increase of approximately 2,550 residents; however, due to the availability of libraries in the City, surrounding communities, schools, and the County's library system made up of 86 libraries available to the public, the increase in use on any one library is not anticipated to be substantial. Additionally, the County has devised library facilities mitigation fee programs, in which residential projects are required to remit payment pursuant to the County-wide program to account for library-related construction and acquisition costs. The Project would be subject to applicable library facilities fees. Therefore, the Project would not require the expansion of existing facilities or construction of new facilities, and impacts would be **less than significant**. No mitigation is required.

3.13.6 Cumulative Impacts

As defined in the State CEQA Guidelines Section 15130, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, present, and probable future projects within the cumulative impact area for population, housing, and employment. The cumulative study area used to assess potential cumulative population and housing impacts includes the City of Commerce, LACFD and LASD service areas, and Montebello Unified School District. Cumulative impacts on public services including fire and police protection, parks, and schools would result when projects collectively increase demand on services such that additional facilities or services must be constructed or provided. Cumulative projects would likely result in an incremental increase in the demand for fire protection, police protection, parks, schools (for cumulative projects that have a residential component), and other public services. Because the City is nearly built out, the proposed Project and all cumulative projects are located in areas currently served by LACFD, LASD, and Montebello Unified School District.

Fire Protection

Cumulative growth within the County could result in a need for additional fire protection services to serve new development. Cumulative projects proposed, such as commercial, residential, or industrial projects would require fire protection services from fire agencies within the region. While the majority of cumulative projects involve discretionary actions, and therefore would be required to demonstrate compliance with CEQA/NEPA prior to Project approval, they would incrementally increase the need for fire services. However, these impacts would be mitigated through the City's fire service fee, and/or the County's Developer Fee Program to fund the purchase of fire station sites, the construction of new stations, and the funding of certain capital equipment and compliance with the County Fire Code. Therefore, no significant cumulative impact to fire protection services are anticipated.

Police Protection

The increase in demand for law enforcement services from implementation of cumulative projects would have the potential to result in the need to construct or expand existing police facilities, which would have the potential to create an adverse impact on the environment. While the majority of cumulative projects require discretionary actions and would be required to demonstrate compliance with CEQA and/or NEPA prior to Project approval, they would incrementally increase the need for law enforcement services, which would have the potential to result in a significant cumulative impact. Operational funding for the Sheriff's Department and the police departments serving cities in Los Angeles County is derived from various types of tax revenue, which are deposited in the General Fund. Provided that staff and facilities are expanded to serve future development in the Project area and surrounding cities, no significant cumulative impact to law enforcement are anticipated.

Schools

The increase in student population as a result of the proposed Project and cumulative residential projects could require the construction or expansion of school facilities. While the majority of cumulative projects require discretionary actions, they would incrementally increase the need for school facilities. However, as discussed above in section 3.13.5, under state law, development projects are required to pay established school impact fees in accordance with SB 50 at the time of building permit issuance. Therefore, the increase in the demand for school facilities and services due to cumulative development would be adequately mitigated to a less than significant level by the payment of SB 50 fees.

Parks

Buildout of the Project along with cumulative projects would increase use of existing local and regional parks, and could result in the accelerated deterioration of recreational facilities. However, the deterioration that would occur to local parks and recreational facilities from regional population growth may be offset with funding from new development such as in-lieu fees for parks or donation of parkland pursuant to the Quimby Act. Cumulative projects would be required to demonstrate compliance with CEQA and/or NEPA prior to Project approval, and existing federal, state, and local regulations related to parks and recreational facilities would mitigate potential adverse impacts to the environment that may result from the expansion of such facilities. Therefore, the Project would not result in a cumulatively considerable contribution to a significant cumulative impact to park facilities.

Libraries

Future cumulative development would generate new tax revenues, as noted above, which act as funding sources for County and city libraries. Additionally, in order to minimize potentially adverse effects, the County has devised library facilities mitigation fee programs, and future projects would be required to remit payment pursuant to the County-wide program to account for library-related construction and acquisition costs. Requiring payment of the library facilities fee in effect would mitigate cumulative impacts on the County library system to a less-than-significant level, and therefore, not cumulatively considerable.

Therefore, the Project's contribution is **less than cumulatively considerable**, as the Project is required to fund its fair share of an established fee program designed to alleviate the cumulative impact. As such, a potential cumulative impact to fire services, police protection, schools, parks, and other public facilities would not occur. No mitigation is required.

3.13.7 Mitigation Measures

Impacts would be **less than significant**. No mitigation measures are required.

3.13.8 Level of Significance After Mitigation

Impacts would be less than significant.

3.13.9 References

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3.14 Recreation

This section describes the existing recreational conditions of the Project site and vicinity, identifies associated regulatory requirements, and evaluates potential impacts related to implementation of the proposed Project.

Comments received in response to the Notice of Preparation (see Appendix A) included concerns regarding impacts on the existing park and open space use, youth and City activities held at Veterans' Park, removal of existing park amenities in the proposed design, limited (walkable) access to other recreational spaces during Project construction, and lack of existing recreational uses in the Project area.

Information contained in this section is based on the City's General Plan and available online resources. Other sources consulted are listed in Section 3.14.9 References.

3.14.1 Environmental Setting

This section describes the existing recreational conditions in the Project area and also identifies the resources that could be affected by the proposed Project. Because of the City's largely industrial character, the City stresses the need for more parkland and recreational facilities as a means to provide amenities for those living and working in the City. The Project site is in a highly urbanized area and is surrounded by a mix of residential, commercial, industrial, and open space land uses.

A portion of the Project site currently consists of the 9.6-acre Veteran's Memorial Park. The Veterans Memorial Park was constructed between 1965 and 1970, and consists of a baseball diamond, two basketball courts, a community center, a parking lot, and miscellaneous outdoor recreational spaces. Due to the age of Veterans Memorial Park, the utility of the improvements made are deteriorating and the outdoor recreational spaces are aging. In addition, the existing community center has been shuttered due to structural and safety issues, and temporary trailers are used in lieu of the community center. Over time, much of the ground surface at the Veterans Memorial Park, which is sitting atop the landfill material from 1954, has settled over the weight of different types of debris.

The City's Parks and Recreation Department maintains and operates five neighborhood parks (City of Commerce 2008). Veterans Memorial Park is one of four neighborhood parks in the City. The other four City parks, Bristow, Rosewood, Bandini Park, and Pacific Mini-Park are described below.

Bristow Park, located at 1466 S. McDonnell Avenue, offers outdoor activities such as organized youth sports in basketball, flag football, soccer, softball, and volleyball. Bristow Park also offers picnic shelters, playgrounds and a children's wading pool open during the summer. Bristow Park is located approximately 3.7 miles northwest of the Project site, and consists of 11.1 acres.

Rosewood Park, located at 5600 Harbor Street, offers outdoor activities such as organized youth sports in basketball, flag football, soccer, softball, and volleyball. Facilities at Rosewood Park include picnic shelters, playgrounds, and a community center, which offers recreational programs and activities for all age levels. Rosewood Park is located approximately 2.7 miles northwest of the Project site, and consists of 11.6 acres.

Bandini Park and Batres Community Center, located at 4725 Astor Avenue, offers recreational programs and activities for all age levels. Activities include a preschool program, children and adult arts and crafts, an after-

school recreational program, ceramics, exercise and a variety of organized youth programs. The community center has a kitchen and meeting area, which is available for authorized use for parties and other social occasions. Bandini Park offers outdoor activities such as organized youth sports, playgrounds, a children's wading pool and picnic shelters. Bandini Park is located approximately 3.6 miles northwest of the Project site, and consists of 3.1 acres (City of Commerce 2019).

Pacific Mini-Park occupies 0.24 acre of land in the Emil neighborhood, located in the Southeast planning area. The park is considered a "pocket" park, meaning that it provides limited park facilities and services to the immediate area. The Pacific Mini-Park contains a tot lot with playground equipment, and picnic tables are also available. The City intends to install additional playground equipment and picnic facilities at this park (City of Commerce 2008).

Additionally, located just outside of the City limits, Treasure Island Park in the City of Downey is located 0.25 mile southwest of the Project site; and Bell Gardens Park, and John Anson Ford Park in the City of Bell Gardens are located 1.2 and 1.8 miles southwest of the Project site, respectively.

In addition to neighborhood parks, there are other recreational spaces in the City, including Brenda Villa Aquatic Center, Camp Commerce, the Senior Citizens Center, and the Teen Center. These facilities provide a variety of amenities including a physical fitness center at Brenda Villa Aquatic Center, basketball and volleyball facilities at Camp Commerce, and billiards and meeting areas at the Senior and Teen Centers (City of Commerce 2019).

As described under Section 6.5.3 of the City's General Plan, the existing park area in the City meets NRPA standards, with a parkland/population ratio of 2.5 acres per 1,000 persons. In addition, the special recreational facilities available to the residents exceed standards established by the NRPA. The existing parks, with both existing and proposed facilities, are anticipated to adequately serve the needs of the community during the timeframe considered in the general plan. Under the ultimate build out population is achieved, the city will require approximately two additional acres of parkland to maintain the current recommended standard of 2.5 acres per 1,000 residents. The City currently provides park area and recreation programs well above the standards recommended by the NRPA. However, the City is largely developed, and limited land is available for the development of new and large parks. There may be opportunities for the development of recreational open space in the City over the life of the General Plan. Privately owned land cannot be designated for public use in the General Plan unless the private land will be acquired. For this reason, a park overlay designation has been indicated in the General Plan, which show those areas of the City that may be considered good candidates for park development. The Commerce Parks and Recreation Department has identified a number of improvements that it intends to implement over the life of the City's General Plan (City of Commerce 2008).

3.14.2 Relevant Plans, Policies, and Ordinances

Federal

The following federal regulations pertaining to recreation would apply to the proposed Project.

National Recreation and Parks Association Recommendations

The National Recreation and Parks Association (NRPA) recommends neighborhood parks should serve a population of 2,000 to 10,000 persons and have a service area radius of one-third to one-quarter mile. In addition, the NRPA recommends a minimum of 2.5 acres of park space per 1,000 residents.

State

The following state regulations pertaining to recreation would apply to the proposed Project.

Quimby Act

Since the passage of the 1975 Quimby Act (California Government Code Section 66477), cities and counties have been authorized to pass ordinances requiring that developers set aside land, donate conservation easements or pay fees for park improvements. Revenues generated by the Quimby Act cannot be used for the operation and maintenance of park facilities. The goal of the Quimby Act was to require developers to help mitigate the impacts of property improvements. The act gives authority for passage of land dedication ordinances only to cities and counties.

The Landscape and Lighting Act of 1972

The Landscaping and Lighting Act (California Streets and Highways Code, Section 22500 et seq.) enables cities, counties, and special districts to acquire land for parks, recreation, and open space. A local government may also use the assessments to pay for improvements and maintenance to these areas. In addition to local government agencies (i.e., counties and cities), park and recreation facilities may be provided by other public agencies, such as community service districts, park and recreation districts, etc. If so empowered, such an agency may acquire, develop, and operate recreational facilities for the general public.

The Mello-Roos Community Facilities Act

The Mello-Roos Community Facilities Act (Government Code [GC] section 53311 et seq.) is a tax-based financing method available to cities, counties, and special districts. It authorizes local governments to establish community facilities districts (CFDs) within which they may levy special taxes and issue bonds to finance open space acquisition, maintenance, and other programs. Approval of the special tax and any related bond issue requires approval by two-thirds of the district electorate.

Local

The following local/regional regulations pertaining to recreation would apply to the proposed Project.

City of Commerce General Plan

The Resource Management Element of the City of Commerce 2020 General Plan provides objectives, policies, and programs regarding recreational resources, including the following policies which are applicable to the proposed Project:

> ***Resource Management Policy 4.4***
>
> The City of Commerce will review existing landscaping standards for all public and private developments so as to increase the green space throughout the City.
>
> ***Resource Management Policy 5.1***
>
> The City of Commerce will maintain the existing park and recreational facilities to the extent that they can continue to provide residents with the best possible recreational opportunities.

Resource Management Policy 5.2

The City of Commerce will strive to create more "green space" and recreational facilities that will accommodate skateboarding, roller hockey, and field soccer programming.

Resource Management Policy 5.3

The City of Commerce will continue to upgrade existing facilities to improve park appearance and utility.

Resource Management Policy 5.4

The City of Commerce will expand Veteran's Park and Bristow Park to include such facilities as soccer fields and basketball courts.

Resource Management Policy 6.1

The City of Commerce will strive to ensure that park and open space is preserved and maintained for the use of existing and future residents of the city.

Section 6.5.3 Open Space Standards and Adopted Land Use Policy

The existing park area in the City meets NRPA standards (stated above), with a parkland/population ratio of 2.5 acres per 1,000 persons. In addition, the special recreational facilities available to the residents exceed standards established by the NRPA. The existing parks, with both existing and proposed facilities, are anticipated to adequately serve the needs of the community during the timeframe considered in the general plan. Under the ultimate build out population is achieved, the city will require approximately two additional acres of parkland to maintain the current recommended standard of 2.5 acres per 1,000 residents. The City currently provides park area and recreation programs well above the standards recommended by the NRPA. As the City's population grows, the population/open space ratio will decline. However, as a policy, the city will maintain the minimum standard of 2.5 acres of park space per 1,000 residents.

The potential increase in the city's population that will need to be served by these facilities is directly related to the nature and extent of future development in the city. The Community Development Element is specifically concerned with the identification of future development in the city, and serves as a guide for both the type, location, and density of future land use.

Regional Transportation Plan/Sustainable Communities Strategy

The Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) sets broad goals for the region and provides strategies to reduce problems associated with congestion and mobility. Consistent with the provisions of Section 15091 of the State CEQA Guidelines and review of county and city general plans, the RTP had adopted recreation standards-based mitigation including the following:

- Where projects require the construction or expansion of recreational facilities or the payment of equivalent Quimby fees, consider increasing the accessibility to natural areas and lands for outdoor recreation from the proposed project area, in coordination with local and regional open space planning or management agencies.

- Where construction or expansion of recreational facilities is included in the project or required to meet public park service ratios, apply necessary mitigation measures to avoid or reduce significant environmental impacts associated with the construction or expansion of such facilities, through the imposition of conditions required to be followed to avoid or reduce impacts associated with air quality, noise, traffic, biological resources, greenhouse gas emissions, hydrology and water quality, and others that apply to specific construction or expansion of new or expanded public service facilities.

Los Angeles County Code Section 21.24.340, 21.24.350, and 21.28.140

Los Angeles County Code Section 21.24.340 (Residential Subdivisions, Local Park Space Obligation, Formula) contains the methodology used to determine the amount of parkland required to be dedicated by the subdivider as a part of the subdivision map approval process. In accordance with Section 21.28.140, the developer may also choose to pay a fee in-lieu of the provision of parkland. Additionally, the developer may choose to provide less than the required amount of parkland, but develop it with amenities equal to the value of what the in-lieu fee would be. In order to determine the local park space obligation for a subdivision, a formula is used, which considers the number of dwelling units in the subdivision, the average household size by Park Planning Area (PPA) (which differs for single family, multifamily, and mobile home developments as well as by PPA), and the adopted ratio of three acres of parkland per 1,000 residents, per the Quimby Act. However, it should be noted that, as discussed in the existing General Plan, as a condition of zone change approval, General Plan amendment, specific plan approval, or development agreement, the County may require a subdivider to dedicate land according to the General Plan goal of four acres of local parkland per 1,000 residents, and six acres of regional parkland per 1,000 residents.

Once the local park space obligation is determined, County Code Section 21.24.350 (Residential Subdivisions, Provision or Local Park Sites) contains regulations pertaining to the siting of park facilities as well as provisions that give the option to subdividers of 50 units or less to choose to provide the obligatory amount of parkland, any excess of which would be credited to the subdivision, or otherwise allow any remaining obligation to be satisfied by the payment of park fees in accordance with the provisions of Section 21.28.140. Additionally, since only the portions of the land dedicated for parkland that are suitable for park use can be counted against the obligation of the subdivider, attributes of the park space including the slope of the site are used to determine the amount of land which can be counted against the subdivider's obligation. For example, for the portions of the site in excess of 20 percent slope, only 10 percent of the acreage will be counted against the subdivider's obligation whereas all of the land that is less than three percent slope can be counted towards the obligation.

Section 21.28.140 (Park Fees Required When, Computation and Use) contains provisions regarding the payment of in-lieu fees for any portion of the dedication obligation not satisfied by the subdivider. These fees would be enforced as a condition of approval on the final approval of the subdivision. The in-lieu fee is determined by multiplying the amount of park space not satisfied by the representative land value for the appropriate PPA. This section also makes it the responsibility of the Los Angeles County Department of Parks and Recreation (DPR) to develop a schedule specifying how, when, and where it will use the land or fees, or both, from each subdivision to develop park or recreational facilities within the applicable PPA.

3.14.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to public services are based on Appendix G of the State CEQA Guidelines. Through the analysis in the Initial Study (see Appendix A), it was determined that the

proposed Project could have a potentially significant impact to recreation. Accordingly, all of the thresholds are further analyzed in the EIR. According to Appendix G of the State CEQA Guidelines, a significant impact related to public services would occur if the Project would:

A. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
B. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

3.14.4 Methodology

The recreation analysis herein is based on information provided in the City's General Plan, and available information and data provided online.

3.14.5 Impacts Analysis

Threshold A: Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

During remediation and construction of the proposed Project, portions of the existing 9.6-acre Veteran's Memorial Park would be available for use. Phase I would commence in March 2022 and would include construction of 165,000 square feet of commercial land uses, the 77,050-square-foot community center, 400 residential units, and the proposed public open space (all on the eastern portion of the Project site). During Phase I of Project construction, the existing community center would remain open for public use, with the expectation that by the time Phase II of Project construction commences, the new community center would be open for use and the existing community center could then be demolished. Phase II of Project construction would commence in December 2023 and would include construction of the remaining 450 residential units.

During this time, the Project has the potential to result in an increased use of existing neighborhood and regional parks or other recreational facilities located in close proximity to the Project site. However, the unavailability of Veteran's Memorial Park would be temporary in nature, and the potential increased use of surrounding neighborhood parks during revitalization of Veteran's Memorial Park is not anticipated to be substantial. All of the parks within the City and the surrounding communities are expected to be available for use during construction of the Project.

Upon operation of the proposed Project, the increase in on-site population of 2,550 residences, and reduction in existing park space from 9.6 acres to 4.75 acres could result in an increased demand for recreational facilities, which has the potential to result in the deterioration of existing facilities. The Project involves the demolition of the existing Veterans Memorial Park and an adjacent vacant parcel, and the redevelopment of the Project site to accommodate a mixed-use development (refer to Figure 2-4 Site Plan, in Chapter 2 of this EIR). The proposed Project would include the construction of 850 residential units, 165,000 square feet of commercial uses, a 77,050-square-foot community center, a 5,000-square-foot museum, and approximately 4.75 acres of parks and open space. The proposed revitalized park and open space would include 100,000 square feet of open green space, 20,000 square feet of children's playground area, 50,000 square feet of youth sports fields, a 3,600 square foot grass amphitheater, and 5,000 square feet of benches and stands. The proposed Project is to Provide a revitalized Veterans Memorial Park with new structures, an all-inclusive playground, a contemporary soccer and baseball youth sports complex, a contemporary library, and ample outdoor green space to maximize

opportunities for community events and services. Additionally, the Project would remediate the former on-site landfill to provide a safer environment for future park visitors, as well as residents living in the City.

An objective for parkland development in the City's General Plan is to continue to maintain or exceed a parkland standard of one acre per 2,500 persons. The proposed Project would provide 4.75 acres of park and open space area, which would adequately serve the Project's 2,550 residents, and residents in the Project area. Additionally, the 4.75 acres of parks and open space does not include the proposed 77,050-square-foot community center and 5,000-square-foot museum, which would be available to the public.

In 2018, the City of Commerce had a population of 12,808 (United States Census Bureau 2019). With 21.9 total acres of neighborhood parks in the City (Rosewood Park, Bandini Park, Bristow Park, Pacific Mini-Park, and the proposed revitalized Veteran's Memorial Park), the City would surpass the parkland development objective of one acre per 2,500 persons. In addition, the proposed Project would be subject to applicable development impact fees related to parks and recreation. As such, with payment of the required development impact fees related to parks and recreation in combination with provision of on-site recreational facilities, the Project would meet the anticipated demand for neighborhood and regional parks or other recreational facilities. Project residents and the public would have access to adequate on-site recreational facilities, which would offset increased use of existing parks and recreational facilities in the City. Therefore, implementation of the Project would not result in a substantial increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur. Impacts to neighborhood and regional parks would be **less than significant**. No mitigation is required.

Threshold B: Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

As described above under Threshold A, the Project involves the demolition of the existing Veterans Memorial Park and an adjacent vacant parcel, and the redevelopment of the Project site to accommodate a mixed-use development including a revitalized Veteran's Memorial Park. New structures proposed as part of the new Veterans Memorial Park would include a four-story, 77,050-square-foot community center. The community center would include indoor sports courts and offices, a library, and a ballroom/event space as well as supporting amenities (e.g. offices, restrooms, lobbies etc.).The community center would be approximately 120 feet in height and located on the southeastern portion of the Project site along the I-5 freeway. A Sports Complex comprising youth-sized soccer and baseball fields (to accommodate local and regional league and tournament matches), a playground, and public open space would be located immediately adjacent to the community center. The green space would lead towards the grass-stepped amphitheater, which includes concrete bench steps and would essentially separate the residential development on the west of the Project site and commercial development to the east. The Project also proposes an art component, including a 5,000-square-foot Latino Museum, and murals.

The existing Veterans Memorial Park was constructed between 1965 and 1970, and consists of a baseball diamond, two basketball courts, a community center, a parking lot, and miscellaneous outdoor recreational spaces. As described in Section 3.14.1 above, due to the age of Veterans Memorial Park, the utility of the improvements made are deteriorating and the outdoor recreational spaces are aging. In addition, the existing community center has been shuttered due to structural and safety issues, and temporary trailers are used in lieu of the community center. Over time, much of the ground surface at the Veterans Memorial Park, which is sitting atop the landfill material from 1954, has settled over the weight of different types of debris.

Considering that the Project proposes to remediate the entire Project site, and redevelop a deteriorating park space with improved park and open space area of sufficient acreage to meet the City's parkland development objective, the Project's proposed recreational facilities would not result in an adverse physical effect on the environment. Therefore, impacts would be **less than significant**. No mitigation is required.

3.14.6 Cumulative Impacts

Buildout of the Project along with cumulative projects would increase use of existing local and regional parks, and could result in the accelerated deterioration of recreational facilities. However, the deterioration that would occur to local parks and recreational facilities from population growth within the City may be offset with funding from new development, such as in-lieu fees for parks or donation of parkland pursuant to the Quimby Act. Cumulative projects would be required to demonstrate compliance with CEQA and/or NEPA prior to project approval, and existing federal, state, and local regulations related to parks and recreational facilities would mitigate potential adverse impacts to the environment that may result from the expansion of such facilities. Project compliance with applicable regulations, and consideration of the Project's proposed revitalization of the existing Veteran's Memorial Park, the Project would **not result in a cumulatively considerable impact** to recreation facilities. No mitigation is required.

3.14.7 Mitigation Measures

Impacts would be **less than significant**. No mitigation measures are required.

3.14.8 Level of Significance After Mitigation

Impacts would be **less than significant**.

3.14.9 References

City of Commerce. 2008. City of Commerce 2020 General Plan. Adopted January 2008. http://www.ci.commerce.ca.us/DocumentCenter/Home/View/152. Accessed December 10, 2019.

City of Commerce. 2019. City Facilities. http://www.ci.commerce.ca.us/Facilities#. Accessed December 10, 2019.

United States Census Bureau. 2019, Quick Facts – Commerce City, California. https://www.census.gov/quickfacts/fact/table/commercecitycalifornia,CA/PST045218#viewtop. Accessed December 11, 2019.

3.15 Transportation

This section describes the existing transportation conditions of the Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Project.

Comments received in response to the Notice of Preparation (see Appendix A) included concerns regarding potential impacts on Caltrans facilities located in close proximity to the Project site, consistency with the 2016 adopted RTP/SCS Goals, and potential impacts to signalized intersections along Gage Avenue within the City of Bell Gardens. Additionally, the County of Los Angeles Fire Department provided comments regarding conducting a review of access requirements per its Fire Code, as well as other traffic-related issues.

Information contained in this section is based on the *Transportation Impact Study for the Modelo Mixed-Use Development Study* and *Construction Traffic Analysis* prepared by Gibson Transportation Consulting in December 2019 and March 2020, respectively (Appendix H). The methodology and base assumptions used in the analysis were established in conjunction with the City of Commerce (City) as the lead agency. Other sources consulted are listed in Section 3.15.9 References.

3.15.1 Environmental Setting

This section describes the existing conditions in the Project area and also identifies the transportation facilities that could be affected by the proposed Project.

Study Area and Scope

Potential traffic impacts were evaluated on a typical weekday during the morning (7:00 AM to 9:00 AM) and afternoon (4:00 PM to 6:00 PM) peak periods. The base assumptions, technical methodologies, and study area were identified as part of the jointly developed study approach. The following traffic scenarios were developed and analyzed as part of this study:

- **Existing Conditions (Year 2019)** – The analysis of existing traffic conditions is intended to provide a basis for the remainder of the study. The Existing Conditions analysis includes an assessment of streets, traffic volumes, and operating conditions.
- **Existing with Project Conditions (Year 2019)** – The California Environmental Quality Act (CEQA) requires an evaluation of Project traffic impacts on the existing environment as part of traffic impact analyses. This analysis evaluates the potential Project-related traffic impacts as compared to existing conditions.
- **Future without Project Conditions (Year 2023)** – Future traffic conditions were projected for Year 2023 without the Project to forecast the future traffic growth and intersection operating conditions expected to result from general regional growth and specific related projects developed in the vicinity of the Project site by the Year 2023. This scenario is used as the baseline against which potential future Project traffic impacts are evaluated.
- **Future with Project Conditions (Year 2023)** – This analysis measures future traffic conditions with traffic expected to be generated by the Project added to Year 2023 without the Project traffic conditions. The incremental impacts of the Project on future traffic operating conditions were then identified.

The Project site location and study intersections are displayed in Figure 3.15.1, Study Area. As shown in Table 3.15-1, Study Intersections, per consultation with the City, the Project's study area contains the following 27 intersections (23 existing signalized intersections, and four unsignalized intersections, listed with their jurisdictions:

Table 3.15-1. Study Intersections

No	Intersection	Jurisdiction
1.	Paramount Boulevard & Washington Boulevard	City of Pico Rivera
2.	Rosemead Boulevard & Washington Boulevard	City of Pico Rivera
3.	Garfield Avenue & Telegraph Road	City of Commerce
4.	Telegraph Road & I-5 NB Ramps	City of Commerce / Caltrans
5.	Telegraph Road & Greenwood Avenue	City of Commerce
6 [a]	Telegraph Rd & I-5 NB Off Ramp	City of Commerce / Caltrans
7.	Eastern Avenue & Bandini Boulevard	City of Commerce / Bell
8.	Garfield Avenue & Bandini Boulevard	City of Commerce
9[a].	I-5 SB Ramps & Bandini Boulevard	City of Commerce / Caltrans
10.	Eastern Avenue & Slauson Avenue	City of Commerce
11.	Garfield Avenue & Slauson Avenue	City of Commerce
12.	Greenwood Avenue & Slauson Avenue	City of Commerce
13.	I-5 SB Ramps / Gage Avenue & Slauson Avenue	City of Commerce / Caltrans
14.	Telegraph Road & Slauson Avenue	City of Commerce
15.	Paramount Boulevard & Slauson Avenue	City of Pico Rivera
16.	Rosemead Boulevard & Slauson Avenue	City of Pico Rivera
17.	Eastern Avenue & Gage Avenue	City of Bell Gardens
18.	Garfield Avenue & Gage Avenue	City of Bell Gardens
19.	Greenwood Avenue & Gage Avenue	City of Bell Gardens
20.	Gage Avenue & Zindell Avenue	City of Commerce
21[b].	Gage Avenue & Project Driveway	City of Commerce
22.	Eastern Avenue & Florence Avenue	City of Bell Gardens
23.	Garfield Avenue & Florence Avenue	City of Bell Gardens
24 [a]	I-5 SB Ramps & Paramount Boulevard	City of Downey
25.	I-5 NB Ramps & Paramount Boulevard	City of Downey
26.	Telegraph Road & Paramount Boulevard	City of Pico Rivera
27.	Telegraph Road & Rosemead Boulevard	City of Pico Rivera / Downey

Source: Gibson Transportation Consulting, Inc.
Notes:
[a] Unsignalized Intersection;
[b] Project is proposing to install signal at intersection

Existing Roadway Network/Circulation System

Local Roadways

Primary local access to the Project site is provided via Telegraph Road, Slauson Avenue, Zindell Avenue and Gage Avenue. Descriptions of key roadways serving the study area are provided below:

Eastern Avenue – Eastern Avenue provides two lanes in each direction and is located approximately 2.2 miles west of the Project site. The street provides left-turn pockets at signalized intersections. Parking is not allowed on either side of the street. The speed limit on Eastern Avenue is 40 miles per hour (mph).

Garfield Avenue – Garfield Avenue provides two lanes in each direction and is located approximately 1.0 miles west of the Project site. The street provides left-turn pockets at signalized intersections and a two-way left-turn median. Parking is not allowed on either side of the street. The speed limit on Garfield Avenue is 35 mph.

Greenwood Avenue – Greenwood Avenue provides one to two lanes in each direction, with left-turn pockets at most signalized intersections, and is located approximately 1,500 feet west of the Project site. Parking is generally allowed on both sides of the street. A signalized railroad crossing with gate arms is located just south of Slauson Avenue. The rail line serves heavy freight trains and has infrequent service. The speed limit on Greenwood Avenue is 30 mph.

Telegraph Road – Telegraph Road provides two lanes in each direction and is located approximately 500 feet northeast of the Project site, on the east side of the Interstate 5 (I-5) freeway. The street provides left-turn pockets at signalized intersections and a two-way left-turn median. Two freeway interchanges are located along this road. Parking is not allowed on either side of the street. The speed limit on Telegraph Road is 45 mph.

Bandini Boulevard – Bandini Boulevard provides one to two lanes in each direction and is located 0.5 miles north of the Project site. The street provides left-turn pockets at signalized intersections and a two-way left-turn median to the west of the Project site. On-street parking is generally allowed on both sides of the street. The speed limit on Bandini Avenue is 40 mph.

Slauson Avenue – Slauson Avenue provides three lanes in each direction and is located adjacent to the north side of the Project site. The street provides left-turn pockets at signalized intersections and a two-way left-turn median to the west of the Project site. Some on-street parking is generally allowed on both sides of the street. The speed limit on Slauson Avenue is 45 mph.

Gage Avenue – Gage Avenue provides two lanes in each direction, with left-turn pockets at signalized intersections, and is located approximately 500 feet northwest of the Project site. The street provides driveway access to the Project site and generally provides parking on both sides of the street. A signalized railroad crossing with gate arms is located just south of Slauson Avenue and north of the Project Site. The rail line serves heavy freight trains and has infrequent service. The speed limit on Gage Avenue is 35 mph.

Paramount Boulevard – Paramount Boulevard provides two lanes in each direction and is located approximately 0.75 miles southeast of the Project site. The street provides left-turn pockets at signalized intersections and a two-way left-turn median to the west of the Project site. Two freeway interchanges are located along this road. Limited on-street parking is allowed on both sides of the street. The speed limit on Paramount Boulevard is 45 mph.

Rosemead Boulevard – Rosemead Boulevard provides two lanes in each direction and is located approximately 1 mile southeast of the Project site. The street provides left-turn pockets at signalized intersections. Two freeway interchanges are located along this road and limited on-street parking is allowed on both sides of the street. The speed limit on Rosemead Boulevard is 40 mph.

Florence Avenue – Florence Avenue provides three lanes in each direction and is located approximately 1.4 miles southwest of the Project site. The street provides left-turn pockets at signalized intersections and a two-way left-turn median. Two freeway interchanges are located along this road and limited on-street parking is allowed on both sides of the street. The speed limit on Florence Avenue is 40 mph.

Regional Highway System

Primary regional access to the study area is provided by the Interstate (I)-5 freeway, located directly east of the Project site, and the Long Beach Freeway (I-710), located approximately three miles west of the Project site. The I-5 freeway is an eight-lane freeway that runs north-south the entire length of the western United States from Mexico to Canada. Immediately adjacent to the Project site, the I-5 freeway runs in the northwest/southeast direction with ramp access provided via Telegraph Road and Slauson Avenue. The I-710 freeway is an eight-lane freeway that runs north-south from Long Beach to Alhambra. The nearest ramp access to the I-710 freeway is provided via Bandini Boulevard and Florence Avenue.

Level of Service Methodology

Level of service (LOS) is a qualitative measure used to describe the condition of traffic flow on the street system, ranging from excellent conditions at LOS A to overloaded conditions at LOS F. LOS D is typically recognized as the minimum acceptable LOS in urban areas including Commerce, Downey, Bell, Bell Gardens, and Pico Rivera. LOS definitions are provided in Table 3.15-2 and Table 3.15-3.

Intersection capacity calculations were conducted to measure the LOS of the intersections using an overall intersection capacity of 1,600 vehicles per hour per lane (vphpl) and adding a factor of 0.10 to account for the yellow interval clearance. The existing or projected volumes through an intersection are compared to the capacity of the intersection to calculate a volume-to-capacity (V/C) ratio and that ratio is used to determine the LOS at the intersection.

In accordance with City guidelines, the LOS analyses were conducted using the Vistro software package to analyze signalized and unsignalized intersections. Signalized intersections were analyzed using Intersection Capacity Utilization (ICU) methodology to obtain the corresponding ICU value for signalized intersections. Unsignalized intersections were analyzed using the Highway Capacity Manual, 6th Edition (Transportation Research Board, 2016) (HCM) methodology to identify the amount of delay for the stop-controlled intersections.

In accordance with Caltrans' guidelines, found in *Guide for the Preparation of Traffic Impact Studies* (Caltrans December 2002), all Caltrans Facilities were analyzed using the HCM 6 methodology with the Vistro software package.

Table 3.15-2. Level of Service Definitions for Intersections per ICU Methodology

Level of Service	V/C Ratio	Definition
A	0.000 - 0.600	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.
B	0.601 - 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.

Table 3.15-2. Level of Service Definitions for Intersections per ICU Methodology

Level of Service	V/C Ratio	Definition
C	0.701 - 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801 - 0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901 - 1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

Source: Transportation Research Circular No. 212, Interim Materials on Highway Capacity (Transportation Research Board, 1980).

Table 3.15-3. Level of Service Definitions for Intersections per HCM Methodology

Level of Service	Description	Delay[a]	
		Signalized Intersections	*Unsignalized Intersections*
A	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.	≤ 10	0.0 - 10.0
B	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.	> 10 and ≤ 20	10.1 - 15.0
C	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.	> 20 and ≤ 35	15.1 - 25.0
D	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.	> 35 and ≤ 55	25.1 - 35.0
E	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.	> 55 and ≤ 80	35.1 - 50.0
F	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.	> 80	> 50.0

Source: *Highway Capacity Manual 6th Edition* (Transportation Research Board, 2016).

[a] Measured in seconds.

Existing Traffic Volumes and Levels of Service

Weekday morning and afternoon peak hour traffic counts were conducted at the 27 study intersections in April 2019 and late August 2019 when schools were back in session. These volumes are shown in Figure 3.15-2, Existing Conditions (Year 2019) Peak Hour Traffic Volumes. Intersection lane configurations are shown in Figure 3.15-3 Intersection Lane Configurations and the intersection turning movement count data sheets are provided in Appendix B of the TIS.

Table 3.15-4 summarizes the weekday morning and afternoon peak hour V/C ratio and corresponding LOS at each study intersection under existing conditions. LOS calculation worksheets are provided in Appendix C of the TIS.

Table 3.15-4. Existing Conditions (Year 2019) Intersection Levels of Service

No.	Intersection	PeakHour	Existing Conditions	
			V/C or Delay	*LOS*
1.	Paramount Boulevard & Washington Boulevard	A.M. P.M.	0.860 0.928	D E
2.	Rosemead Boulevard & Washington Boulevard	A.M. P.M.	0.848 0.880	D D
3.	Garfield Avenue & Telegraph Road	A.M. P.M.	0.717 0.755	C C
4.	Telegraph Road & I-5 NB Ramps (Garfield Avenue)	A.M. P.M.	0.771 0.875	C D
5.	Telegraph Road & Greenwood Avenue	A.M. P.M.	0.710 0.716	C C
6 [a]	Telegraph Road & I-5 NB Off Ramp (Slauson Avenue)	A.M. P.M.	6.7 62.9	A E
7.	Eastern Avenue & Bandini Boulevard	A.M. P.M.	0.756 0.735	C C
8.	Garfield Avenue & Bandini Boulevard	A.M. P.M.	0.975 0.825	E D
9 [a]	I-5 SB Ramps & Bandini Boulevard	A.M. P.M.	20.8 82.2	C F
10.	Eastern Avenue & Slauson Avenue	A.M. P.M.	0.756 0.827	C D
11.	Garfield Avenue & Slauson Avenue	A.M. P.M.	0.860 0.861	D D
12.	Greenwood Avenue & Slauson Avenue	A.M. P.M.	0.613 0.709	B C
13.	I-5 SB Ramps / Gage Avenue & Slauson Avenue	A.M. P.M.	0.719 0.910	C E
14.	Telegraph Road & Slauson Avenue	A.M. P.M.	0.807 0.871	D D
15.	Paramount Boulevard & Slauson Avenue	A.M. P.M.	0.802 0.901	D E
16.	Rosemead Boulevard & Slauson Avenue	A.M. P.M.	0.805 0.904	D E
17.	Eastern Avenue & Gage Avenue	A.M. P.M.	0.805 0.935	D E
18.	Garfield Avenue & Gage Avenue	A.M. P.M.	0.849 0.886	D D
19.	Greenwood Avenue & Gage Avenue	A.M. P.M.	0.497 0.513	A A
20.	Gage Avenue & Zindell Avenue	A.M. P.M.	0.449 0.419	A A

Table 3.15-4. Existing Conditions (Year 2019) Intersection Levels of Service

No.	Intersection	PeakHour	Existing Conditions	
			V/C or Delay	*LOS*
21[b].	Gage Avenue & Project Driveway	A.M. P.M.	0.3 0.4	A A
22.	Eastern Avenue & Florence Avenue	A.M. P.M.	0.852 0.941	D E
23.	Garfield Avenue & Florence Avenue	A.M. P.M.	0.777 0.738	C C
24 [a]	I-5 SB Ramps & Paramount Boulevard	A.M. P.M.	4.9 10.5	A B
25.	I-5 NB Ramps & Paramount Boulevard	A.M. P.M.	0.612 0.895	B D
26.	Telegraph Road & Paramount Boulevard	A.M. P.M.	0.800 0.951	C E
27.	Telegraph Road & Rosemead Boulevard	A.M. P.M.	0.884 1.001	D F

Source: Gibson Transportation Consulting, Inc.
Notes:
[a] Unsignalized Intersection
[b] Project is proposing to install signal at intersection

The results of this analysis indicate that 16 of the 27 study intersections are currently operating at LOS D or better during the weekday morning and afternoon peak hours. The following intersections operate at LOS E or F during either the morning or afternoon peak periods:

1 Paramount Boulevard & Washington Boulevard (LOS E in the PM peak hour)
6 Telegraph Road & I-5 Northbound Off-Ramp (Slauson Avenue) (LOS E in the PM peak hour)
8 Garfield Avenue & Bandini Boulevard (LOS E in the AM peak hour)
9 I-5 Southbound Ramps & Bandini Boulevard (LOS F in the PM peak hour)
13 I-5 Southbound Ramps / Gage Avenue & Slauson Avenue (LOS E in the PM peak hour)
15 Paramount Boulevard & Slauson Avenue (LOS E in the PM peak hour)
16 Rosemead Boulevard & Slauson Avenue (LOS E in the PM peak hour)
17 Eastern Avenue & Gage Avenue (LOS E in the PM peak hour)
22 Eastern Avenue & Florence Avenue (LOS E in the PM peak hour)
26 Telegraph Road & Paramount Boulevard (LOS E in the PM peak hour)
27 Telegraph Road & Rosemead Boulevard (LOS E in the PM peak hour)

Future Conditions/Cumulative (Related Projects)

Estimates of future traffic conditions both with and without the Project, representing cumulative conditions, were developed to evaluate the potential impacts of the Project on the local street system. This discussion details the assumptions used to develop the Future without Project Conditions in Year 2023, which corresponds to anticipated occupancy of the Project. This analysis includes traffic growth both from future projects and from regional growth projections (Option "B" above, or ambient growth). Given that the ambient growth factor

discussed below likely includes some traffic growth resulting from the Related Projects, the traffic analysis provides a highly conservative estimate of Future without Project traffic volumes.

Ambient Growth

Existing traffic is expected to increase between Year 2019 and Year 2023 as a result of general area-wide and regional growth and development. According to the growth projections in the Commerce region, 2010 Congestion Management Program for Los Angeles County (Metro, 2010) (CMP) recommends an ambient traffic growth factor of 1.46% per year be used to adjust the existing (Year 2019) traffic volumes to reflect the effects of regional growth and development by the Year 2023. The total growth adjustment applied over the four-year period was 5.84%. This growth factor accounts for increases in traffic due to potential projects plus projects not yet proposed or projects outside the study area.

Related Projects

In accordance with the State CEQA Guidelines' requirements, this study also considered the effects of the Project in relation to the Related Projects. The list of Related Projects is based on information provided by the City for projects that may contribute directly to traffic approaches at study intersections. Projects located outside of this radius would be captured in the ambient growth. The Related Projects are detailed in Table 3.15-5 and their locations are shown in Figure 3.15-4, Location of Related Projects. No planned or proposed developments beyond City boundaries are expected to have a noticeable impact on traffic levels in the Project vicinity.

Though the buildout years of many of these projects are uncertain and may be beyond the buildout year of the Project, and notwithstanding that some may never be approved or developed, they were all considered as part of this study and conservatively assumed to be completed by the Project buildout Year 2023. Therefore, the traffic growth due to the development of Related Projects considered in this analysis is highly conservative and, by itself, substantially overestimates the actual traffic volume growth in the City that would likely occur prior to Project buildout. With the addition of the 1.4% per year ambient growth factor previously discussed, the Future without Project cumulative condition is even more conservative.

Using these conservative assumptions, the potential transportation impacts of the Project were evaluated. The development of estimated traffic volumes added to the study area as a result of Related Projects involves the use of a three-step process: trip generation, trip distribution, and trip assignment.

Trip Generation, Distribution and Assignment

Trip generation estimates for the Related Projects were provided by the City or were calculated using a combination of previous study findings and the trip generation rates contained in Trip Generation, 9th Edition (Institute of Transportation Engineers [ITE], 2012). The Related Projects trip generation estimates, shown in Table 3.15-5, are conservative in that they do not in every case account for either the existing uses to be removed or the likely use of other travel modes (transit, walk, etc.) Further, they do not account for the internal capture trips within a multi-use development, nor the interaction of trips between multiple Related Projects within the study area, in which one Related Project serves as the origin for a trip destined for another Related Project.

The geographic distribution of the traffic generated by the Related Projects is dependent on several factors. These include the type and density of the proposed land uses, the geographic distribution of the population from which the employees/residents and potential patrons of the proposed developments are drawn, and the location of these projects in relation to the surrounding street system. These factors were considered along with logical travel routes through the street system to develop a reasonable pattern of trip distribution.

Table 3.15-5. Related Projects

No.	Project	Land Use	Size	Units	Weekday						
					Daily Trips	*AM Peak Hour*			*PM Peak Hour*		
						In	*Out*	*Total*	*In*	*Out*	*Total*
1	Costco Gas Station	Gas Station	1	pump	169	6	6	12	7	7	14
	6340 Washington Boulevard										
2	Warehouse Building	Warehousing	83,000	SF	295	20	5	25	7	20	27
	6300 Telegraph Road										
3	Warehouse Building	Warehousing	185,000	SF	659	35	21	56	15	44	59
	7140 Bandini Boulevard										
4	The Citadel	Shopping Outlet Center	317,000	SF	7,316	168	86	254	321	331	652
	100 Citadel Drive										
5	AltaMed Office Conversion	Office	78,316	SF	792	87	1	88	(2)	99	97
	2035 Camfield Avenue										
6	Vehicle Repair	Auto Care Center	2,000	SF	80	3	2	5	3	3	6
	7500 Wellman Street										
7	Fast Food Restaurant	Fast Food	2,600	SF	1,290	38	36	74	44	41	85
	5556 East Washington Blvd										
8	Retail	Shopping Center	16,000	SF	683	9	6	15	28	31	59
	5200 Triggs Street										
9	Gas Station and Convenience Store	Convenience Store	2,306	SF	1,950	47	47	94	59	58	117
	2425 South Atlantic Boulevard	Gas Station									
				Total Related Project Trips	13,234	413	210	623	482	634	1,116

Source: Gibson Transportation Consulting, Inc.

Future Traffic Volumes and Levels of Service

The trip generation estimates for the Related Projects were assigned to the local street system using the trip distribution patterns described above. Figure 3.15-5, Related Project-Only Peak Hour Traffic Volumes, shows the peak hour traffic volumes associated with these Related Projects at the study intersections. These volumes were then added to the existing traffic volumes after adjustment for ambient growth through the Project buildout Year 2023. As discussed above, this is a conservative approach as many of the Related Projects may be reflected in the ambient growth rate. These volumes represent the Future without Project Conditions (i.e., existing traffic volumes added to ambient traffic growth and Related Project traffic growth) for Year 2023 and are shown in Figure 3.15-6, Future without Project Conditions (Year 2023) Peak Hour Traffic Volumes, for the 27 study intersections.

Table 3.15-6 summarizes the weekday morning and afternoon peak hour LOS results for each of the study intersections under Future without Project Conditions for Year 2023.

Table 3.15-6. Future Without Project Conditions (Year 2023) Intersection Levels of Service

No.	Intersection	Peak Hour	Future without Project Conditions	
			V/C Ratio	*LOS*
1.	Paramount Boulevard & Washington Boulevard	A.M. P.M.	0.905 0.976	E E
2.	Rosemead Boulevard & Washington Boulevard	A.M. P.M.	0.892 0.926	D E
3.	Garfield Avenue & Telegraph Road	A.M. P.M.	0.760 0.806	C D
4.	Telegraph Road & I-5 NB Ramps (Garfield Avenue)	A.M. P.M.	0.827 0.951	D E
5.	Telegraph Road & Greenwood Avenue	A.M. P.M.	0.758 0.752	C C
6.[a]	Telegraph Road & I-5 NB Off Ramp (Slauson Avenue)	A.M. P.M.	10.1 94.5	B F
7.	Eastern Avenue & Bandini Boulevard	A.M. P.M.	0.799 0.777	C C
8.	Garfield Avenue & Bandini Boulevard	A.M. P.M.	1.030 0.867	F D
9.[a]	I-5 SB Ramps & Bandini Boulevard	A.M. P.M.	25.1 101.0	C F
10.	Eastern Avenue & Slauson Avenue	A.M. P.M.	0.800 0.871	C D
11.	Garfield Avenue & Slauson Avenue	A.M. P.M.	0.906 0.912	E E
12.	Greenwood Avenue & Slauson Avenue	A.M. P.M.	0.649 0.756	B C
13.	I-5 SB Ramps / Gage Avenue & Slauson Avenue	A.M. P.M.	0.760 0.958	C E
14.	Telegraph Road & Slauson Avenue	A.M. P.M.	0.866 0.926	D E
15.	Paramount Boulevard & Slauson Avenue	A.M. P.M.	0.845 0.951	D E

Table 3.15-6. Future Without Project Conditions (Year 2023) Intersection Levels of Service

No.	Intersection	Peak Hour	Future without Project Conditions	
			V/C Ratio	*LOS*
16.	Rosemead Boulevard & Slauson Avenue	A.M. P.M.	0.849 0.954	D E
17.	Eastern Avenue & Gage Avenue	A.M. P.M.	0.848 0.984	D E
18.	Garfield Avenue & Gage Avenue	A.M. P.M.	0.896 0.936	D E
19.	Greenwood Avenue & Gage Avenue	A.M. P.M.	0.522 0.541	A A
20.	Gage Avenue & Zindell Avenue	A.M. P.M.	0.471 0.440	A A
21.[b]	Gage Avenue & Project Driveway	A.M. P.M.	0.3 0.4	A A
22.	Eastern Avenue & Florence Avenue	A.M. P.M.	0.895 0.990	D E
23.	Garfield Avenue & Florence Avenue	A.M. P.M.	0.816 0.774	D C
24.[a]	I-5 SB Ramps & Paramount Boulevard	A.M. P.M.	7.9 17.5	A B
25.	I-5 NB Ramps & Paramount Boulevard	A.M. P.M.	0.645 0.946	B E
26.	Telegraph Road & Paramount Boulevard	A.M. P.M.	0.849 1.013	D F
27.	Telegraph Road & Rosemead Boulevard	A.M. P.M.	0.932 1.055	E F

Source: Gibson Transportation Consulting, Inc.
Notes:
[a] Unsignalized Intersection
[b] Project is proposing to install signal at intersection

As shown, 10 of the 27 study intersections are anticipated to operate at LOS D or better during both the weekday morning and afternoon peak hours. The remaining intersections operate at LOS E or F during at least one of the peak periods. The intersections projected to operate at LOS E or LOS F include:

1 Paramount Boulevard & Washington Boulevard (LOS E in the AM and PM peak hour)
2 Rosemead Boulevard & Washington Boulevard (LOS E in the PM peak hour)
4 Telegraph Road & I-5 Northbound Off-Ramp (Garfield Avenue) (LOS E in the PM peak hours)
6 Telegraph Road & I-5 Northbound Off-Ramp (Slauson Avenue) (LOS F in the PM peak hour)
8 Garfield Avenue & Bandini Boulevard (LOS F in the AM peak hour)
9. I-5 Southbound Ramps & Bandini Boulevard (LOS F in the PM peak hour)
11 Garfield Avenue & Slauson Avenue (LOS E in the AM and PM peak hours)
13 I-5 Southbound Ramps/Gage Avenue & Slauson Avenue (LOS E in the PM peak hour)
14 Telegraph Road & Slauson Avenue (LOS E in the PM peak hour)

15 Paramount Boulevard & Slauson Avenue (LOS E in the PM peak hour)
16 Rosemead Boulevard & Slauson Avenue (LOS E in the PM peak hour)
17 Eastern Avenue & Gage Avenue (LOS E in the PM peak hour)
18 Garfield Avenue & Gage Avenue (LOS E in the PM peak hour)
22 Eastern Avenue & Florence Avenue (LOS E in the PM peak hour)
25 I-5 Northbound Ramps & Paramount Boulevard (LOS E in the PM peak hour)
26 Telegraph Road & Paramount Boulevard (LOS F in the PM peak hour)
27 Telegraph Road & Rosemead Boulevard (LOS E in the AM peak hour, LOS F in the PM peak hour)

Site Access and Circulation

The Project site is bounded by Slauson Avenue, Gage Avenue, and commercial activity to the north, the I-5 freeway to the east, the Rio Hondo Channel and bike path to the south, and a gated residential community to the west. Vehicular access from the local street system would be provided via two all-way intersections along Gage Avenue – one at the Project Driveway and the second at Zindell Avenue. Figure 3.15-7 shows the Project site plan, the access and internal circulation system, and the general locations of the buildings and land uses. The Project proposes to signalize the intersection of Gage Avenue/Project Driveway and improve the existing signal at Zindell Avenue to accommodate access to the Project site.

Parking would be provided in a subterranean parking structure below the Project. Access to the parking garage would be provided via multiple driveways from the Project's internal site circulation system.

Bicycle and Pedestrians

It should be noted that the City of Commerce is drafting a Bicycle and Pedestrian Master Plan to develop a vision to make bicycling and walking a more viable transportation option for its residents. This document will contain policy and infrastructure recommendation that the City will implement to incorporate bicycling and walking-friendly elements. Additional bicycle and pedestrian facilities would be provided near the Project site as well; however, specific details are not known at this time.

As described in the Caltrans Highway Design Manual, bicycle facilities are classified as follows:

- Class I Bikeway (Bike Path). Provides a completely separate right-of-way and is designated for the exclusive use of bicycles and pedestrians with vehicle and pedestrian cross-flow minimized.
- Class II Bikeway (Bike Lane). Provides a restricted right-of-way and is designated for the use of bicycles with a striped lane on a street or highway. Vehicle parking and vehicle/pedestrian crossflow are permitted.
- Class III Bikeway (Bike Route). Provides for a right-of-way designated by signs or pavement markings for shared use with pedestrians or motor vehicles.

Currently, there are no existing bicycle facilities along any of the streets in the Project vicinity. Rio Hondo Bike Path, a bicycle and off-road biking trail exists south of the Project site which connects to the regional bike path along the Rio Hondo channel.

Pedestrian facilities in the Project vicinity consist of sidewalks along street frontages. Sidewalks exist along the length of Zindell Avenue and Gage Avenue in the vicinity of the Project site.

Public Transportation

The Project study area is served by Los Angeles County Metropolitan Transportation Authority (Metro) bus lines, City of Commerce Municipal Bus lines, and Montebello Bus lines. The Commerce Metrolink Station, located approximately 1.5 miles northwest of the Project site, provides access to the Orange County Line, a regional train service running from Oceanside to Los Angeles. The transit routes serving the Project area are described below and shown in Figure 3.15-8, Existing Transit Services:

- **Metro Line 62** – Line 62 is a local line that travels from downtown Los Angeles to Hawaiian Gardens via Telegraph Road, with average headways of 20 to 25 minutes in the morning and afternoon peak hours. This line travels along Telegraph Road in the vicinity of the Project, with a stop at Telegraph Road & Slauson Avenue.
- **Metro Line 108** – Line 108 is a local line that travels from Pico Rivera to Venice via Slauson Avenue, with average headways of 10 to 20 minutes in the morning peak hours and 10 minutes in the afternoon peak hours. This line travels along Slauson Avenue in the vicinity of the Project, with a stop at Gage Avenue & Slauson Avenue.
- **Metro Line 110** – Line 110 is a local line that travels from Bell Gardens to Playa Vista via Gage Avenue, with average headways of 15 to 30 minutes in the morning peak hours and 25 to 30 minutes in the afternoon peak hours. This line travels along Slauson Avenue in the vicinity of the Project, with a stop at Gage Avenue & Garfield Avenue.
- **Metro Line 265** – Line 265 is a local line that travels from Lakewood to Pico Rivera via Paramount Boulevard, with average headways of 40 to 60 minutes in the morning peak hours and one hour in the afternoon peak hours. This line travels along Slauson Avenue in the vicinity of the Project, with a stop at Paramount Boulevard & Slauson Avenue.
- **Metro Line 358** – Line 358 is a local line that travels from Pico Rivera to Venice via Slauson Avenue, with average headways of 10 to 20 minutes in the morning peak hours and 10 minutes in the afternoon peak hours. This line travels along Slauson Avenue in the vicinity of the Project, with a stop at Gage Avenue & Slauson Avenue.
- **Commerce Green Line** – The Green Line is a local line that provides service to the western portion of Commerce, with average headways of 65 to 75 minutes throughout the day. This line provides service to the Commerce Metrolink Station, Commerce City Hall and a local shopping center, with a stop adjacent to the Project.
- **Commerce Orange Line** – The Orange Line is a local line that provides service to the western portion of Commerce, with average headways of 85 minutes throughout the day. This line provides service to The Citadel, Commerce Metrolink Station, and Commerce City Hall, with a stop adjacent to the Project.
- **Commerce Yellow Line** – The Yellow Line is a local line that provides service to the western portion of Commerce, with average headways of 70 minutes throughout the day. This line provides service to Commerce City Hall, Commerce Metrolink Station, and a local shopping center, with a stop within 0.5 miles of the Project.
- **Montebello M-20** – The M-20 Line is a local line that provides service from San Gabriel to Montebello, with average headways of 20 minutes in the morning and afternoon peak hours. This line travels along Telegraph Road in the vicinity of the Project, with a stop at Telegraph Road & Gage Road.

Table 3-15.7 summarizes the transit routes operating in the vicinity of the Project site. It shows the routes organized by service providers, the type of service (peak vs. off-peak, rapid vs. local), and frequency of service, as described above. The average Metro headways during the peak hour were estimated using detailed April 2019 trip and ridership data provided by Metro.

Table 3.15-7. Existing Transit Service in Study Area

Provider, Route, and Service Area		Service Type	Hours of Operation	Average Headway (minutes)[a]			
				Morning Peak Period		*Afternoon Peak Period*	
				NB/EB	*SB/WB*	*NB/EB*	*SB/WB*
Metro Bus Service							
62	Downtown Los Angeles to Hawaiian Gardens via Telegraph Road	Local	5:00 A.M. - 12:00 A.M.	22	24	22	24
108/358	Pico Rivera to Venice via Slauson Avenue	Local	5:00 A.M. - 10:00 P.M.	14	18	11	10
110	Bell Gardens to Playa Vista via Gage Avenue	Local	5:00 A.M. - 11:30 P.M.	20	18	27	30
265	Lakewood to Pico Rivera via Paramount Boulevard	Local	5:30 A.M. - 9:00 P.M.	48	40	60	60
City of Commerce							
Green	Loop from the Citidel to southeast Commerce	Local	5:30 A.M. - 9:30 P.M.	65	N/A	75	N/A
Orange	Loop from the Citidel to southeast Commerce	Local	5:30 A.M. - 6:30 P.M.	85	N/A	85	N/A
Yellow	Loop from the Citidel to southeast Commerce	Local	5:30 A.M. - 12:00 A.M.	70	N/A	70	N/A
Montebello Bus Lines							
M-20	San Gabriel to south Montebello via San Gabriel Boulevard	Local	7:00 A.M. - 6:00 P.M.	20	20	20	20

Source: Gibson Transportation Consulting, Inc.

Rail Transit

The Burlington Northern Santa Fe (BNSF) Railway and Union Pacific Railroad operate railroad facilities in the vicinity of the Project site. The BNSF Railway Los Angeles Intermodal Facility (also known as Hobart Yard) is located approximately five miles north of the Project site. There is a railroad crossing just south of the I-5 freeway southbound ramps and Gage Avenue/Slauson Avenue intersection near the Project site. As mentioned previously, this line serves heavy freight trains and has an infrequent service.

3.15.2 Relevant Plans, Policies, and Ordinances

Federal

There are no federal regulations pertaining to transportation that would apply to the proposed Project.

State

The following state regulations pertaining to transportation would apply to the proposed Project.

California Department of Transportation

Caltrans is the public agency responsible for designing, building, operating, and maintaining California's state highway system, which consists of freeways, highways, expressways, toll roads, and the area between the roadways and property lines. Caltrans is also responsible for permitting and regulating the use of state roadways. Caltrans' construction practices require temporary traffic control planning during any activities that interfere with the normal function of a state roadway. Where applicable, the parameters set forth in Caltrans' *Guide for the Preparation of Traffic Impact Studies* (Caltrans 2002) were used in the traffic analysis of Caltrans facilities.

Senate Bill (SB) 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 the review under the California Environmental Quality Act (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 (Section 21099).

Among other things, 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. Currently, environmental review of transportation impacts focuses on the delay that vehicles experience at intersections and on roadway segments, which is often measured using LOS.

Pursuant to SB743, the focus of transportation analysis changes from vehicle delay to vehicle miles traveled (VMT). OPR released two rounds of draft proposals for updating the CEQA Guidelines related to evaluating transportation impacts and, after further study and consideration of public comment, submitted a final set of revisions to the Natural Resources Agency in November 2017. This was followed by a rulemaking process that would implement the requirements of the legislation. The updates to the CEQA Guidelines required under SB 743 were approved on December 28, 2018. OPR's regulatory text indicates that a public agency may immediately commence implementation of the new transportation impact guidelines, and that the guidelines must be implemented statewide by January 1, 2020.

The City of Commerce has not yet adopted local VMT criteria, therefore, this section is based on traffic impact study that provides a delay-based level of service analysis for the proposed Project.

Local

The following local/regional regulations pertaining to transportation would apply to the proposed Project.

City Of Commerce 2020 General Plan

The City of Commerce adopted the 2020 General Plan (adopted in January 2008) and the Transportation Element includes a discussion of the stated intersection performance standard for the City. The City has established LOS D as a target LOS, and LOS E as a threshold LOS standard as part of the General Plan. While the Transportation Element of the General Plan contains a performance standard, per City's direction the traffic study has employ ed more specific intersection impact threshold criteria for purposes of determining significant traffic impacts for which mitigation is then required, if feasible.

City Of Bell Gardens General Plan

The City of Bell Gardens General Plan Circulation and Transportation Element (adopted July 27, 1995) does not establish a target LOS; it acknowledges that urban streets should be typically designed to operate at LOS D. However LOS E operation occurs at the maximum volume a facility can accommodate.

City Of Pico Rivera General Plan 2014

The City of Pico Rivera General Plan Circulation Element (adopted 2014) strives to achieve and maintain operations at intersections at LOS D or better at peak travel tines within the City.

City Of Downey 2025 General Plan

The City of Downey adopted the 2025 General Plan (adopted in January 2005) and the Circulation Element includes a discussion of the stated intersection performance standard for the City. The City of Downey general plan advances programs to reduce congestion to provide acceptable LOS D or better and considers LOS E or F as unacceptable.

3.15.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to area transportation are based on Appendix G of the State CEQA Guidelines. Through the analysis in the Initial Study (see Appendix A), it was determined that the proposed Project could have a potentially significant impact to area transportation. Accordingly, all of the thresholds are further analyzed in the EIR. According to Appendix G of the State CEQA Guidelines, a significant impact related to area transportation would occur if the Project would:

A. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
B. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).
C. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
D. Result in inadequate emergency access.

3.15.4 Methodology

Based on the above thresholds from Appendix G of the State CEQA Guidelines and the guidelines for assessment of transportation impacts used by the City of Commerce, the following significance criteria were used to determine impacts to transportation facilities.

Intersection Impact Criteria and Thresholds

City of Commerce

The significance of the potential impacts of Project-generated traffic at the signalized study intersections was determined using criteria established by the City. According to the Sliding Scale Method for calculating the level of impact due to the proposed Project, a significant transportation impact is determined based on the criteria presented in Table 3.15-8.

The guidelines indicate that a Project is considered to have a significant traffic impact on a signalized intersection if the increase in the V/C ratio attributable to the Project exceeds a specific threshold based on the final intersection LOS, as described in the table below. For unsignalized intersections that have an approach that operates at LOS E or worse, a signal warrant analysis is needed to determine if the intersection meets the warrants for installation of a traffic signal.

Table 3.15-8. City of Commerce Signalized Intersection Impact Threshold Criteria

Final *v/c*	Level of Service	Project Related Increase in *v/c*
> 0.700 – 0.800	C	Equal to or greater than 0.04
> 0.800 – 0.900	D	Equal to or greater than 0.02
> 0.900 – 1.000	E	Equal to or greater than 0.01
> 1.000	F	Equal to or greater than 0.01

Source: Gibson Transportation Consulting, Inc.

Caltrans

An analysis of Caltrans facilities, including freeway mainline segments, intersections, off-ramp queuing and on-ramp capacity was conducted to provide further information to the decision makers. The analysis follows the guidelines found in Guide for the Preparation of Traffic Impact Studies (Caltrans, December 2002) (Caltrans TIS Guide). Within the study area, Caltrans has jurisdiction over three types of facilities: freeway mainline facilities; freeway ramp intersections; and freeway off-ramps.

Freeway Mainline Segments

In the absence of specific Caltrans criteria for evaluating impacts to freeway mainline segments, the segments were analyzed for the proposed Project's effect on operating conditions. Consistent with Caltrans guidelines, the freeway mainline segments within the study area have been assessed using HCM 6th Edition analysis methodology. The HCM methodology for freeway facilities calculates vehicle density (passenger car lengths per mile per lane) and assigns an LOS letter grade from LOS A to LOS F. Table 3.15-9 shows the LOS and density relationship for mainline freeway segments below.

Table 3.15-9. Level of Service Definitions for Freeways per HCM Methodology

Level of Service	Description	Density[a]
A	Free-flow speeds prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.	≤ 11
B	Free-flow speeds are maintained. The ability to maneuver with the traffic stream is only slightly restricted.	> 11 and ≤ 18
C	Flow with speeds at or near free-flow speeds. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver.	> 18 and ≤ 26
D	Speeds decline slightly with increasing flows. Freedom to maneuver with the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort.	> 26 and ≤ 35
E	Operation at capacity. There are virtually no usable gaps within the traffic stream, leaving little room to maneuver. Any disruption can be expected to produce a breakdown with queuing.	> 35 and ≤ 45
F	Represents a breakdown in flow and oversaturated conditions.	> 45

Source: *Highway Capacity Manual 6th Edition* (Transportation Research Board, 2016) and Caltrans.
Notes:
[a] Density is defined in vehicles per mile per lane and describes the proximity to other vehicles and is related to the freedom to maneuver within the traffic stream (*Highway Capacity Manual 6th Edition,* Transportation Research Board, 2016).

Caltrans guidelines provide that a target LOS at the transition between LOS C and LOS D is recommended. However, Caltrans also acknowledges that this target may not always be feasible, and if an existing State Highway facility is operating below the appropriate target LOS, the existing LOS should be maintained.

In the absence of specific incremental criteria by which to measure the significance of impacts to freeway facilities, it was conservatively assumed that the Project would significantly impact a freeway segment if the addition of Project traffic to these segments would increase the traffic volumes by more than 2%.

Freeway Ramp Intersections

Caltrans has not published specific criteria that defines a significant impact for signalized or unsignalized intersections. The operation of intersections under Caltrans jurisdiction are analyzed using HCM methodology. The Vistro software suite was used to determine the LOS based on the HCM methodology at intersections under Caltrans jurisdiction.

Freeway Off-Ramps

Freeway off-ramps are analyzed for ramp queue lengths using HCM methodology, as applied in the Vistro software suite. The assessment of the off-ramps included a review of the vehicle queue length as compared to: 1) the storage length of an individual approach lane at the junction of the ramp with the surface street intersection; and, 2) queuing capacity of the ramp to determine if the queue length could result in vehicles backing up onto the freeway mainline. The queue may exceed the striped length of a given approach lane, but as long as there is sufficient additional queuing capacity on the ramp, it will not spill over onto the freeway mainline.

3.15.5 Impacts Analysis

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

The following discussion relates to potential Project impacts to circulation system, including transit, roadway, bicycle and pedestrian facilities. Further, see Section 3.10, Land Use and Planning, of this EIR for a discussion of the proposed Project's consistency with applicable land use plans.

Project Trip Generation

The trip generation estimates for the Project were developed based on the rates documented in Trip Generation, 9th Edition, Trip Generation, 10th Edition (ITE, 2017) and Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region (San Diego Association of Governments, April 2002). These rates are based on surveys of similar land uses at sites around the country and are provided as both daily rates and morning and afternoon peak hour rates. They relate the number of vehicle trips traveling to and from the Project site to the size of development of each land use.

Appropriate trip generation reductions to account for trips shared between the different uses within the Project and pass-by trips were made when appropriate. Internal capture adjustments were considered as part of the trip generation estimates to account for person trips made between the different uses of the Project without using an off-site road connection. These internal capture values were determined by using National Cooperative Highway Research Program (NCHRP) 8-51 Internal Trip Capture Estimation Tool (Transportation Research Board and National Research Council, 2011). The resulting worksheets are provided in Appendix D of the TIS.

Pass-by adjustments were also applied to the Project trip generation estimates to account for Project trips made by drivers stopping on the way to another destination. The pass-by trips are not new trips to the study area. Because the City does not have guidelines for trip credits, the report used pass-by credits allowed by the Los Angeles Department of Transportation in Transportation Impact Study Guidelines (LADOT, December 2016).

Table 3.15-10 presents the trip generation estimates for the Project site. As shown, the Project is expected to generate a net increase of 10,902 weekday daily trips, including an increase of 510 weekday morning peak hour trips (207 inbound trips and 303 outbound trips) and an increase of 695 weekday afternoon peak hour trips (390 inbound trips and 305 outbound trips).

Table 3.15-10. City of Commerce Signalized Intersection Impact Threshold Criteria

Trip Generation Rates[a]									
				Morning Peak Hour			*Afternoon Peak Hour*		
Land Use	*ITE Land Use*	*Rate*	*Daily*	*In*	*Out*	*Total*	*In*	*Out*	*Total*
Multifamily Housing (Mid-Rise) Residential	221	per du	5.44	26%	74%	0.36	61%	39%	0.44
Public Park	411	per acre	0.78	59%	41%	0.02	55%	45%	0.11
Bowling Alley	437	per ksf	11.60	95%	5%	0.81	65%	35%	1.16
Movie Theater	445[b]	per seat	1.8	0%	0%	0	36%	64%	0.08
Health Club	492[c]	per ksf	32.93	51%	49%	1.31	57%	43%	3.45
Recreational Community Center	495	per ksf	28.82	66%	34%	1.76	47%	53%	2.31
Shopping Center	820	per ksf	37.75	62%	38%	0.94	48%	52%	3.81
Supermarket	850	per ksf	106.78	60%	40%	3.82	51%	49%	9.24
Pharmacy	880	per ksf	90.08	65%	35%	2.94	49%	51%	8.51
High Turnover Sit-Down Restaurant	932	per ksf	112.18	55%	45%	9.94	62%	38%	9.77
Mixed Use Internal Capture Credit[d]									
Multifamily Housing (Mid-Rise) Residential	221	per du	18%	6%	8%	8%	31%	23%	28%
Cinema/Entertainment	437, 445, 492, 495	Various	4%	0%	0%	0%	7%	8%	8%
Retail	820, 850, 880	per ksf	25%	11%	16%	13%	26%	45%	25%
High-Turnover (Sit-Down) Restaurant	932	per ksf	38%	28%	14%	21%	46%	68%	54%
Trip Generation Estimates									
				Morning Peak Hour			*Afternoon Peak Hour*		
Land Use	*ITE Land Use*	*Size*	*Daily*	*In*	*Out*	*Total*	*In*	*Out*	*Total*
Existing Active Land Use Credits									
Public Park	411	6 acres	4	0	0	0	0	1	1
Recreational Community Center	495	64.444 ksf	1,857	75	38	113	70	79	149
		Pass-by Adjustment[e] 20%	*(371)*	*(15)*	*(8)*	*(23)*	*(14)*	*(16)*	*(30)*
		Existing Land Use Credits Subtotal	***1,491***	***60***	***31***	***91***	***56***	***63***	***119***

Table 3.15-10. City of Commerce Signalized Intersection Impact Threshold Criteria

Proposed Project										
Multifamily Housing (Mid-Rise) Residential	221	850	du	4,624	80	226	306	228	146	374
Internal Capture Adjustment[d]				*(832)*	*(5)*	*(18)*	*(23)*	*(71)*	*(34)*	*(105)*
Residential Subtotal				**3,792**	**75**	**208**	**283**	**157**	**112**	**269**
Public Park	411	5	acres	4	0	0	0	0	1	1
Bowling Alley	437	20.000	ksf	232	15	1	16	15	8	23
Internal Capture Adjustment[d]				*(10)*	*0*	*0*	*0*	*(1)*	*(1)*	*(2)*
Movie Theater	445 [b]	2,200	seats	3,960	0	0	0	63	113	176
Internal Capture Adjustment[d]				*(139)*	*0*	*0*	*0*	*(4)*	*(9)*	*(13)*
Pass-by Adjustment[e] 10%				*(382)*	*0*	*0*	*0*	*(6)*	*(10)*	*(16)*
Health Club	492[c]	15.000	ksf	494	10	10	20	29	23	52
Internal Capture Adjustment[d]				*(20)*	*0*	*0*	*0*	*(2)*	*(2)*	*(4)*
Pass-by Adjustment[e] 20%				*(99)*	*(2)*	*(2)*	*(4)*	*(6)*	*(4)*	*(10)*
Recreational Community Center[f]	495	81.361	ksf	2,345	95	48	143	88	100	188
Internal Capture Adjustment[d]				*(82)*	*0*	*0*	*0*	*(6)*	*(8)*	*(14)*
Pass-by Adjustment[e] 20%				*(453)*	*(19)*	*(10)*	*(29)*	*(16)*	*(19)*	*(35)*
Shopping Center	820	28.000	ksf	1,057	16	10	26	51	56	107
Internal Capture Adjustment[d]				*(270)*	*(2)*	*(2)*	*(4)*	*(13)*	*(25)*	*(38)*
Pass-by Adjustment[e] 50%				*(394)*	*(7)*	*(4)*	*(11)*	*(16)*	*(18)*	*(34)*
Supermarket	850	25.000	ksf	2,670	57	39	96	118	113	231
Internal Capture Adjustment[d]				*(641)*	*(6)*	*(6)*	*(12)*	*(31)*	*(51)*	*(82)*
Pass-by Adjustment[e] 40%				*(811)*	*(20)*	*(13)*	*(33)*	*(29)*	*(31)*	*(60)*
Pharmacy	880	6.000	ksf	540	11	7	18	25	26	51
Internal Capture Adjustment[d]				*(130)*	*(1)*	*(1)*	*(2)*	*(7)*	*(12)*	*(19)*
Pass-by Adjustment[e] 40%				*(164)*	*(4)*	*(2)*	*(6)*	*(6)*	*(7)*	*(13)*
High Turnover Sit-Down Restaurant	932	16.000	ksf	1,795	87	72	159	97	59	156
Internal Capture Adjustment[d]				*(673)*	*(24)*	*(10)*	*(34)*	*(45)*	*(40)*	*(85)*
Pass-by Adjustment[e] 20%				*(224)*	*(14)*	*(11)*	*(25)*	*(9)*	*(5)*	*(14)*
Commercial / Recreational Subtotal				**8,601**	**192**	**126**	**318**	**289**	**256**	**545**
Total - net new project trips				**10,902**	**207**	**303**	**510**	**390**	**305**	**695**

Notes:
ksf: 1,000 square feet

du: Dwelling unit

[a] Source: *Trip Generation, 10th Edition*, Institute of Transportation Engineers, 2017.

[b] Weekday Daily trip generation rates source: *Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, San Diego Association of Governments, April 2002.

[c] Weekday Daily trip generation rate source: *Trip Generation, 9th Edition, Institute of Transportation Engineers, 2012.*

[d] Internal capture adjustments account for person trips made between distinct land uses within a mixed-use development without using an off-site road system. Based on the NCHRP 8-51 Internal Trip Capture Estimation Tool (National Cooperative Highway Research Program Report 684 – Enhancing Internal Trip Capture Estimation for Mixed-Use Developments, Transportation Research Board and National Research Council, 2011), the Project trips can potentially be adjusted for over 25% internal capture adjustments.

[e] Pass-by adjustments account for Project trips made as an intermediate stop on the way from an origin to a primary trip destination without route diversion.

[f] Includes 76,361 sf community center and 5,000 sf museum.

Project Trip Distribution and Assignment

The geographic distribution of traffic generated by the Project was derived using the methods described previously for related projects. The general geographic trip distribution pattern used in the assignment of Project-generated traffic for the residential uses is illustrated in Figure 3.15-9, Project Trip Distribution-Residential, and for the non-residential uses in Figure 3.15-10, Project Trip Distribution Commercial.

The Project trip generation estimates summarized in Table 3.15-10 and the distribution patterns illustrated in Figure 3.15-9 and Figure 3.15-10 were used to assign the Project-generated traffic to the local and regional street system and through the eight study intersections. Figure 3.15-11, Project-Only Peak Hour Traffic Volumes, illustrates the assignment of Project-generated peak hour traffic volumes at each of the 27 study intersections during a typical weekday.

Existing with Project Conditions

The Existing with Project Conditions reflect existing conditions with the addition of Project traffic. The Project-only morning and afternoon peak hour traffic volumes shown in Figure 3.15-11 were added to the existing morning and afternoon peak hour traffic volumes shown in Figure 3.15-2. The resulting volumes are illustrated in Figure 3.15-12, Existing with Project Conditions (Year 2019) Peak Hour Traffic Volumes and represent Existing with Project Conditions.

Existing with Project Intersection Levels of Service

Table 3.15-11 summarizes the results of the Existing with Project Conditions during the weekday morning and afternoon peak hours for the 27 study intersections. As shown in Table 3.15-11, the results of this analysis indicate that 13 of the 27 study intersections are would operate at LOS D or better during the weekday morning and afternoon peak hours. The remaining intersections operate at LOS E or F during the morning or afternoon peak periods.

The intersections projected to operate at LOS E or LOS F include:

1. Paramount Boulevard & Washington Boulevard (LOS E in the PM peak hour)
4. Telegraph Road & I-5 Northbound Ramps (Garfield Avenue) (LOS E in the PM peak hour)
6. Telegraph Road & I-5 Northbound Off-Ramp (Slauson Avenue) (LOS E in the PM peak hour)
8. Garfield Avenue & Bandini Boulevard (LOS E in the AM peak hour)
9. I-5 Northbound Ramps & Bandini Boulevard (LOS F in the PM peak hour)
13. I-5 Southbound Ramps/Gage Avenue & Slauson Avenue (LOS F in the PM peak hour)

14 Telegraph Road & Slauson Avenue (LOS E in the PM peak hour)
15 Paramount Boulevard & Slauson Avenue (LOS E in the PM peak hour)
16 Rosemead Boulevard & Slauson Avenue (LOS E in the PM peak hour)
17 Eastern Avenue & Gage Avenue (LOS E in the PM peak hour)
18 Garfield Avenue & Gage Avenue (LOS E in the PM peak hour)
22 Eastern Avenue & Florence Avenue (LOS E in the PM peak hour)
26 Telegraph Road & Paramount Boulevard (LOS E in the PM peak hour)
27 Telegraph Road & Rosemead Boulevard (LOS F in the PM peak hour)

As detailed in Table 3.15-11, when measuring the Existing with Project Conditions against Existing Conditions, the incremental increases in the V/C ratios resulting from Project traffic would exceed the thresholds of the significant impact criteria at eight of the 27 study intersections under Existing with Project Conditions.

The relative impact of the added Project traffic volumes during the peak hours was evaluated based on analysis of existing operating conditions at the study intersections without and with the Project. The City's significance criteria and thresholds were then used to determine the significance of a transportation impact caused by the Project on the study intersection, prior to any Project improvements or trip reduction measures. The potential Project impacts on the Existing with Project Conditions during the weekday morning and afternoon peak hours are shown in Table 3.15-11.

The Project would cause a significant impact at eight of the 27 analyzed intersections, as follows:

4 Telegraph Road & I-5 Northbound Ramps (Garfield Avenue) - ≥0.02 V/C increase at LOS D in the AM peak hour and ≥0.01 V/C increase at LOS E in the PM peak hour
6 Telegraph Road & I-5 Northbound Off-Ramp (Slauson Avenue) - ≥1.0 seconds increase at LOS E in the PM peak hour
13 I-5 Southbound Ramps / Gage Avenue & Slauson Avenue - ≥0.04 V/C increase at LOS C in the AM peak hour and ≥0.01 V/C increase at LOS F in the PM peak hour
14 Telegraph Road & Slauson Avenue - ≥0.02 V/C increase at LOS D in the AM peak hour and ≥0.01 V/C increase at LOS E in the PM peak hour
17 Eastern Avenue & Gage Avenue - ≥0.01 V/C increase at LOS E in the PM peak hour
18 Garfield Avenue & Gage Avenue - ≥0.02 V/C increase at LOS D in the AM peak hour and ≥0.01 V/C increase at LOS E in the PM peak hour
22 Eastern Avenue & Florence Avenue - ≥0.02 V/C increase at LOS D in the AM peak hour and ≥0.01 V/C increase at LOS E in the PM peak hour
26 Telegraph Road & Paramount Boulevard - ≥0.01 V/C increase at LOS E in the PM peak hour

A discussion of proposed mitigation measures is included in Section 3.15.7 as follows.

Future with Project Conditions

The future year analysis of the Year 2023 corresponds to the anticipated buildout year of the Project. The Project-only morning and afternoon peak hour traffic volumes shown in Figure 3.15-11 were added to the existing morning and afternoon peak hour traffic volumes shown in Figure 3.15-6. The resulting volumes are illustrated in Figure 3.15-13 and represent Future with Project Conditions after development of the Project under Future without Project Conditions.

Future with Project Intersection Levels of Service

Table 3.15-12 summarizes the results of the Future with Project Conditions during the weekday morning and afternoon peak hours for the 27 study intersections. As shown in Table 3.15-12, the results of this analysis indicate that 10 of the 27 study intersections are currently operating at LOS D or better during the weekday morning and afternoon peak hours.

The following intersections operate at LOS E or F during at least one of the peak periods:

1 Paramount Boulevard & Washington Boulevard (LOS E in the AM and PM peak hour)
2 Rosemead Boulevard & Washington Boulevard (LOS E in the PM peak hour)
4 Telegraph Road & I-5 Northbound Off-Ramp (Garfield Avenue) (LOS E in the PM peak hour)
6 Telegraph Road & I-5 Northbound Off-Ramp (Slauson Avenue) (LOS F in the PM peak hour)
8 Garfield Avenue & Bandini Boulevard (LOS F in the AM peak hour)
9 I-5 Southbound Ramps & Bandini Boulevard (LOS F in the PM peak hour)
11 Garfield Avenue & Slauson Avenue (LOS E in the AM and PM peak hour)
13 I-5 Southbound Ramps / Gage Avenue & Slauson Avenue (LOS F in the PM peak hour)
14 Telegraph Road & Slauson Avenue (LOS E in the AM and PM peak hour)
15 Paramount Boulevard & Slauson Avenue (LOS E in the PM peak hour)
16 Rosemead Boulevard & Slauson Avenue (LOS E in the PM peak hour)
17 Eastern Avenue & Gage Avenue (LOS F in the PM peak hour)
18 Garfield Avenue & Gage Avenue (LOS E in the AM and PM peak hour)
22 Eastern Avenue & Florence Avenue (LOS E in the AM peak hour, LOS F in the PM peak hour)
25 I-5 Northbound Ramps & Paramount Boulevard (LOS E in the PM peak hour)
26 Telegraph Road & Paramount Boulevard (LOS F in the PM peak hour)
27 Telegraph Road & Rosemead Boulevard (LOS E in the AM peak hour, LOS F in the PM peak hour)

The relative impact of the added Project traffic volumes during the peak hours was evaluated based on analysis of existing operating conditions at the study intersections without and with the Project. The City's significance criteria and thresholds as shown in Table 3.15-8 were then used to determine the significance of a transportation impact caused by the Project on the study intersection, prior to any Project improvements or trip reduction measures. The potential Project impacts on the Future with Project Conditions during the weekday morning and afternoon peak hours are shown in Table 3.15-12.

The Project would cause a significant impact at nine of the 27 analyzed intersections, as follows:

4 Telegraph Road & I-5 Northbound Ramps (Garfield Avenue) - ≥0.02 V/C increase at LOS D in the AM peak hour and ≥0.01 V/C increase at LOS E in the PM peak hour
6 Telegraph Road & I-5 Northbound Off-Ramp (Slauson Avenue) - ≥1.0 seconds increase at LOS E in the PM peak hour)
11. Garfield Avenue & Slauson Avenue - ≥0.01 V/C increase at LOS E in the PM peak hour
13 I-5 Southbound Ramps / Gage Avenue & Slauson Avenue - ≥0.02 V/C increase at LOS D in the AM peak hour and ≥0.01 V/C increase at LOS F in the PM peak hour

14 Telegraph Road & Slauson Avenue - ≥0.01 V/C increase at LOS E in the AM and the PM peak hour

17 Eastern Avenue & Gage Avenue - ≥0.01 V/C increase at LOS F in the PM peak hour

18 Garfield Avenue & Gage Avenue - ≥0.01 V/C increase at LOS E in the AM and the PM peak hour

22 Eastern Avenue & Florence Avenue - ≥0.01 V/C increase at LOS E in the AM and LOS F the PM peak hour

26 Telegraph Road & Paramount Boulevard - ≥0.01 V/C increase at LOS F in the PM peak hour

A discussion of proposed mitigation measures is included in Section 3.15.7.

Table 3.15-11. Existing with Project Conditions (Year 2019) Intersection Levels of Service and Significant Impact

No.	Intersection	Peak Hour	Existing Conditions		Existing with Project Conditions			
			V/C or Delay	*LOS*	*V/C or Delay*	*LOS*	*Δ V/C*	*Impact*
1.	Paramount Boulevard & Washington Boulevard	A.M. P.M.	0.860 0.928	D E	0.862 0.934	D E	0.002 0.006	NO NO
2.	Rosemead Boulevard & Washington Boulevard	A.M. P.M.	0.848 0.880	D D	0.852 0.887	D D	0.004 0.007	NO NO
3.	Garfield Avenue & Telegraph Road	A.M. P.M.	0.717 0.755	C C	0.726 0.763	C C	0.009 0.008	NO NO
4.	Telegraph Road & I-5 NB Ramps (Garfield Avenue)	A.M. P.M.	0.771 0.875	C D	0.808 0.907	D E	0.037 0.032	YES YES
5.	Telegraph Road & Greenwood Avenue	A.M. P.M.	0.710 0.716	C C	0.732 0.726	C C	0.022 0.010	NO NO
6.[a]	Telegraph Road & I-5 NB Off Ramp (Slauson Avenue)	A.M. P.M.	6.7 62.9	A E	7.6 69.5	A E	0.9 6.6	NO YES
7.	Eastern Avenue & Bandini Boulevard	A.M. P.M.	0.756 0.735	C C	0.766 0.739	C C	0.010 0.004	NO NO
8.	Garfield Avenue & Bandini Boulevard	A.M. P.M.	0.975 0.825	E D	0.983 0.838	E D	0.008 0.013	NO NO
9.[a]	I-5 SB Ramps & Bandini Boulevard	A.M. P.M.	20.8 82.2	C F	21.1 83.0	C F	0.3 0.8	NO NO
10.	Eastern Avenue & Slauson Avenue	A.M. P.M.	0.756 0.827	C D	0.770 0.838	C D	0.014 0.011	NO NO
11.	Garfield Avenue & Slauson Avenue	A.M. P.M.	0.860 0.861	D D	0.867 0.874	D D	0.007 0.013	NO NO
12.	Greenwood Avenue & Slauson Avenue	A.M. P.M.	0.613 0.709	B C	0.635 0.742	B C	0.022 0.033	NO NO
13.	I-5 SB Ramps / Gage Avenue & Slauson Avenue	A.M. P.M.	0.719 0.910	C E	0.784 1.062	C F	0.065 0.152	YES YES
14.	Telegraph Road & Slauson Avenue	A.M. P.M.	0.807 0.871	D D	0.857 0.901	D E	0.050 0.030	YES YES
15.	Paramount Boulevard & Slauson Avenue	A.M. P.M.	0.802 0.901	D E	0.810 0.908	D E	0.008 0.007	NO NO
16.	Rosemead Boulevard & Slauson Avenue	A.M. P.M.	0.805 0.904	D E	0.817 0.908	D E	0.012 0.004	NO NO

Table 3.15-11. Existing with Project Conditions (Year 2019) Intersection Levels of Service and Significant Impact

No.	Intersection	Peak Hour	Existing Conditions		Existing with Project Conditions			
			V/C or Delay	*LOS*	*V/C or Delay*	*LOS*	*Δ V/C*	*Impact*
17.	Eastern Avenue & Gage Avenue	A.M.	0.805	D	0.821	D	0.016	NO
		P.M.	0.935	E	0.954	E	0.019	YES
18.	Garfield Avenue & Gage Avenue	A.M.	0.849	D	0.874	D	0.025	YES
		P.M.	0.886	D	0.922	E	0.036	YES
19.	Greenwood Avenue & Gage Avenue	A.M.	0.497	A	0.515	A	0.018	NO
		P.M.	0.513	A	0.540	A	0.027	NO
20.	Gage Avenue & Zindell Avenue	A.M.	0.449	A	0.630	B	0.181	NO
		P.M.	0.419	A	0.591	A	0.172	NO
21.[b]	Gage Avenue & Project Driveway	A.M.	0.3	A	4.8	A	4.5	NO
		P.M.	0.4	A	8.1	A	7.7	NO
22.	Eastern Avenue & Florence Avenue	A.M.	0.852	D	0.873	D	0.021	YES
		P.M.	0.941	E	0.954	E	0.013	YES
23.	Garfield Avenue & Florence Avenue	A.M.	0.777	C	0.784	C	0.007	NO
		P.M.	0.738	C	0.752	C	0.014	NO
24.[a]	I-5 SB Ramps & Paramount Boulevard	A.M.	4.9	A	4.9	A	0.0	NO
		P.M.	10.5	B	10.8	B	0.3	NO
25.	I-5 NB Ramps & Paramount Boulevard	A.M.	0.612	B	0.615	B	0.003	NO
		P.M.	0.895	D	0.897	D	0.002	NO
26.	Telegraph Road & Paramount Boulevard	A.M.	0.800	C	0.815	D	0.015	NO
		P.M.	0.951	E	0.973	E	0.022	YES
27.	Telegraph Road & Rosemead Boulevard	A.M.	0.884	D	0.888	D	0.004	NO
		P.M.	1.001	F	1.008	F	0.007	NO

Source: Gibson Transportation Consulting, Inc.
Notes:
[a] Unsignalized Intersection
[b] Project is proposing to install signal at intersection

Table 3.15-12. Future with Project Conditions (Year 2023) Intersection Levels of Service and Significant Impact

No.	Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions			
			V/C or Delay	*LOS*	*V/C or Delay*	*LOS*	*Δ V/C*	*Impact*
1.	Paramount Boulevard & Washington Boulevard	A.M.	0.905	E	0.906	E	0.001	NO
		P.M.	0.976	E	0.982	E	0.006	NO
2.	Rosemead Boulevard & Washington Boulevard	A.M.	0.892	D	0.896	D	0.004	NO
		P.M.	0.926	E	0.933	E	0.007	NO
3.	Garfield Avenue & Telegraph Road	A.M.	0.760	C	0.769	C	0.009	NO
		P.M.	0.806	D	0.814	D	0.008	NO
4.	Telegraph Road & I-5 NB Ramps (Garfield Avenue)	A.M.	0.827	D	0.864	D	0.037	YES
		P.M.	0.951	E	0.983	E	0.032	YES

Table 3.15-12. Future with Project Conditions (Year 2023) Intersection Levels of Service and Significant Impact

No.	Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions			
			V/C or Delay	*LOS*	*V/C or Delay*	*LOS*	*Δ V/C*	*Impact*
5.	Telegraph Road & Greenwood Avenue	A.M.	0.758	C	0.780	C	0.022	NO
		P.M.	0.752	C	0.762	C	0.010	NO
6.[a]	Telegraph Road & I-5 NB Off Ramp (Slauson Avenue)	A.M.	10.1	B	11.5	B	1.4	NO
		P.M.	94.5	F	103.9	F	9.4	YES
7.	Eastern Avenue & Bandini Boulevard	A.M.	0.799	C	0.808	D	0.009	NO
		P.M.	0.777	C	0.782	C	0.005	NO
8.	Garfield Avenue & Bandini Boulevard	A.M.	1.030	F	1.038	F	0.008	NO
		P.M.	0.867	D	0.880	D	0.013	NO
9.[a]	I-5 SB Ramps & Bandini Boulevard	A.M.	25.1	C	25.7	C	0.6	NO
		P.M.	101.0	F	101.7	F	0.7	NO
10.	Eastern Avenue & Slauson Avenue	A.M.	0.800	C	0.815	D	0.015	NO
		P.M.	0.871	D	0.882	D	0.011	NO
11.	Garfield Avenue & Slauson Avenue	A.M.	0.906	E	0.915	E	0.009	NO
		P.M.	0.912	E	0.925	E	0.013	YES
12.	Greenwood Avenue & Slauson Avenue	A.M.	0.649	B	0.671	B	0.022	NO
		P.M.	0.756	C	0.790	C	0.034	NO
13.	I-5 SB Ramps / Gage Avenue & Slauson Avenue	A.M.	0.760	C	0.818	D	0.058	YES
		P.M.	0.958	E	1.109	F	0.151	YES
14.	Telegraph Road & Slauson Avenue	A.M.	0.866	D	0.911	E	0.045	YES
		P.M.	0.926	E	0.957	E	0.031	YES
15.	Paramount Boulevard & Slauson Avenue	A.M.	0.845	D	0.853	D	0.008	NO
		P.M.	0.951	E	0.958	E	0.007	NO
16.	Rosemead Boulevard & Slauson Avenue	A.M.	0.849	D	0.860	D	0.011	NO
		P.M.	0.954	E	0.958	E	0.004	NO
17.	Eastern Avenue & Gage Avenue	A.M.	0.848	D	0.865	D	0.017	NO
		P.M.	0.984	E	1.003	F	0.019	YES
18.	Garfield Avenue & Gage Avenue	A.M.	0.896	D	0.921	E	0.025	YES
		P.M.	0.936	E	0.973	E	0.037	YES
19.	Greenwood Avenue & Gage Avenue	A.M.	0.522	A	0.540	A	0.018	NO
		P.M.	0.541	A	0.568	A	0.027	NO
20.	Gage Avenue & Zindell Avenue	A.M.	0.471	A	0.653	B	0.182	NO
		P.M.	0.440	A	0.612	B	0.172	NO
21.[b]	Gage Avenue & Project Driveway	A.M.	0.3	A	4.8	A	4.5	NO
		P.M.	0.4	A	8.1	A	7.7	NO
22.	Eastern Avenue & Florence Avenue	A.M.	0.895	D	0.916	E	0.021	YES
		P.M.	0.990	E	1.003	F	0.013	YES
23.	Garfield Avenue & Florence Avenue	A.M.	0.816	D	0.823	D	0.007	NO
		P.M.	0.774	C	0.788	C	0.014	NO
24.[a]	I-5 SB Ramps & Paramount Boulevard	A.M.	7.9	A	8.0	A	0.1	NO
		P.M.	17.5	B	17.9	B	0.5	NO

Table 3.15-12. Future with Project Conditions (Year 2023) Intersection Levels of Service and Significant Impact

No.	Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions			
			V/C or Delay	*LOS*	*V/C or Delay*	*LOS*	*Δ V/C*	*Impact*
25.	I-5 NB Ramps & Paramount Boulevard	A.M.	0.645	B	0.647	B	0.002	NO
		P.M.	0.946	E	0.948	E	0.002	NO
26.	Telegraph Road & Paramount Boulevard	A.M.	0.849	D	0.864	D	0.015	NO
		P.M.	1.013	F	1.035	F	0.022	YES
27.	Telegraph Road & Rosemead Boulevard	A.M.	0.932	E	0.936	E	0.004	NO
		P.M.	1.055	F	1.062	F	0.007	NO

Source: Gibson Transportation Consulting, Inc.
Notes:
[a] Unsignalized Intersection
[b] Project is proposing to install signal at intersection

Caltrans Analysis

The following presents the results of the analyses of Caltrans facilities, for informational purposes including freeway mainline segments, intersections and off-ramp queuing. Table 3.15-13 lists the Caltrans facilities that were analyzed.

Existing Year 2019 traffic volumes were used where applicable, and additional Existing Conditions data was collected from Caltrans. For consistency with Caltrans long-range planning, each Caltrans facility was analyzed for Year 2040 conditions in addition to existing Year 2019 conditions. The existing traffic volumes were increased by both ambient growth (assumed to be 1.46% per year for 21 total years based on CMP projections) and related project traffic, in the same manner as future traffic volumes were developed for Year 2023.

Table 3.15-13. Caltrans Facilities Analyzed in the Study Area

ID	Location
Freeway Mainline Segments	
FS-1.	I-5 between Rosemead Boulevard & Paramount Avenue
FS-2.	I-5 between Paramount Avenue & Slauson Avenue
FS-3.	I-5 between Slauson Avenue & Garfield Avenue
FS-4.	I-5 between Garfield Avenue & Eastern Avenue
Study Intersections	
S-1.	Telegraph Road & I-5 Northbound Ramps s/o Garfield Avenue (Intersection #4)
S-2.	Telegraph Road & I-5 Northbound Off Ramp n/o Slauson Avenue (Intersection #6)
S-3.	Bandini Boulevard & I-5 Southbound Ramps s/o Garfield Avenue (Intersection #9)
S-4.	I-5 Southbound Ramps/Gage Avenue & Slauson Avenue (Intersection #13)
S-5.	I-5 Southbound Ramps & Paramount Boulevard (Intersection #24)
S-6.	I-5 Northbound Ramps & Paramount Boulevard (Intersection #25)
Off-Ramp Queues	
Q-1.	Telegraph Road & I-5 Northbound Ramps s/o Garfield Avenue (Intersection #4)
Q-2.	Telegraph Road & I-5 Northbound Off Ramp n/o Slauson Avenue (Intersection #6)

Table 3.15-13. Caltrans Facilities Analyzed in the Study Area

ID	Location
Q-3.	Bandini Boulevard & I-5 Southbound Ramps s/o Garfield Avenue (Intersection #9)
Q-4.	I-5 Southbound Ramps/Gage Avenue & Slauson Avenue (Intersection #13)
Q-5.	I-5 Southbound Ramps & Paramount Boulevard (Intersection #24)
Q-6.	I-5 Northbound Ramps & Paramount Boulevard (Intersection #25)
On-Ramp Capacity	
O-1.	Telegraph Road & I-5 Northbound Ramps s/o Garfield Avenue (Intersection #4)
O-2.	Bandini Boulevard & I-5 Southbound Ramps s/o Garfield Avenue (Intersection #9)
O-3.	I-5 Southbound Ramps/Gage Avenue & Slauson Avenue (Intersection #13)
O-4.	I-5 Southbound Ramps & Paramount Boulevard (Intersection #24)
O-5.	I-5 Northbound Ramps & Paramount Boulevard (Intersection #25)

Source: Gibson Transportation Consulting, Inc.

Freeway Mainline Segments

Four freeway mainline segments on the I-5 freeway were analyzed using the HCM methodology. A free-flow speed of 55 mph was assumed in the HCM analysis in accordance with Caltrans guidance. Existing weekday freeway volumes were collected from Caltrans' Performance Measurement System for the average weekday traffic volume in April 2019.

Year 2019 Conditions

Table 3.15-14 summarizes the results of the HCM analysis for Existing and Existing with Project Conditions. As shown in Table 3.15-14, all four freeway mainline segments operate at LOS E in at least one direction during one of the analyzed peak hours under Existing Conditions, with or without Project additions.

Year 2023 Conditions

Table 3.15-15 summarizes the results of the HCM analysis for Future (Year 2023) and Future (Year 2023) with Project Conditions. As shown in Table 3.15-15, all four freeway mainline segments operate at LOS E in at least one direction during one of the analyzed peak hours under Future (Year 2023) , with or without Project additions.

Year 2040 Conditions

Table 3.15-16 summarizes the results of the HCM analysis for Future (Year 2040) without Project and Future (Year 2040) with Project Conditions. As shown in Table 3.15-16, all four freeway mainline segments are anticipated to operate at LOS D, E or F during at least one of the analyzed peak hours under Future Conditions, with or without the Project. However, the Project does not add enough traffic to any segment to result in a decrease in speed. As shown in Table 3.15-17, the Project's contribution to future growth, indicates that the Project is responsible for less than 2% of the future freeway traffic growth.

Intersections

The three unsignalized and three signalized freeway ramp intersections under Caltrans jurisdiction were further analyzed using the HCM methodology according to the Caltrans TIS Guidelines. Table 3.15-3 summarizes the LOS definitions for the intersections. It is important to note that Caltrans has not published a specific threshold that defines a significant impact for signalized or unsignalized intersections.

Year 2019 Conditions

Table 3.15-18 summarizes the results of the HCM analysis for Existing and Existing with Project Conditions for Caltrans intersections. As shown, three of the six intersections are currently operating at LOS D or better during the analyzed peak hours. The other three intersections are currently operating at LOS E or F in at least one of the peak hours analyzed under Existing Conditions and/or Existing with Project Conditions. As described previously, two of the three intersections – Telegraph Road/I-5 Northbound Off-Ramp (Garfield Avenue) and I-5 Southbound Ramps/Gage Avenue/Slauson Avenue – were identified as significantly impacted by Project traffic based on City thresholds and mitigation measures (**MM-TRA-1** and **MM-TRA-2**) have been proposed.

Year 2023 Conditions

Table 3.15-19 summarizes the results of the HCM analysis for Future without Project 2023 and Future with Project 2023 Conditions for Caltrans intersections. As shown, two of the six intersections are anticipated to operate at LOS D or better during the analyzed peak hours. The other five intersections are currently operating at LOS E or F in at least one of the peak hours analyzed under Future without Project 2023 Conditions and/or Future with Project 2023 Conditions. As described previously, three of the four intersections – Telegraph Road/I-5 Northbound Ramps (Garfield Avenue), Telegraph Road/I-5 Northbound Off-Ramp (Slauson Avenue), and I-5 Southbound Ramps/Gage Avenue/ Slauson Avenue – were identified as significantly impacted by Project traffic based on City thresholds and mitigation measures (**MM-TRA-1**, **MM-TRA-2** and **MM-TRA- 4**) have been proposed.

Year 2040 Conditions

Table 3.15-20 summarizes the results of the HCM analysis for Future without Project 2040 and Future with Project 2040 Conditions. As shown, one of the six intersections are anticipated to operate at LOS D or better during the analyzed peak hours for Caltrans intersections. The other four intersections are currently operating at LOS E or F in at least one of the peak hours analyzed under Future without Project 2040 Conditions and/or Future with Project 2040 Conditions. As described previously, three of the five intersections – Telegraph Road/I-5 Northbound Ramps (Garfield Avenue), Telegraph Road/I-5 Northbound Off-Ramp (Slauson Avenue), and I-5 Southbound Ramps/Gage Avenue & Slauson Avenue – were identified as significantly impacted by Project traffic based on City thresholds and mitigation measures (**MM-TRA-1**, **MM-TRA-2** and **MM-TRA- 4**) have been proposed.

Off-Ramp Queuing

Six off-ramps from the I-5 freeway (as shown in Table 3.15-11) were analyzed to determine whether the lengths of the ramps are sufficient to accommodate vehicle queues. The queue lengths were estimated using Vistro software, which reports the 95th percentile queue length, in feet, for each approach lane on the off-ramp.

Caltrans' primary concern is that queued vehicles do not extend past the end of an off-ramp onto the mainline. To this end, the queuing analysis looked at two separate components of ramp capacity: the length of each approach lane to the intersection at the end of the off-ramp and the total length of the ramp, behind any approach lane delineation lines, to the gore point where the ramp diverges from the freeway mainline. The queue may exceed the striped length of a given approach lane as long as there is sufficient additional queuing capacity on the ramp, so that any queue will not spill over onto the mainline.

Year 2019 Conditions

Table 3.15-21 summarizes the results of the queuing analysis for Existing and Existing with Project Conditions. The queue lengths at all six off-ramps would not exceed the capacity of the approach lanes or the ramps, with or without Project traffic.

Year 2023 Conditions

Table 3.15-22 summarizes the results of the queuing analysis for Future without Project Year 2023 and Future with Project Year 2023 Conditions. The queue lengths at all six off-ramps would not exceed the capacity of the approach lanes or the ramps, with or without Project traffic.

Year 2040 Conditions

Table 3.15-23 summarizes the results of the queuing analysis for Future without Project Year 2040 and Future with Project Year 2040 Conditions. The queue lengths at four of the six off-ramps would not exceed the capacity of the approach lanes or the ramps, with or without Project traffic. The other two off-ramps – Telegraph Road & I-5 Northbound Ramps (Garfield Avenue) and I-5 Northbound Off-Ramp & Paramount Boulevard – would exceed the storage capacity during at least one of the peak hours analyzed. For both ramps, the queue is exceeded under both with Project and without Project Conditions. The Project traffic would not extend the queue at either of the ramps beyond the length of one vehicle. Therefore, the increase in Project traffic is not responsible for the queue extending beyond capacity.

On-Ramp Capacity Evaluation

Five on-ramps to the I-5 freeway (as shown in Table 3.15-11) were analyzed to determine the existing or projected volumes as compared to the Caltrans TIS Guide ramp capacity of 900 vehicles per hour per lane (vphpl).

Year 2019 Conditions

Table 3.15-24 summarizes the results of the on-ramp analysis for Existing and Existing with Project Conditions. As shown, the Project would not substantially increase the on-ramp volumes at any analyzed on-ramps during any analyzed peak hours.

Year 2023 Conditions

Table 3.15-25 summarizes the results of the on-ramp analysis for Future without Project 2023 Conditions and Future with Project 2023 Conditions. The Project would not substantially increase the on-ramp volumes at any analyzed on-ramps during any analyzed peak hours.

Year 2040 Conditions

Table 3.15-26 summarizes the results of the on-ramp analysis for Future without Project 2040 Conditions and Future with Project 2040 Conditions. The Project would not substantially increase the on-ramp volumes at any analyzed on-ramps during any analyzed peak hours. However, with the addition of 59 Project trips, the on-ramp capacity would be exceeded at Telegraph Road/I-5 Northbound Ramps (Garfield Avenue) in the morning peak hour.

Long Range Cumulative Analysis

Caltrans requires that the level of new Project traffic be compared to the traffic growth likely to occur along the freeway segments serving the Project. Table 3.15-17 shows the Year 2019 and Year 2040 volumes on the freeway segments serving the Project site. The Project would add traffic to the freeways, representing approximately 1.86% of the traffic growth levels between Year 2019 and Year 2040. Since the Project's contribution is less than 2%, the Project's impact to Caltrans facilities are considered **less than significant**. No mitigation is required.

Table 3.15-14. Existing Conditions (Year 2019) Freeway Mainline Segment Level of Service Evaluation

ID	Freeway Segment	Peak Hour	Direction	Existing Conditions			Existing with Project Conditions		
				Speed [ab]	*Density* [bc]	*LOS*	*Speed* [ab]	*Density* [bc]	*LOS*
FS-1.	I-5 between Rosemead Boulevard & Paramount Avenue	AM	NB	49	34	D	49	34	D
			SB	49	40	E	49	40	E
		PM	NB	49	32	D	49	32	D
			SB	49	38	E	49	38	E
FS-2.	I-5 between Paramount Avenue & Slauson Avenue	AM	NB	49	36	E	49	36	E
			SB	49	31	D	49	31	D
		PM	NB	49	31	D	49	31	D
			SB	49	28	D	49	28	D
FS-3.	I-5 between Slauson Avenue & Garfield Avenue	AM	NB	49	36	E	49	36	E
			SB	49	33	D	49	34	D
		PM	NB	49	31	D	49	31	D
			SB	49	29	D	49	29	D
FS-4.	I-5 between Garfield Avenue & Eastern Avenue	AM	NB	49	38	E	49	38	E
			SB	49	35	D	49	35	E
		PM	NB	49	34	D	49	34	D
			SB	49	22	C	49	23	C

Source: Gibson Transportation Consulting, Inc.

Notes:

AM & PM - Weekday peak hours

[a] Mean speed measured in miles per hour (mph).

[b] Methodology from *Highway Capacity Manual 6th Edition*, Transportation Research Board, 2016.

[c] Measured in vehicles per mile per lane (v/m/l) for freeways with a free-flow speed of 55 mph

Table 3.15-15. Future Conditions (Year 2023) Freeway Mainline Segment Level of Service Evaluation

ID	Freeway Segment	Peak Hour	Direction	Future without Project Conditions			Future with Project Conditions		
				Speed [ab]	*Density* [bc]	*LOS*	*Speed* [ab]	*Density* [bc]	*LOS*
FS-1.	I-5 between Rosemead Boulevard & Paramount Avenue	AM	NB	49	35	E	49	36	E
			SB	49	42	E	49	42	E
		PM	NB	49	33	D	49	34	D
			SB	49	40	E	49	40	E
FS-2.	I-5 between Paramount Avenue & Slauson Avenue	AM	NB	49	38	E	49	38	E
			SB	49	32	D	49	33	D
		PM	NB	49	33	D	49	33	D
			SB	49	30	D	49	30	D
FS-3.	I-5 between Slauson Avenue & Garfield Avenue	AM	NB	49	38	E	49	38	E
			SB	49	35	D	49	35	D
		PM	NB	49	33	D	49	33	D
			SB	49	31	D	49	31	D
FS-4.	I-5 between Garfield Avenue & Eastern Avenue	AM	NB	49	40	E	49	40	E
			SB	49	37	E	49	37	E
		PM	NB	49	36	E	49	36	E
			SB	49	24	C	49	24	C

Source: Gibson Transportation Consulting, Inc.

Notes

AM & PM - Weekday peak hours

[a] Mean speed measured in miles per hour (mph).

[b] Methodology from Highway Capacity Manual 6th Edition, Transportation Research Board, 2016.

[c] Measured in vehicles per mile per lane (v/m/l) for freeways with a free-flow speed of 55 mph

Table 3.15-16. Future Conditions (Year 2040) Freeway Mainline Segment Level of Service Evaluation

ID	Freeway Segment	Peak Hour	Direction	Future without Project (2040) Conditions			Future with Project (2040) Conditions		
				Speed [ab]	*Density* [bc]	*LOS*	*Speed* [ab]	*Density* [bc]	*LOS*
FS-1.	I-5 between Rosemead Boulevard & Paramount Avenue	AM	NB	49	45	E	49	45	E
			SB	n/a	OVERFLOW	F	n/a	OVERFLOW	F
		PM	NB	49	42	E	49	42	E
			SB	n/a	OVERFLOW	F	n/a	OVERFLOW	F
FS-2.	I-5 between Paramount Avenue & Slauson Avenue	AM	NB	n/a	OVERFLOW	F	n/a	OVERFLOW	F
			SB	49	40	E	49	41	E
		PM	NB	49	41	E	49	41	E
			SB	49	37	E	49	37	E
FS-3.	I-5 between Slauson Avenue & Garfield Avenue	AM	NB	n/a	OVERFLOW	F	n/a	OVERFLOW	F
			SB	49	44	E	49	44	E
		PM	NB	49	41	E	49	41	E
			SB	49	38	E	49	38	E
FS-4.	I-5 between Garfield Avenue & Eastern Avenue	AM	NB	n/a	OVERFLOW	F	n/a	OVERFLOW	F
			SB	n/a	OVERFLOW	F	n/a	OVERFLOW	F
		PM	NB	49	45	E	n/a	OVERFLOW	F
			SB	49	30	D	49	30	D

Source: Gibson Transportation Consulting, Inc.

Notes

AM & PM - Weekday peak hours

[a] Mean speed measured in miles per hour (mph).

[b] Methodology from *Highway Capacity Manual 6th Edition*, Transportation Research Board, 2016.

[c] Measured in vehicles per mile per lane (v/m/l) for freeways with a free-flow speed of 55 mph.

Table 3.15-17. Proportion of Projected Future Traffic on Freeway Mainline Segments (Year 2040) Project Full Buildout Conditions

ID	Freeway Mainline Segment	Peak Hour	Direction	Vehicles per Hour (VPH)					Project Portion of Growth
				Existing Conditions[a]	*Related Projects*	*Ambient Growth*	*Project Only*	*Total Growth*	
FS-1.	I-5 between Rosemead Boulevard & Paramount Avenue	AM Peak Hour	NB	6,097	53	1,869	24	1,946	1.23%
			SB	7,257	21	2,225	41	2,287	1.79%
		PM Peak Hour	NB	5,762	50	1,767	47	1,864	2.52%
			SB	6,820	80	2,091	36	2,207	1.63%
FS-2.	I-5 between Paramount Avenue & Slauson Avenue	AM Peak Hour	NB	6,471	53	1,984	16	2,053	0.78%
			SB	5,594	21	1,715	41	1,777	2.31%
		PM Peak Hour	NB	5,601	50	1,717	31	1,798	1.72%
			SB	5,039	80	1,545	36	1,661	2.17%
FS-3.	I-5 between Slauson Avenue & Garfield Avenue	AM Peak Hour	NB	6,484	53	1,988	2	2,043	0.10%
			SB	6,045	17	1,853	22	1,892	1.16%
		PM Peak Hour	NB	5,605	50	1,718	4	1,772	0.23%
			SB	5,239	78	1,606	43	1,727	2.49%
FS-4.	I-5 between Garfield Avenue & Eastern Avenue	AM Peak Hour	NB	6,861	46	2,104	62	2,212	2.80%
			SB	6,330	29	1,941	32	2,002	1.60%
		PM Peak Hour	NB	6,127	59	1,879	47	1,985	2.37%
			SB	4,044	83	1,240	63	1,386	4.55%
Average Proportion of Project-Related Traffic to Mainline Segments									1.86%

Source: Gibson Transportation Consulting, Inc.

Table 3.15-18. Existing with Project Conditions (Year 2019) Caltrans Intersection Peak Hours Levels of Service

No.	Intersection	Peak Hour	Existing		Existing with Project	
			Delay	*LOS*	*Delay*	*LOS*
S-1.	Telegraph Road &	AM	28.1	C	29.7	C
	I-5 Northbound Ramps s/o Garfield Avenue (Intersection #4)	PM	39.6	D	43.3	D
S-2.	Telegraph Road &	AM	6.7	A	7.6	A
	I-5 Northbound Off Ramp n/o Slauson Ave (Intersection #6)	PM	62.9	E	69.5	E
S-3.	Bandini Boulevard &	AM	20.8	C	21.1	C
	I-5 Southbound Ramps s/o Garfield Avenue (Intersection #9)	PM	82.2	F	83.0	F
S-4.	I-5 Southbound Ramps/Gage Avenue &	AM	38.7	D	46.7	D
	Slauson Avenue (Intersection #13)	PM	93.8	F	149.5	F
S-5.	I-5 Southbound Ramps &	AM	4.9	A	4.9	A
	Paramount Boulevard (Intersection #24)	PM	10.5	B	10.8	B
S-6.	I-5 Northbound Ramps &	AM	16.2	B	16.3	B
	Paramount Boulevard (Intersection #25)	PM	23.7	C	24.1	C

Notes:
AM & PM - Weekday peak hours
Delay is measured in seconds per vehicle
LOS = Level of service
Results per Vistro (HCM 6th Edition methodology).

Table 3.15-19. Future with Project Conditions (Year 2023) Caltrans Intersection Peak Hours Levels of Service

No.	Intersection	Peak Hour	Future without Project (Year 2023)		Future with Project (Year 2023)	
			Delay	*LOS*	*Delay*	*LOS*
S-1.	Telegraph Road &	AM	31.4	C	34.0	C
	I-5 Northbound Ramps s/o Garfield Avenue (Intersection #4)	PM	51.2	D	56.6	E
S-2.	Telegraph Road &	AM	10.1	B	11.5	B
	I-5 Northbound Off Ramp n/o Slauson Ave (Intersection #6)	PM	94.5	F	103.9	F
S-3.	Bandini Boulevard &	AM	25.1	C	25.7	C
	I-5 Southbound Ramps s/o Garfield Avenue (Intersection #9)	PM	101.0	F	101.7	F
S-4.	I-5 Southbound Ramps/Gage Avenue &	AM	41.8	D	51.3	D
	Slauson Avenue (Intersection #13)	PM	111.3	F	168.3	F
S-5.	I-5 Southbound Ramps &	AM	7.9	A	8.0	A
	Paramount Boulevard (Intersection #24)	PM	17.5	B	17.9	B
S-6.	I-5 Northbound Ramps &	AM	17.2	B	17.3	B
	Paramount Boulevard (Intersection #25)	PM	27.2	C	27.6	C

Notes:
AM & PM - Weekday peak hours
Delay is measured in seconds per vehicle
LOS = Level of service
Results per Vistro (HCM 6th Edition methodology).

Table 3.15-20. Future with Project Conditions (Year 2040) Caltrans Intersection Peak Hours Levels of Service

No.	Intersection	Peak Hour	Future without Project (Year 2040)		Future with Project (Year 2040)	
			Delay	*LOS*	*Delay*	*LOS*
S-1.	Telegraph Road &	AM	51.9	D	58.8	E
	I-5 Northbound Ramps s/o Garfield Avenue (Intersection #4)	PM	106.3	F	115.2	F
S-2.	Telegraph Road &	AM	36.1	D	39.4	D
	I-5 Northbound Off Ramp n/o Slauson Ave (Intersection #6)	PM	295.9	F	323.8	F
S-3.	Bandini Boulevard &	AM	60.7	E	62.3	E
	I-5 Southbound Ramps s/o Garfield Avenue (Intersection #9)	PM	186.5	F	187.1	F
S-4.	I-5 Southbound Ramps/Gage Avenue &	AM	69.2	E	86.4	F
	Slauson Avenue (Intersection #13)	PM	194.3	F	254.4	F
S-5.	I-5 Southbound Ramps &	AM	42.5	D	42.5	D
	Paramount Boulevard (Intersection #24)	PM	30.2	C	30.3	C
S-6.	I-5 Northbound Ramps &	AM	24.0	C	24.1	C
	Paramount Boulevard (Intersection #25)	PM	68.1	E	69.1	E

Notes:
AM & PM - Weekday peak hours
Delay is measured in seconds per vehicle
LOS = Level of service
Results per Vistro (HCM 6th Edition methodology).

Table 3.15-21. Existing Conditions (Year 2019) Freeway Off-Ramp Queue Evaluation

ID	Freeway Off-ramp	Ramp and Lane Description	Vehicle Storage Capacity[a]	Existing Conditions				Existing with Project Conditions			
				AM Peak Hour		*PM Peak Hour*		*AM Peak Hour*		*PM Peak Hour*	
				Vehicle Queue Length[b]	*Exceeds Capacity?*	*Vehicle Queue Length[b]*	*Exceeds Capacity?*	*Vehicle Queue Length[b]*	*Exceeds Capacity?*	*Vehicle Queue Length[b]*	*Exceeds Capacity?*
Q-1.	Telegraph Road &	I-5 Northbound Off Ramp									
	I-5 Northbound Ramps s/o Garfield Avenue	Left	247	247	NO	247	NO	247	NO	247	NO
	(Intersection #4)	Shared Left/Right	247	247	NO	247	NO	247	NO	247	NO
		Ramp	345	61	NO	102	NO	62	NO	102	NO
Q-2.	Telegraph Road &	I-5 Northbound Off Ramp									
	I-5 Northbound Off Ramp n/o Slauson Ave	Left	327	141	NO	327	NO	154	NO	327	NO
	(Intersection #6)	Right	311	42	NO	101	NO	47	NO	134	NO
		Ramp	493	0	NO	92	NO	0	NO	106	NO
Q-3.	Bandini Boulevard &	I-5 Southbound Off Ramp									
	I-5 Northbound Off Ramp n/o Slauson Ave	Left	169	13	NO	5	NO	14	NO	6	NO
	(Intersection #9)	Right	Free	Free	NO	Free	NO	Free	NO	Free	NO
		Ramp	437	0	NO	0	NO	0	NO	0	NO
Q-4.	I-5 Southbound Ramps/Gage Avenue &	I-5 Southbound Off Ramp									
	Slauson Avenue	Left	167	167	NO	40	NO	167	NO	44	NO
	(Intersection #13)	Shared Left/Through	167	167	NO	40	NO	167	NO	44	NO
		Shared Right/Through	167	50	NO	7	NO	73	NO	40	NO
		Ramp	592	10	NO	0	NO	10	NO	0	NO

Table 3.15-21. Existing Conditions (Year 2019) Freeway Off-Ramp Queue Evaluation

ID	Freeway Off-ramp	Ramp and Lane Description	Vehicle Storage Capacity[a]	Existing Conditions				Existing with Project Conditions			
				AM Peak Hour		*PM Peak Hour*		*AM Peak Hour*		*PM Peak Hour*	
				Vehicle Queue Length[b]	*Exceeds Capacity?*	*Vehicle Queue Length[b]*	*Exceeds Capacity?*	*Vehicle Queue Length[b]*	*Exceeds Capacity?*	*Vehicle Queue Length[b]*	*Exceeds Capacity?*
Q-5.	I-5 Southbound Off Ramp &	I-5 Southbound Off Ramp									
	Paramount Boulevard	Left	50	50	NO	50	NO	50	NO	50	NO
	(Intersection #24)	Right	Free	Free	NO	Free	NO	Free	NO	Free	NO
		Ramp	845	11	NO	3	NO	12	NO	3	NO
Q-6.	I-5 Northbound Off Ramp &	I-5 Northbound Off Ramp									
	Paramount Boulevard	Left	100	19	NO	100	NO	19	NO	100	NO
	(Intersection #25)	Right	100	9	NO	100	NO	15	NO	100	NO
		Ramp	730	0	NO	358	NO	0	NO	375	NO

Notes:
AM & PM - Weekday peak hours
[a] Storage length capacity is the distance from the freeway mainline gore point to the terminus of the off-ramp, expressed in feet.
[b] 95th Percentile queue results per Vistro (Methodology from Highway Capacity Manual 6th Edition, Transportation Research Board, 2016).

Table 3.15-22. Future Conditions (Year 2023) Freeway Off-Ramp Queue Evaluation

ID	Freeway Off-ramp	Ramp and Lane Description	Vehicle Storage Capacity[a]	Future without Project (Year 2023) Conditions				Future with Project (Year 2023) Conditions			
				AM Peak Hour		*PM Peak Hour*		*AM Peak Hour*		*PM Peak Hour*	
				Vehicle Queue Length	*Exceeds Capacity?*	*Vehicle Queue Length*	*Exceeds Capacity?*	*Vehicle Queue Length*	*Exceeds Capacity?*	*Vehicle Queue Length*	*Exceeds Capacity?*
Q-1.	Telegraph Road &	I-5 Northbound Off Ramp									
	I-5 Northbound Ramps s/o Garfield Avenue	Left	247	247	NO	247	NO	247	NO	247	NO

Table 3.15-22. Future Conditions (Year 2023) Freeway Off-Ramp Queue Evaluation

ID	Freeway Off-ramp	Ramp and Lane Description	Vehicle Storage Capacity [a]	Future without Project (Year 2023) Conditions				Future with Project (Year 2023) Conditions			
				AM Peak Hour		*PM Peak Hour*		*AM Peak Hour*		*PM Peak Hour*	
				Vehicle Queue Length	*Exceeds Capacity?*	*Vehicle Queue Length*	*Exceeds Capacity?*	*Vehicle Queue Length*	*Exceeds Capacity?*	*Vehicle Queue Length*	*Exceeds Capacity?*
	(Intersection #4)	Shared Left/Right	247	247	NO	247	NO	247	NO	247	NO
		Ramp	345	117	NO	263	NO	117	NO	262	NO
Q-2.	Telegraph Road &	I-5 Northbound Off Ramp									
	I-5 Northbound Off Ramp n/o Slauson Ave	Left	327	186	NO	327	NO	200	NO	327	NO
	(Intersection #6)	Right	311	49	NO	137	NO	55	NO	183	NO
		Ramp	493	0	NO	157	NO	0	NO	167	NO
Q-3.	Bandini Boulevard &	I-5 Southbound Off Ramp									
	I-5 Northbound Off Ramp n/o Slauson Ave	Left	169	16	NO	5	NO	17	NO	8	NO
	(Intersection #9)	Right	Free	Free	NO	Free	NO	Free	NO	Free	NO
		Ramp	437	0	NO	0	NO	0	NO	0	NO
Q-4.	I-5 Southbound Ramps/Gage Avenue &	I-5 Southbound Off Ramp									
	Slauson Avenue	Left	167	167	NO	42	NO	167	NO	50	NO
	(Intersection #13)	Shared Left/Through	167	167	NO	42	NO	167	NO	50	NO
		Shared Right/Through	167	56	NO	20	NO	79	NO	46	NO
		Ramp	592	18	NO	0	NO	18	NO	0	NO
Q-5.	I-5 Southbound Off Ramp &	I-5 Southbound Off Ramp									
	Paramount Boulevard	Left	50	50	NO	50	NO	50	NO	50	NO
	(Intersection #24)	Right	Free	Free	NO	Free	NO	Free	NO	Free	NO
		Ramp	845	21	NO	5	NO	21	NO	5	NO
Q-6.	I-5 Northbound Off Ramp &	I-5 Northbound Off Ramp									
	Paramount Boulevard	Left	100	20	NO	100	NO	20	NO	100	NO

Table 3.15-22. Future Conditions (Year 2023) Freeway Off-Ramp Queue Evaluation

ID	Freeway Off-ramp	Ramp and Lane Description	Vehicle Storage Capacity [a]	Future without Project (Year 2023) Conditions				Future with Project (Year 2023) Conditions			
				AM Peak Hour		*PM Peak Hour*		*AM Peak Hour*		*PM Peak Hour*	
				Vehicle Queue Length	*Exceeds Capacity?*	*Vehicle Queue Length*	*Exceeds Capacity?*	*Vehicle Queue Length*	*Exceeds Capacity?*	*Vehicle Queue Length*	*Exceeds Capacity?*
	(Intersection #25)	Right	100	10	NO	100	NO	15	NO	100	NO
		Ramp	730	0	NO	413	NO	0	NO	428	NO

Table 3.15-23. Future Conditions (Year 2040) Freeway Off-Ramp Queue Evaluation

ID	Freeway Off-ramp	Ramp and Lane Description	Vehicle Storage Capacity[a]	Future without Project Conditions				Future with Project Conditions			
				AM Peak Hour		*PM Peak Hour*		*AM Peak Hour*		*PM Peak Hour*	
				Vehicle Queue Length	*Exceeds Capacity?*	*Vehicle Queue Length*	*Exceeds Capacity?*	*Vehicle Queue Length*	*Exceeds Capacity?*	*Vehicle Queue Length*	*Exceeds Capacity?*
Q-1.	Telegraph Road &	I-5 Northbound Off Ramp									
	I-5 Northbound Ramps s/o Garfield Avenue	Left	247	247	NO	247	NO	247	NO	247	NO
	(Intersection #4)	Shared Left/Right	247	247	NO	247	NO	247	NO	247	NO
		Ramp	345	410	**YES**	728	**YES**	410	**YES**	728	**YES**
Q-2.	Telegraph Road &	I-5 Northbound Off Ramp									
	I-5 Northbound Off Ramp n/o Slauson Ave	Left	327	327	NO	327	NO	327	NO	327	NO
	(Intersection #6)	Right	311	90	NO	311	NO	101	NO	311	NO
		Ramp	493	28	NO	383	NO	39	NO	469	NO
Q-3.	Bandini Boulevard &	I-5 Southbound Off Ramp									
	I-5 Northbound Off Ramp n/o Slauson Ave	Left	169	21	NO	7	NO	23	NO	8	NO

Table 3.15-23. Future Conditions (Year 2040) Freeway Off-Ramp Queue Evaluation

ID	Freeway Off-ramp	Ramp and Lane Description	Vehicle Storage Capacity[a]	Future without Project Conditions				Future with Project Conditions			
				AM Peak Hour		*PM Peak Hour*		*AM Peak Hour*		*PM Peak Hour*	
				Vehicle Queue Length	*Exceeds Capacity?*	*Vehicle Queue Length*	*Exceeds Capacity?*	*Vehicle Queue Length*	*Exceeds Capacity?*	*Vehicle Queue Length*	*Exceeds Capacity?*
	(Intersection #9)	Right	Free	Free	NO	Free	NO	Free	NO	Free	NO
		Ramp	437	0	NO	0	NO	0	NO	0	NO
Q-4.	I-5 Southbound Ramps/Gage Avenue &	I-5 Southbound Off Ramp									
	Slauson Avenue	Left	167	167	NO	52	NO	167	NO	58	NO
	(Intersection #13)	Shared Left/Through	167	167	NO	52	NO	167	NO	58	NO
		Shared Right/Through	167	70	NO	23	NO	94	NO	54	NO
		Ramp	592	72	NO	0	NO	72	NO	0	NO
Q-5.	I-5 Southbound Off Ramp &	I-5 Southbound Off Ramp									
	Paramount Boulevard	Left	50	50	NO	50	NO	50	NO	50	NO
	(Intersection #24)	Right	Free	Free	NO	Free	NO	Free	NO	Free	NO
		Ramp	845	44	NO	17	NO	44	NO	17	NO
Q-6.	I-5 Northbound Off Ramp &	I-5 Northbound Off Ramp									
	Paramount Boulevard	Left	100	25	NO	100	NO	25	NO	100	NO
	(Intersection #25)	Right	100	13	NO	100	NO	18	NO	100	NO
		Ramp	730	0	NO	748	**YES**	0	NO	765	**YES**

Notes:
AM & PM - Weekday peak hours
[a] Storage length capacity is the distance from the freeway mainline gore point to the terminus of the off-ramp, expressed in feet.
[b] 95th Percentile queue results per Vistro (Methodology from Highway Capacity Manual 6th Edition, Transportation Research Board, 2016).

Table 3.15-24. Existing Conditions (Year 2019) Freeway On-Ramp Capacity Evaluation

ID	Freeway On-ramp	Number of Lanes	Peak Hour	Existing Conditions		Existing with Project Conditions	
				Vehicles per Hour	*Exceeds Capacity?*	*Vehicles per Hour*	*Exceeds Capacity?*
0-1.	Telegraph Road &	1	AM	669	NO	728	NO
	I-5 Northbound Ramps s/o Garfield Avenue (Intersection #4)		PM	598	NO	642	NO
0-2.	Bandini Boulevard &	2	AM	528	NO	528	NO
	I-5 Southbound Ramps s/o Garfield Avenue (Intersection #9)		PM	830	NO	830	NO
0-3.	I-5 Southbound Ramps/Gage Avenue &	2	AM	698	NO	739	NO
	Slauson Avenue (Intersection #13)		PM	931	NO	967	NO
0-4.	I-5 Southbound Ramps &	2	AM	475	NO	475	NO
	Paramount Boulevard (Intersection #24)		PM	584	NO	584	NO
0-5.	I-5 Northbound Ramps &	2	AM	1,374	NO	1,376	NO
	Paramount Boulevard (Intersection #25)		PM	578	NO	582	NO

Notes:
AM & PM - Weekday peak hours
On-ramp capacity is 900 vehicles per hour per lane. This capacity does not include the effects of the ramp meter rate.

Table 3.15-25. Future with Project (Year 2023) Freeway On-Ramp Capacity Evaluation

ID	Freeway On-ramp	Number of Lanes	Peak Hour	Future without Project Conditions		Future with Project Conditions	
				Vehicles per Hour	*Exceeds Capacity?*	*Vehicles per Hour*	*Exceeds Capacity?*
0-1.	Telegraph Road &	1	AM	723	NO	782	NO
	I-5 Northbound Ramps s/o Garfield Avenue (Intersection #4)		PM	658	NO	702	NO
0-2.	Bandini Boulevard &	2	AM	559	NO	559	NO
	I-5 Southbound Ramps s/o Garfield Avenue (Intersection #9)		PM	878	NO	878	NO
0-3.	I-5 Southbound Ramps/Gage Avenue &	2	AM	746	NO	787	NO
	Slauson Avenue (Intersection #13)		PM	989	NO	1,025	NO
0-4.	I-5 Southbound Ramps &	2	AM	503	NO	503	NO
	Paramount Boulevard (Intersection #24)		PM	618	NO	618	NO

Table 3.15-25. Future with Project (Year 2023) Freeway On-Ramp Capacity Evaluation

ID	Freeway On-ramp	Number of Lanes	Peak Hour	Future without Project Conditions		Future with Project Conditions	
				Vehicles per Hour	*Exceeds Capacity?*	*Vehicles per Hour*	*Exceeds Capacity?*
O-5.	I-5 Northbound Ramps &	2	AM	1,454	NO	1,456	NO
	Paramount Boulevard (Intersection #25)		PM	612	NO	616	NO

Source: Gibson Transportation Consulting, Inc
Notes:
AM & PM - Weekday peak hours
On-ramp capacity is 900 vehicles per hour per lane. This capacity does not include the effects of the ramp meter rate.

Table 3.15-26. Future with Project (Year 2040) Freeway On-Ramp Capacity Evaluation

ID	Freeway On-ramp	Number of Lanes	Peak Hour	Future without Project Conditions		Future with Project Conditions	
				Vehicles per Hour	*Exceeds Capacity?*	*Vehicles per Hour*	*Exceeds Capacity?*
O-1.	Telegraph Road &	1	AM	889	NO	948	**YES**
	I-5 Northbound Ramps s/o Garfield Avenue (Intersection #4)		PM	806	NO	850	NO
O-2.	Bandini Boulevard &	2	AM	690	NO	690	NO
	I-5 Southbound Ramps s/o Garfield Avenue (Intersection #9)		PM	1,084	NO	1,084	NO
O-3.	I-5 Southbound Ramps/Gage Avenue &	2	AM	919	NO	960	NO
	Slauson Avenue (Intersection #13)		PM	1,220	NO	1,256	NO
O-4.	I-5 Southbound Ramps &	2	AM	621	NO	621	NO
	Paramount Boulevard (Intersection #24)		PM	763	NO	763	NO
O-5.	I-5 Northbound Ramps &	2	AM	1,795	NO	1,797	NO
	Paramount Boulevard (Intersection #25)		PM	755	NO	759	NO

Source: Gibson Transportation Consulting, Inc.
Notes:
AM & PM - Weekday peak hours
On-ramp capacity is 900 vehicles per hour per lane. This capacity does not include the effects of the ramp meter rate.

Transit Analysis

Table 3.15-27 and Table 3.15-28 summarize the total available capacity on the Metro bus lines serving the study area. Detailed peak hour ridership data for the Commerce and Montebello bus systems was not available, but site observations indicated that these bus trips were not all full during the morning and afternoon peak hours. Using the frequency of service of each line, the standing capacity of each bus, and the average peak hour load in each direction, Table 3.15-27 and Table 3.15-28 show that the Metro transit lines within 0.25 miles (walking distance) of the Project site currently have available capacity for approximately 384 additional riders during the morning peak hour and 670 additional riders during the afternoon peak hour. The transit lines with bus stops or stations located more than 0.25 miles from the Project site were not included in this capacity analysis. This indicates that sufficient transit capacity in the study area is available.

Therefore, based on the available transit capacity near the study area, the Project's impact on transit facilities would be **less than significant**. No mitigation is required.

Construction Traffic Impact Analysis

Traffic impacts from a project's construction activities would occur as a result of the following types of activities:

- Increases in truck traffic associated with export of fill materials and delivery of construction materials
- Increases in automobile traffic associated with construction workers traveling to and from the site
- Reductions in existing street capacity or on-street parking from temporary lane closures necessary for the construction of roadway improvements, utility relocation, and drainage facilities
- Blocking existing vehicle or pedestrian access to other parcels fronting street

A project's construction traffic could decrease the capacity of access streets and haul routes due to slower movements and larger turning radii of trucks.

This proposed Project's construction processes were broken into four separate phases: remediation/demolition, grading, foundations, and vertical construction. A trip generation for each of the four phases was developed, as shown in Table 3.15-29. Each of the processes involves two types of vehicular trips. Heavy vehicle trips, which include hauling trucks and other large construction vehicles, are predominately oriented toward freeway routes, while the worker trips, mainly passenger vehicles, have diverse destinations more similar to the Project's distribution assumptions.

For the purposes of analysis, heavy vehicles were converted into passenger car equivalencies (PCEs). Transportation Research Circular No. 212, Interim Materials on Highway Capacity, (Transportation Research Board, 1980) (Circular No. 212) defines PCE for a vehicle as the number of through moving passenger cars to which it is equivalent based on the vehicle's headway and delay-creating effects. Table 8 of Circular No. 212 and Exhibit 12-25 of 6th Edition Highway Capacity Manual (Transportation Research Board, 2017) suggest a PCE of 2.0 for trucks for the local terrain. No carpooling or transit usage was assumed for worker trips.

The City of Commerce limits construction activities to the hours between 7:00 AM and 10:00 PM. Some activities may require after-hours construction and the appropriate approvals/permits would be secured.

Table 3.15-27. Transit System Capacity in the Study Area – Morning Peak Hour

Provider, Route, and Service Area		Capacity per Trip[a]	Peak Hour Ridership[b]				Average Remaining Capacity per Trip		Remaining Peak Hour Capacity	
			Peak Load		*Average Load*					
			NB/EB	*SB/WB*	*NB/EB*	*SB/WB*	*NB/EB*	*SB/WB*	*NB/EB*	*SB/WB*
Metro Bus Service										
62	Downtown Los Angeles to Hawaiian Gardens via Telegraph Road	50	23	23	17	15	33	35	90	88
108/358	Pico Rivera to Venice via Slauson Avenue	50	13	6	3	5	47	45	59	147
City of Commerce										
Green	Loop from the Citidel to southeast Commerce	30	*Data Not Available*							
Orange	Loop from the Citidel to southeast Commerce	30	*Data Not Available*							
Yellow	Loop from the Citidel to southeast Commerce	30	*Data Not Available*							
Montebello Bus Lines										
M-20	San Gabriel to south Montebello via San Gabriel Boulevard	50	*Data Not Available*							
								Total Transit System Capacity	384	

Source: Gibson Transportation Consulting, Inc
Notes:
Metro: Los Angeles County Metropolitan Transportation Authority.
[a] Capacity assumptions:
Metro Bus - 40 seated/50 standing.
Metro Articulated Bus - 66 seated/75 seated and standing.
[b] Ridership information based on data from Metro for October 2017.

Table 3.15-28. Transit System Capacity in the Study Area – Afternoon Peak Hour

Provider, Route, and Service Area		Capacity per Trip[a]	Peak Hour Ridership[b]				Average Remaining Capacity per Trip		Remaining Peak Hour Capacity	
			Peak Load		*Average Load*					
			NB/EB	*SB/WB*	*NB/EB*	*SB/WB*	*NB/EB*	*SB/WB*	*NB/EB*	*SB/WB*
Metro Bus Service										
62	Downtown Los Angeles to Hawaiian Gardens via Telegraph Road	50	26	32	15	23	35	27	96	69
108/358	Pico Rivera to Venice via Slauson Avenue	50	4	10	3	5	47	45	247	258
City of Commerce										
Green	Loop from the Citidel to southeast Commerce	30	*Data Not Available*							
Orange	Loop from the Citidel to southeast Commerce	30	*Data Not Available*							
Yellow	Loop from the Citidel to southeast Commerce	30	*Data Not Available*							
Montebello Bus Lines										
M-20	San Gabriel to south Montebello via San Gabriel Boulevard	50	*Data Not Available*							
								Total Transit System Capacity	670	

Notes
Metro: Los Angeles County Metropolitan Transportation Authority.
[a] Capacity assumptions:
Metro Bus - 40 seated / 50 standing.
Metro Articulated Bus - 66 seated / 75 seated and standing standing.
[b] Ridership information based on data from Metro for October 2017.

Construction Trip Generation

The proposed Project would be constructed over a period of 49 months. The duration and number of worker and truck trips per construction phase is summarized below and in Table 3.15-29.

- **Remediation/Demolition Phase**– This phase is estimated to require approximately 12 months. The remediation/demolition phase of construction is anticipated to have the highest number of heavy vehicle trips. Applying the conversion factor of 2.0 for trucks to calculate the PCE, truck traffic for the remediation/demolition period will generate 380 daily trips, 190 PCE trips inbound and 190 PCE trips outbound per day. In addition, a maximum of 8 construction workers would work at the Project site during this phase, hence, a total of 16 daily worker trips, 8 inbound trips and 8 outbound trips is anticipated. Adding truck and worker trips, a total of 396 daily trips, 198 inbound trips and 198 outbound trips are anticipated during this phase.
- **Site Preparation** – This phase is estimated to require approximately 6 months. A total of 18 daily worker trips, 9 inbound worker trips and 9 outbound worker trips are anticipated during this phase.
- **Grading** – This phase is estimated to require approximately 6 months. During this period a maximum of 53 trucks and 10 construction workers would work at the Project site. Applying the conversion factor of 2.0 for trucks to calculate the PCE, truck traffic for the grading phase will generate 212 daily PCE trips, 106 PCE trips inbound and 106 PCE trips outbound per day. In addition, a maximum of 10 construction workers would work at the Project site during this phase, hence, a total of 20 daily worker trips, 10 inbound trips and 810 outbound trips is anticipated. Adding truck and worker trips, a total of 232 daily trips, 116 inbound trips and 116 outbound trips is anticipated during this phase.
- **Building Construction** – This phase is estimated to require approximately 21 months. During this period a maximum of 531 construction workers and 136 vendors would work at the Project site. Adding truck and worker trips, a total of 1,334 daily trips, 667 inbound trips and 667 outbound trips is anticipated during this phase.
- **Paving** – This phase is estimated to require approximately 2 months. A total of 16 daily worker trips, 8 inbound worker trips and 8 outbound worker trips are anticipated during this phase.
- **Architectural Coating** – This phase is estimated to require approximately 2 months. During this period a maximum of 106 construction workers would work at the Project site. A total of 212 daily trips, 106 inbound trips and 106 outbound trips is anticipated during this phase.

Table 3.15-29. Construction Trip Generation

Construction Activity	Units per day	Daily	Inbound	Outbound
Remediation/Demolition	1,350 yards			
Heavy Vehicles	95 trucks			
(converted to PCEX2.0)	190 PCE	380	190	190
Workers	8 each	16	8	8
Vendors	0 each	0	0	0
	Total Remediation/Demolition	*396*	*198*	*198*
Site Preparation				
Heavy Vehicles	0 trucks			
(converted to PCEX2.0)	0 PCE	0	0	0
Workers	9 each	18	9	9
Vendors	0 each	0	0	0
	Total Site Preparation	*18*	*9*	*9*

Table 3.15-29. Construction Trip Generation

Construction Activity	Units per day	Daily	Inbound	Outbound
Grading				
Heavy Vehicles	53 trucks			
(converted to PCEX2.0)	106 PCE	212	106	106
Workers	10 each	20	10	10
Vendors	0 each	0	0	0
	Total Grading	*232*	*116*	*116*
Building Construction				
Heavy Vehicles	0 trucks			
(converted to PCEX2.0)	0 PCE	0	0	0
Workers	531 each	1,062	531	531
Vendors	136 each	272	136	136
	Total Building Construction	*1,334*	*667*	*667*
Paving				
Heavy Vehicles	0 trucks			
(converted to PCEX2.0)	0 PCE	0	0	0
Workers	8 each	16	8	8
Vendors	0 each	0	0	0
	Total Paving	*16*	*8*	*8*
Architectural Coating				
Heavy Vehicles	0 trucks			
(converted to PCEX2.0)	0 PCE	0	0	0
Workers	106 each	212	106	106
Vendors	0 each	0	0	0
	Total Architectural Coating	*212*	*106*	*106*

Notes:
PCE = passenger car equivalency (to convert trucks into passenger cars for analysis)

As shown in Table 3.15-29, Construction Trip Generation, the highest number of heavy vehicle trips would occur during the remediation/demolition phase while the highest number of worker trips would occur during the building construction phase. With the implementation of the project design feature PDF-TRA-1 Construction Management Plan, it is assumed that heavy vehicle activity to and from the Project site would occur outside of the morning and afternoon peak hours. Additionally, worker trips to and from the Project site would also occur outside of the peak hours. Therefore, no peak hour construction traffic impacts would occur during the remediation/excavation, grading, or construction components of this development.

Haul Routes

Construction haul trucks must travel on approved truck routes designated within the City and on State facilities. Final haul routes will be established through the Construction Management Plan application, a process which is overseen by the City to avoid creating impacts from cumulative construction activities. The haul route will utilize Gage Avenue for access to the Project site to avoid impacts to the residential street, Zindell Avenue.

Impacts on Access, Transit and Parking

Construction activities are expected to be primarily contained within the Project site boundaries and would generally not affect the adjacent street access, transit, or parking in the area. However, construction events may affect roadway operations by creating periodic curb lane closures to allow installation or removal of scaffolding, temporary placement of cranes or other heavy equipment, and other activities. Project construction would not create such hazards for roadway travelers, bus riders, or parkers, as long as commonly practiced safety procedures for construction are followed. Implementation of PDF-TRA-1 would avoid impacts due to the temporary loss of on-street parking, bus stops, or rerouting of bus lines during construction.

PDF-TRA-1 The contractor will prepare a detailed **Construction Management Plan**, including street closure information, a detour plan, haul routes, and a staging plan, and submit to the City for review and approval. The Construction Management Plan will formalize how construction would be carried out and identify specific actions that would be required to reduce effects on the surrounding community. The Construction Management Plan will be based on the nature and timing of the specific construction activities and other projects in the vicinity of the Project site, and will include, but not be limited to, the following elements, as appropriate:

- Advance, bilingual notification of adjacent property owners and occupants of upcoming construction activities, including durations and daily hours of operation.
- Prohibition of construction worker or equipment parking on adjacent streets.
- Temporary pedestrian, bicycle, and vehicular traffic controls (i.e., flag persons) during all construction activities adjacent to public rights-of-way to ensure traffic safety on public roadways. These controls will include, but not be limited to, flag people trained in pedestrian and bicycle safety.
- Temporary traffic control during all construction activities adjacent to public rights-of-way to improve traffic flow on public roadways (e.g., flag persons).
- Scheduling of construction activities to reduce the effect on traffic flow on surrounding arterial streets.
- Potential sequencing of construction activity to reduce the amount of construction-related traffic on arterial streets.
- Containment of construction activity within the Project site boundaries.
- Prohibition of construction-related vehicles/equipment parking on surrounding public streets.
- Safety precautions for roadway travelers, transit riders, vehicular parking, pedestrians, and bicyclists through such measures as alternate routing and protection barriers will be implemented as appropriate.
- Scheduling of construction-related deliveries, haul trips, etc., so as to occur outside the commuter peak hours to the extent feasible.
- Notifying emergency service providers and law enforcement to ensure that provision of sufficient emergency service, access, and evacuation can occur during construction

Therefore, with the implementation of PDF-TRA-1, impacts due to construction of the project would be **less than significant.** No mitigation is required.

Threshold B: Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

State CEQA Guidelines Section 15064.3, subdivision (b), focuses on newly adopted criteria (vehicle miles traveled) adopted pursuant to SB 743 for determining the significance of transportation impacts. As discussed above in Section 3.15.X, pursuant to SB743, the focus of transportation analysis changes from vehicle delay to VMT. The related updates to the CEQA Guidelines required under SB 743 were approved on December 28, 2018. As stated in CEQA Guidelines Section 15064.3(c), the provisions of Section 15064.3 shall apply prospectively. A lead agency may elect to be governed by the provision of Section 15064.3 immediately. The provisions must be implemented statewide by January 1, 2020.

The City of Commerce have not yet adopted local VMT criteria therefore this section is based on traffic impact study that provides a volume to capacity and delay based level of service analysis for the proposed Project.

The Project characteristics (e.g., mixed land uses, infill development, its proximity to nearby destinations, future pedestrian and bicycle connections, etc.) would encourage localized trips and trips made by walking, biking, carpool, or transit. The Project would, therefore, reduce vehicle trips and trip lengths which results in corresponding reductions in VMT, air quality emissions and transportation-related GHG emissions.

Therefore, the Project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b) and impacts would be **less than significant**. No mitigation is required.

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

Project Access

Project access will not substantially increase hazards due to design features or incompatible uses. Primary site access is provided by two full-access driveways from Gage Avenue:

- Intersection #20 Gage Avenue/Zindell Avenue - The Gage Avenue/Zindell Avenue intersection is an existing signalized intersection that the Project proposes to improve to accommodate access to the Project site. Most of the residential Project traffic would utilize this Project access to enter and exit the site.
- Intersection #21 Gage Avenue/Project Driveway - The Project proposes to signalize the intersection of Gage Avenue/Project Driveway. Most of the commercial Project traffic would utilize this Project access to enter and exit the site.

As shown in Tables 3.15-10 and 3.15-11, both Project driveways would operate at acceptable level of service conditions under Existing with Project and Future Year 2023 with Project conditions.

Parking and Internal Circulation

Parking would be provided in a subterranean parking structure below the Project. Access to the parking garage would be provided via multiple driveways from the Project's internal site circulation system. The Project would provide parking as required by the City's Municipal Code.

All new driveways and internal streets would be designed and constructed in accordance with all applicable regulatory standards. Implementation of these improvements per the applicable standards would ensure compliance with any and all applicable roadway design requirements. As such, no hazardous design features would be a part of the Project's roadway improvement.

Freeway Ramp Queuing Impacts

Six off-ramps from the I-5 freeway were analyzed to determine whether the lengths of the ramps are sufficient to accommodate vehicle queue lengths. The queue lengths were estimated using Vistro, which reports the 95th percentile queue length, in feet, for each approach lane on the off-ramp. Caltrans' primary concern is that queued vehicles do not extend past the back of an off ramp onto the mainline. To this end, the queuing analysis looked at two separate components of ramp capacity: the length of each approach lane to the intersection at the end of the off-ramp and the total length of the ramp, behind any approach lane delineation lines, to the gore point where the ramp diverges from the freeway mainline. The queue may exceed the striped length of a given approach lane as long as there is sufficient additional queuing capacity on the ramp, so that any queue will not spill over onto the mainline. As shown in the TIS and Caltrans analysis summarized previously, the queue lengths at all six off-ramps would not exceed the capacity of the approach lanes or the ramps, with or without Project traffic, for Year 2023. However, two of the six analyzed ramps will exceed capacity under Year 2040 with and without Project. The Project traffic would not extend the queue at either of the ramps beyond the length of one vehicle. Therefore, the increase in Project traffic is not responsible for the queue extending beyond capacity.

Based on the discussion above, the impacts associated with hazardous geometric design features or incompatible uses would be **less than significant**. With the implementation of project design feature **PDF TRA-1,** impacts due to construction of the project would be **less than significant.** No mitigation is required.

Threshold D: Would the project result in inadequate emergency access?

All areas of the Project site would be accessible to emergency responders. As described above, access to the proposed Project would be provided by two full access driveways along Gage Avenue. All internal roadways on the proposed Project site would be designed and constructed in accordance with all applicable provisions of the City and LA County fire code, which includes requirements for width of emergency access routes and turning radii along emergency access routes. Impacts associated with emergency access during the permanent operations of the Project would be **less than significant**. With the implementation of project design feature **PDF TRA-1** impacts associated with emergency access during the construction of the Project would be **less than significant**. No mitigation is required.

3.15.6 Cumulative Impacts

Because of the cumulative nature of transportation impacts, cumulative impacts to the study area's transportation network (study area intersections and Caltrans facilities) under Future Year 2023 and Future Year 2040 (only for Caltrans facilities) are previously addressed in Section 3.15.5 under impact Threshold A.

3.15.7 Mitigation Measures

The following mitigation measures are proposed to address the Project's transportation impacts under Existing with Project and Future Year 2023 with Project conditions.

Intersection #4 Telegraph Road/I-5 Northbound Ramps (Garfield Avenue) (City of Commerce/Caltrans)

MM-TRA-1 The proposed Project shall implement the following improvements:

- Reconfiguring the southbound approach of the intersection to accommodate a right-turn lane. This would result in a southbound approach providing two through lanes and one right-turn lane. This improvement could be implemented by restriping the existing lanes and no widening would be required. A conceptual plan of the proposed mitigation is shown in Figure 3.15-14.

Intersection #6 Telegraph Road/I-5 Northbound Off-Ramp (Slauson Avenue) (City of Commerce/Caltrans)

MM-TRA-2 The proposed Project shall pay its fair-share toward the implementation of the following improvements:

- Signalizing the intersection as it meets the peak hour signal warrant under existing conditions. Signalization would reduce the delay experienced by drivers exiting the freeway as they attempt to turn left onto Telegraph Road. It should be noted that the Project does not add any traffic to the eastbound left-turn movement (the intersection movement that experiences the highest delay and is responsible for the poor overall operating LOS of the intersection). A signal warrant analysis for this intersection is provided in an appendix to the TIS.
- Other proposed projects within the study area also contribute traffic to this intersection and, therefore, the Project should be required to pay its fair share of the cost of this intersection signalization.
- Since this intersection is controlled by both the City and Caltrans, Caltrans would have to approve the design of a traffic signal at this location. This study also considered whether the installation of a traffic signal could queue off-ramp traffic back onto the freeway mainline lanes. In this case, however, the proposed traffic signal would likely give the exiting traffic more gaps in Telegraph Road traffic, thereby reducing the off-ramp queues.
- Caltrans has proposed long-range improvements to the I-5 freeway section through the study area and may be unwilling to permit improvements to ramps that may be removed or modified as part of that improvement program. The latest schedule for these I-5 freeway improvements suggests that this corridor improvement could be more than 15-20 years away.

Intersection #11 Garfield Avenue/ Slauson Avenue (City of Commerce)

MM-TRA-3 The proposed Project shall implement the following improvements:

- Reconfiguring the southbound approach of the intersection to accommodate a right-turn lane. This would result in a southbound approach providing a left-turn lane, two through lanes, and a right-turn lane. This improvement could be implemented by restriping the existing lanes and no widening would be required. A conceptual plan of the proposed mitigation is shown in Figure 3.15-15.

Intersection #13 I-5 Southbound Ramps/Slauson Avenue (City of Commerce/Caltrans)

MM-TRA-4 The proposed Project shall implement the following improvements:

- Reconfiguring the intersection into two three-legged intersections. Intersection 13a would be a T intersection between the I-5 Southbound Ramps & Slauson Avenue and Intersection 13b would be a T intersection between Gage Avenue & Slauson Avenue. To implement this mitigation measure, street widening, new signals, reconfiguration with the existing rail crossing, and signal timing work would be necessary. A conceptual plan of the proposed mitigation is shown in Figure 3.15-16.
- Intersection 13a would be restriped to provide one left-turn lane, two through lanes, and one through/right-turn lane in the eastbound direction; two left-turn lanes and one free right-turn lane in the southbound direction; two through lanes and one free right-turn lane in the westbound direction; and a left-turn/through/right-turn lane out of the northbound driveway. Wellman Street, which is

adjacent to the proposed intersection, would be closed off to Slauson Avenue completely with a cul-de-sac. Neighbors wishing to leave the neighborhood would instead use Greenwood Avenue.

- Intersection 13b would be restriped to provide two through lanes and one right-turn lane in the eastbound direction; one left-turn/through/right-turn lane for the southbound driveway; two left-turn lanes, two through lanes, and a through/right-turn lane in the westbound direction; and two left-turn lanes and a free right-turn lane in the northbound direction. The railroad crossing would shift to the right and would need reconstruction.

Intersection #14 Telegraph Road/Slauson Avenue (City of Commerce)

MM-TRA-5 The proposed Project shall implement the following improvements:

- Reconfiguring the eastbound approach of the intersection to accommodate an additional through lane, resulting in an eastbound approach providing one left-turn lane, three through lanes, and one right-turn lane. The westbound approach of the intersection would be modified to accommodate a new through/right-turn lane, resulting in one left-turn lane, two through lanes, one through/right-turn lane, and one right-turn lane. The overlap phase on the westbound approach would be eliminated with the addition of the through/right-turn lane. The southbound approach would be modified to accommodate a second right-turn lane and would eliminate the existing free right-turn lane. The approach would provide a left-turn lane, two through lanes, and two right-turn lanes. No changes are proposed for the northbound lanes along Telegraph Road. This improvement could be implemented by restriping the existing lanes in both directions and no widening would be required, although reconfiguration of the "pork-chop" right-turn island on the southbound approach would be necessary. A conceptual plan of the proposed mitigation is shown in Figure 3.15-17.

Intersection #17 Eastern Avenue/ Gage Avenue (City of Bell Gardens)

MM-TRA-6 The proposed Project shall implement the following improvements:

- Reconfiguring the southbound approach of the intersection to accommodate a through/right-turn lane. This would result in a southbound approach providing one left-turn lane, two through lanes, and one through/right-turn lane. This improvement could be implemented by restriping the existing lanes and no widening would be required. The through lane would need to be striped south of the intersection. A conceptual plan of the proposed mitigation is shown in Figure 3.15-18.

Intersection #18 Garfield Avenue/ Gage Avenue (City of Bell Gardens)

MM-TRA-7 The proposed Project shall implement the following improvements:

- Reconfiguring the northbound approach of the intersection to accommodate a right-turn lane and the southbound approach of the intersection to accommodate a right-turn lane. This would result in a northbound approach providing one left-turn lane, two through lanes, and one right-turn lane and a southbound approach providing one left-turn lane, two through lanes, and one right-turn lane. This improvement could be implemented by restriping the existing wide through/right-turn lanes in each direction into two lanes – one through lane and one right-turn lane. No widening would be required. A conceptual plan of the proposed mitigation is shown in Figure 3.15-19.

Intersection #22 Eastern Avenue/ Florence Avenue (City of Bell Gardens)

MM-TRA-8 The proposed Project shall implement the following improvements:

- Reconfiguring the southbound approach of the intersection to accommodate a through/right-turn lane. This would result in a southbound approach providing two left-turn lanes, two through lanes, one through/right-turn lane, and one right-turn lane. This improvement could be implemented by restriping one of the existing through lanes and, therefore, no widening would be required. The right-turn lane immediately adjacent to the curb would have to be signed as a "Freeway Only" turn lane. A conceptual plan of the proposed mitigation is shown in Figure 3.15-20.

Intersection #26 Paramount Boulevard/ Telegraph Road (City of Pico Rivera)

MM-TRA-9 The proposed Project shall implement the following improvements:

- Reconfiguring the westbound approach of the intersection to accommodate a through/right-turn lane. This would result in a westbound approach providing one left-turn lane, two through lanes, and one through/right-turn lane. This improvement could be implemented by removing part of the median and moving back the stop bar at the adjacent intersection. The existing crosswalk would have to be relocated as a result of the right-turn lane. No widening would be required. A conceptual plan of the proposed mitigation is shown in Figure 3.15-21.

3.15.8 Level of Significance After Mitigation

Implementation of the above mitigation measures would reduce potential impacts to below a level of significance. The following section discusses the levels of significance of Project impacts after the prescribed mitigation measures have been implemented. Tables 3.15-30 and 3.15-31 provide a summary of the study area level of service summary for the Existing with Project and Future with Project conditions, respectively.

Study Intersections – Existing with Project

Implementation of **MM-TRA-1 through MM-TRAF-9** (with the exception of mitigation measure **MM-TRAF-3**, which is warranted under Future Year 2023 with Project conditions) would reduce the Project's impact to less than significant based on the City's methodology. However, some of these intersections are within the jurisdiction of another public agency. Physical improvements requiring implementation by another public agency will be monitored by the City and implemented to the extent feasible. If the physical improvements are deemed infeasible by the other public agency, cannot be implemented during the design or review process, or implementation is delayed, a significant impact would remain until the improvement is implemented. As the City is not assured of timely implementation of the physical improvement, it is conservatively concluded that impacts at Intersection # 4, 6, 13, 17, 18, 22, and 26 would remain **significant and unavoidable.**

Study Intersections – Future with Project

Implementation of **MM-TRA-1 through MM-TRAF-9** would reduce the Project's impact to less than significant levels based on the City's methodology. However, some of these intersections are within the jurisdiction of another public agency. Physical improvements requiring implementation by another public agency will be monitored by the City and implemented to the extent feasible. If the physical improvements are deemed infeasible by the other public agency, cannot be implemented during the design or review process, or implementation is delayed, a significant impact would remain until the improvement is implemented. As the City is not assured of timely implementation of the physical improvement, it is conservatively concluded that impacts at Intersection # 4, 6, 13, 17, 18, 22, and 26 would remain **significant and unavoidable.**

Table 3.15-30. Existing with Project with Mitigation Conditions (Year 2019) Intersection Levels of Service

No.	Intersection	Peak Hour	Existing Conditions		Existing with Project Conditions				Existing with Project with Mitigation Conditions			
			V/C or Delay	*LOS*	*V/C or Delay*	*LOS*	*Δ V/C*	*Impact*	*V/C or Delay*	*LOS*	*Δ V/C*	*Impact*
1.	Paramount Boulevard &	A.M.	0.860	D	0.862	D	0.002	NO	0.862	D	0.002	NO
	Washington Boulevard	P.M.	0.928	E	0.934	E	0.006	NO	0.934	E	0.006	NO
2.	Rosemead Boulevard &	A.M.	0.848	D	0.852	D	0.004	NO	0.852	D	0.004	NO
	Washington Boulevard	P.M.	0.880	D	0.887	D	0.007	NO	0.887	D	0.007	NO
3.	Garfield Avenue &	A.M.	0.717	C	0.726	C	0.009	NO	0.726	C	0.009	NO
	Telegraph Road	P.M.	0.755	C	0.763	C	0.008	NO	0.763	C	0.008	NO
4.	Telegraph Road &	A.M.	0.771	C	0.808	D	0.037	YES	0.744	C	-0.027	NO
	I-5 NB Ramps (Garfield Avenue)	P.M.	0.875	D	0.907	E	0.032	YES	0.837	D	-0.038	NO
5.	Telegraph Road &	A.M.	0.710	C	0.732	C	0.022	NO	0.732	C	0.022	NO
	Greenwood Avenue	P.M.	0.716	C	0.726	C	0.010	NO	0.726	C	0.010	NO
6.[a]	Telegraph Road &	A.M.	6.7	A	7.6	A	0.9	NO	10.4	B	3.8	NO
	I-5 NB Off Ramp (Slauson Avenue)	P.M.	62.9	E	69.5	E	6.6	YES	10.8	B	-52.1	NO
7.	Eastern Avenue &	A.M.	0.756	C	0.766	C	0.010	NO	0.766	C	0.010	NO
	Bandini Boulevard	P.M.	0.735	C	0.739	C	0.004	NO	0.739	C	0.004	NO
8.	Garfield Avenue &	A.M.	0.975	E	0.983	E	0.008	NO	0.983	E	0.008	NO
	Bandini Boulevard	P.M.	0.825	D	0.838	D	0.013	NO	0.838	D	0.013	NO
9.[a]	I-5 SB Ramps &	A.M.	20.8	C	21.1	C	0.3	NO	21.1	C	0.3	NO
	Bandini Boulevard	P.M.	82.2	F	83.0	F	0.8	NO	83.0	F	0.8	NO
10.	Eastern Avenue &	A.M.	0.756	C	0.770	C	0.014	NO	0.770	C	0.014	NO
	Slauson Avenue	P.M.	0.827	D	0.838	D	0.011	NO	0.838	D	0.011	NO
11.	Garfield Avenue &	A.M.	0.860	D	0.867	D	0.007	NO	0.866	D	0.006	NO
	Slauson Avenue	P.M.	0.861	D	0.874	D	0.013	NO	0.821	D	-0.040	NO
12.	Greenwood Avenue &	A.M.	0.613	B	0.635	B	0.022	NO	0.635	B	0.022	NO
	Slauson Avenue	P.M.	0.709	C	0.742	C	0.033	NO	0.742	C	0.033	NO
13.	I-5 SB Ramps / Gage Avenue &	A.M.	0.719	C	0.784	C	0.065	YES	See Intersections 13a & 13b			
	Slauson Avenue	P.M.	0.910	E	1.062	F	0.152	YES				

Table 3.15-30. Existing with Project with Mitigation Conditions (Year 2019) Intersection Levels of Service

No.	Intersection	Peak Hour	Existing Conditions		Existing with Project Conditions				Existing with Project with Mitigation Conditions			
			V/C or Delay	*LOS*	*V/C or Delay*	*LOS*	*Δ V/C*	*Impact*	*V/C or Delay*	*LOS*	*Δ V/C*	*Impact*
13a.	I-5 SB Ramps &								0.746	C	0.027	NO
	Slauson Avenue								0.615	B	-0.295	NO
13b.	Gage Avenue &								0.648	B	-0.071	NO
	Slauson Avenue								0.851	D	-0.059	NO
14.	Telegraph Road &	A.M.	0.807	D	0.857	D	0.050	YES	0.793	C	-0.014	NO
	Slauson Avenue	P.M.	0.871	D	0.901	E	0.030	YES	0.776	C	-0.095	NO
15.	Paramount Boulevard &	A.M.	0.802	D	0.810	D	0.008	NO	0.810	D	0.008	NO
	Slauson Avenue	P.M.	0.901	E	0.908	E	0.007	NO	0.908	E	0.007	NO
16.	Rosemead Boulevard &	A.M.	0.805	D	0.817	D	0.012	NO	0.817	D	0.012	NO
	Slauson Avenue	P.M.	0.904	E	0.908	E	0.004	NO	0.908	E	0.004	NO
17.	Eastern Avenue &	A.M.	0.805	D	0.821	D	0.016	NO	0.821	D	0.016	NO
	Gage Avenue	P.M.	0.935	E	0.954	E	0.019	YES	0.868	D	-0.067	NO
18.	Garfield Avenue &	A.M.	0.849	D	0.874	D	0.025	YES	0.810	D	-0.039	NO
	Gage Avenue	P.M.	0.886	D	0.922	E	0.036	YES	0.858	D	-0.028	NO
19.	Greenwood Avenue &	A.M.	0.497	A	0.515	A	0.018	NO	0.515	A	0.018	NO
	Gage Avenue	P.M.	0.513	A	0.540	A	0.027	NO	0.540	A	0.027	NO
20.	Gage Avenue &	A.M.	0.449	A	0.630	B	0.181	NO	0.630	B	0.181	NO
	Zindell Avenue	P.M.	0.419	A	0.591	A	0.172	NO	0.591	A	0.172	NO
21.[b]	Gage Avenue &	A.M.	0.3	A	4.8	A	4.5	NO	4.8	A	4.5	NO
	Project Driveway	P.M.	0.4	A	8.1	A	7.7	NO	8.1	A	7.7	NO
22.	Eastern Avenue &	A.M.	0.852	D	0.873	D	0.021	YES	0.744	C	-0.108	NO
	Florence Avenue	P.M.	0.941	E	0.954	E	0.013	YES	0.758	C	-0.183	NO
23.	Garfield Avenue &	A.M.	0.777	C	0.784	C	0.007	NO	0.784	C	0.007	NO
	Florence Avenue	P.M.	0.738	C	0.752	C	0.014	NO	0.752	C	0.014	NO
24.[a]	I-5 SB Ramps &	A.M.	4.9	A	4.9	A	0.0	NO	4.9	A	0.0	NO
	Paramount Boulevard	P.M.	10.5	B	10.8	B	0.3	NO	10.8	B	0.3	NO
25.	I-5 NB Ramps &	A.M.	0.612	B	0.615	B	0.003	NO	0.615	B	0.003	NO
	Paramount Boulevard	P.M.	0.895	D	0.897	D	0.002	NO	0.897	D	0.002	NO

Table 3.15-30. Existing with Project with Mitigation Conditions (Year 2019) Intersection Levels of Service

No.	Intersection	Peak Hour	Existing Conditions		Existing with Project Conditions				Existing with Project with Mitigation Conditions			
			V/C or Delay	*LOS*	*V/C or Delay*	*LOS*	*Δ V/C*	*Impact*	*V/C or Delay*	*LOS*	*Δ V/C*	*Impact*
26.	Telegraph Road &	A.M.	0.800	C	0.815	D	0.015	NO	0.722	C	-0.078	NO
	Paramount Boulevard	P.M.	0.951	E	0.973	E	0.022	YES	0.877	D	-0.074	NO
27.	Telegraph Road &	A.M.	0.884	D	0.888	D	0.004	NO	0.888	D	0.004	NO
	Rosemead Boulevard	P.M.	1.001	F	1.008	F	0.007	NO	1.008	F	0.007	NO

Source: Gibson Transportation Consulting, Inc.
Notes:
[a] Unsignalized Intersection - Uses HCM 6th Edition methodology
[b] Project is proposing to install signal at existing stop controlled intersection. Uses HCM 6th Edition methodology

Table 3.15-31. Future with Project with Mitigation Conditions (Year 2019) Intersection Levels of Service

No.	Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions				Future with Project with Mitigation Conditions			
			V/C or Delay	*LOS*	*V/C or Delay*	*LOS*	*Δ V/C*	*Impact*	*V/C or Delay*	*LOS*	*Δ V/C*	*Impact*
1.	Paramount Boulevard &	A.M.	0.905	E	0.906	E	0.001	NO	0.906	E	0.001	NO
	Washington Boulevard	P.M.	0.976	E	0.982	E	0.006	NO	0.982	E	0.006	NO
2	Rosemead Boulevard &	A.M.	0.892	D	0.896	D	0.004	NO	0.896	D	0.004	NO
	Washington Boulevard	P.M.	0.926	E	0.933	E	0.007	NO	0.933	E	0.007	NO
3.	Garfield Avenue &	A.M.	0.760	C	0.769	C	0.009	NO	0.769	C	0.009	NO
	Telegraph Road	P.M.	0.806	D	0.814	D	0.008	NO	0.814	D	0.008	NO
4.	Telegraph Road &	A.M.	0.827	D	0.864	D	0.037	YES	0.795	C	-0.032	NO
	I-5 NB Ramps (Garfield Avenue)	P.M.	0.951	E	0.983	E	0.032	YES	0.904	E	-0.047	NO

Table 3.15-31. Future with Project with Mitigation Conditions (Year 2019) Intersection Levels of Service

No.	Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions				Future with Project with Mitigation Conditions			
			V/C or Delay	*LOS*	*V/C or Delay*	*LOS*	*Δ V/C*	*Impact*	*V/C or Delay*	*LOS*	*Δ V/C*	*Impact*
5.	Telegraph Road &	A.M.	0.758	C	0.780	C	0.022	NO	0.780	C	0.022	NO
	Greenwood Avenue	P.M.	0.752	C	0.762	C	0.010	NO	0.762	C	0.010	NO
6[a].	Telegraph Road &	A.M.	10.1	B	11.5	B	1.4	NO	11.0	B	0.9	NO
	I-5 NB Off Ramp (Slauson Avenue)	P.M.	94.5	F	103.9	F	9.4	YES	11.4	B	-83.1	NO
7.	Eastern Avenue &	A.M.	0.799	C	0.808	D	0.009	NO	0.808	D	0.009	NO
	Bandini Boulevard	P.M.	0.777	C	0.782	C	0.005	NO	0.782	C	0.005	NO
8.	Garfield Avenue &	A.M.	1.030	F	1.038	F	0.008	NO	1.038	F	0.008	NO
	Bandini Boulevard	P.M.	0.867	D	0.880	D	0.013	NO	0.880	D	0.013	NO
9[a].	I-5 SB Ramps &	A.M.	25.1	C	25.7	C	0.6	NO	25.7	C	0.6	NO
	Bandini Boulevard	P.M.	101.0	F	101.7	F	0.7	NO	101.7	F	0.7	NO
10.	Eastern Avenue &	A.M.	0.800	C	0.815	D	0.015	NO	0.815	D	0.015	NO
	Slauson Avenue	P.M.	0.871	D	0.882	D	0.011	NO	0.882	D	0.011	NO
11.	Garfield Avenue &	A.M.	0.906	E	0.915	E	0.009	NO	0.915	E	0.009	NO
	Slauson Avenue	P.M.	0.912	E	0.925	E	0.013	YES	0.869	D	-0.043	NO
12.	Greenwood Avenue &	A.M.	0.649	B	0.671	B	0.022	NO	0.671	B	0.022	NO
	Slauson Avenue	P.M.	0.756	C	0.790	C	0.034	NO	0.790	C	0.034	NO
13.	I-5 SB Ramps / Gage Avenue &	A.M.	0.760	C	0.818	D	0.058	YES	See 13a & 13b			
	Slauson Avenue	P.M.	0.958	E	1.109	F	0.151	YES				
13a.	I-5 SB Ramps &								0.788	C	0.028	NO
	Slauson Avenue								0.657	B	-0.301	NO

Table 3.15-31. Future with Project with Mitigation Conditions (Year 2019) Intersection Levels of Service

No.	Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions				Future with Project with Mitigation Conditions			
			V/C or Delay	*LOS*	*V/C or Delay*	*LOS*	*Δ V/C*	*Impact*	*V/C or Delay*	*LOS*	*Δ V/C*	*Impact*
13b.	Gage Avenue &								0.677	B	-0.083	NO
	Slauson Avenue								0.891	D	-0.067	NO
14.	Telegraph Road &	A.M.	0.866	D	0.911	E	0.045	YES	0.845	D	-0.021	NO
	Slauson Avenue	P.M.	0.926	E	0.957	E	0.031	YES	0.824	D	-0.102	NO
15.	Paramount Boulevard &	A.M.	0.845	D	0.853	D	0.008	NO	0.853	D	0.008	NO
	Slauson Avenue	P.M.	0.951	E	0.958	E	0.007	NO	0.958	E	0.007	NO
16.	Rosemead Boulevard &	A.M.	0.849	D	0.860	D	0.011	NO	0.860	D	0.011	NO
	Slauson Avenue	P.M.	0.954	E	0.958	E	0.004	NO	0.958	E	0.004	NO
17.	Eastern Avenue &	A.M.	0.848	D	0.865	D	0.017	NO	0.865	D	0.017	NO
	Gage Avenue	P.M.	0.984	E	1.003	F	0.019	YES	0.912	E	-0.072	NO
18.	Garfield Avenue &	A.M.	0.896	D	0.921	E	0.025	YES	0.854	D	-0.042	NO
	Gage Avenue	P.M.	0.936	E	0.973	E	0.037	YES	0.905	E	-0.031	NO
19.	Greenwood Avenue &	A.M.	0.522	A	0.540	A	0.018	NO	0.540	A	0.018	NO
	Gage Avenue	P.M.	0.541	A	0.568	A	0.027	NO	0.568	A	0.027	NO
20.	Gage Avenue &	A.M.	0.471	A	0.653	B	0.182	NO	0.653	B	0.182	NO
	Zindell Avenue	P.M.	0.440	A	0.612	B	0.172	NO	0.612	B	0.172	NO
21[b].	Gage Avenue &	A.M.	0.3	A	4.8	A	4.5	NO	4.8	A	4.5	NO
	Project Driveway	P.M.	0.4	A	8.1	A	7.7	NO	8.1	A	7.7	NO

Table 3.15-31. Future with Project with Mitigation Conditions (Year 2019) Intersection Levels of Service

No.	Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions				Future with Project with Mitigation Conditions			
			V/C or Delay	*LOS*	*V/C or Delay*	*LOS*	*Δ V/C*	*Impact*	*V/C or Delay*	*LOS*	*Δ V/C*	*Impact*
22.	Eastern Avenue &	A.M.	0.895	D	0.916	E	0.021	YES	0.781	C	-0.114	NO
	Florence Avenue	P.M.	0.990	E	1.003	F	0.013	YES	0.797	C	-0.193	NO
23.	Garfield Avenue &	A.M.	0.816	D	0.823	D	0.007	NO	0.823	D	0.007	NO
	Florence Avenue	P.M.	0.774	C	0.788	C	0.014	NO	0.788	C	0.014	NO
24[a].	I-5 SB Ramps &	A.M.	7.9	A	8.0	A	0.1	NO	8.0	A	0.1	NO
	Paramount Boulevard	P.M.	17.5	B	17.9	B	0.5	NO	17.9	B	0.5	NO
25.	I-5 NB Ramps &	A.M.	0.645	B	0.647	B	0.002	NO	0.647	B	0.002	NO
	Paramount Boulevard	P.M.	0.946	E	0.948	E	0.002	NO	0.948	E	0.002	NO
26.	Telegraph Road &	A.M.	0.849	D	0.864	D	0.015	NO	0.766	C	-0.083	NO
	Paramount Boulevard	P.M.	1.013	F	1.035	F	0.022	YES	0.927	E	-0.086	NO
27.	Telegraph Road &	A.M.	0.932	E	0.936	E	0.004	NO	0.936	E	0.004	NO
	Rosemead Boulevard	P.M.	1.055	F	1.062	F	0.007	NO	1.062	F	0.007	NO

Source: Gibson Transportation Consulting, Inc.

Notes:

[a] Unsignalized Intersection - Uses HCM 6th Edition methodology

[b] Project is proposing to install signal at existing stop controlled intersection. Uses HCM 6th Edition methodology

3.15.9 References

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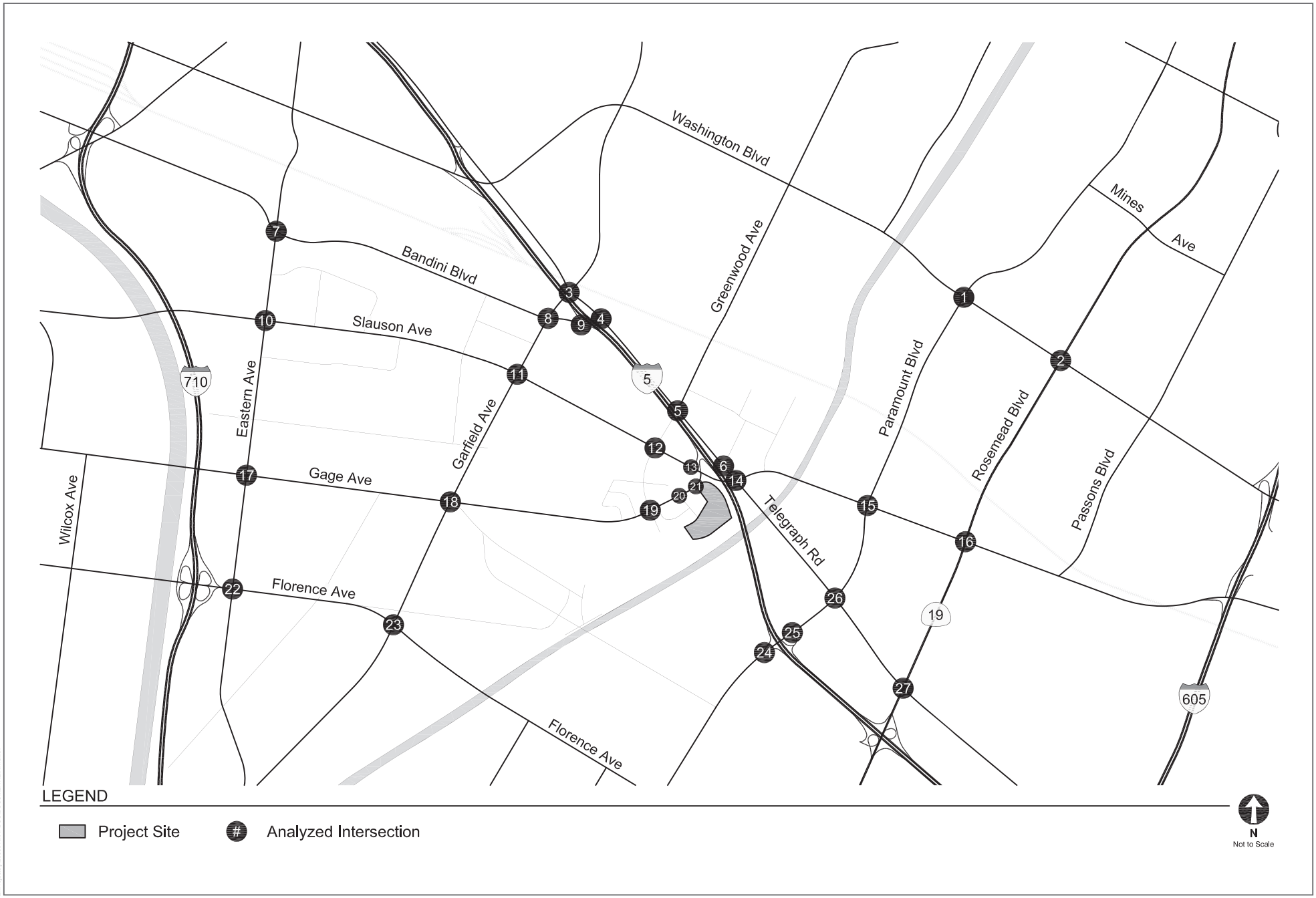

SOURCE: Gibson Transportation Consulting Inc. 2019

DUDEK

FIGURE 3.15-1
Study Area
Modelo Project

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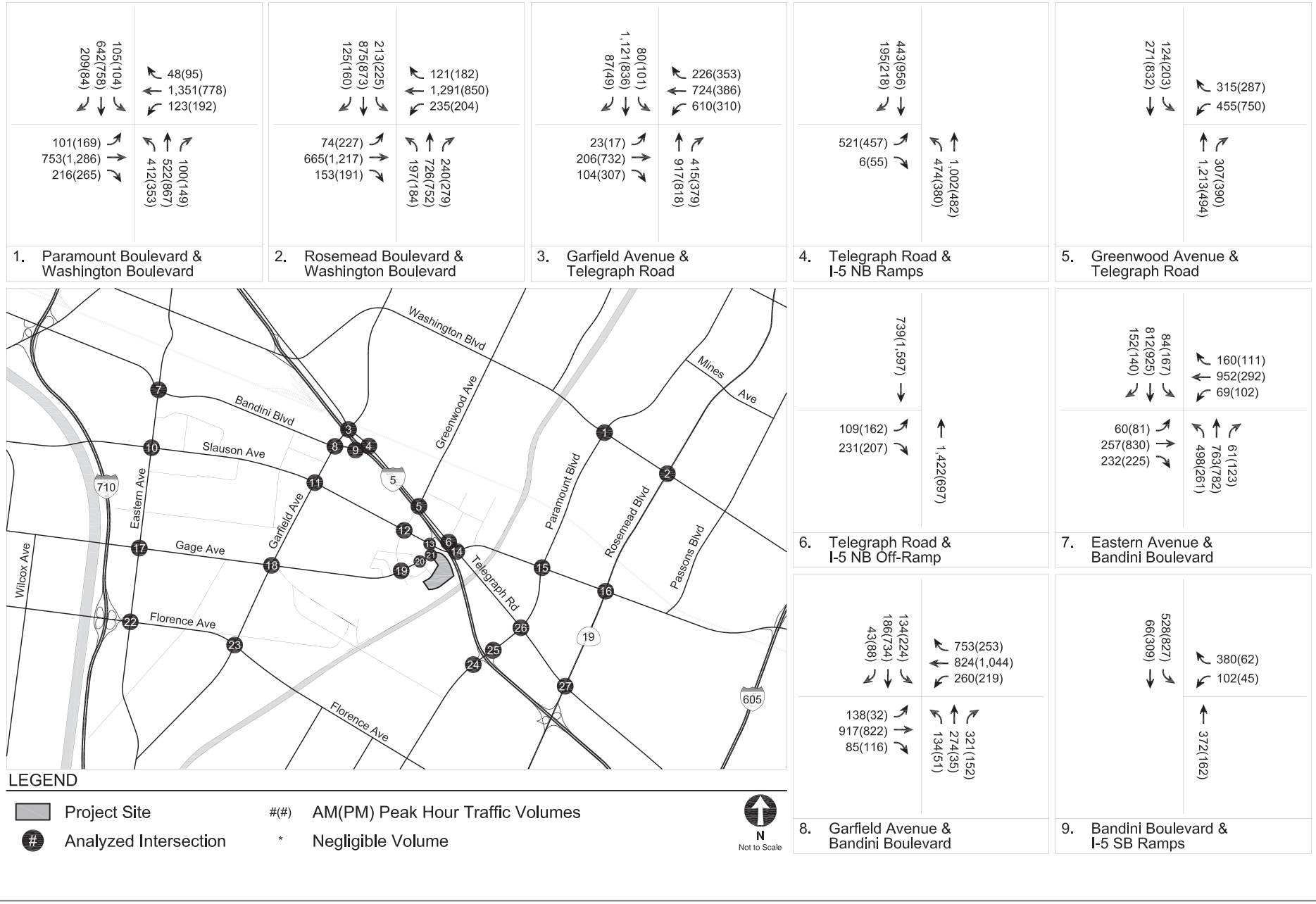

SOURCE: Gibson Transportation Consulting Inc. 2019

DUDEK

FIGURE 3.15-2A

Existing Conditions (Year 2019) Peak Hour Traffic Volumes

Modelo Project

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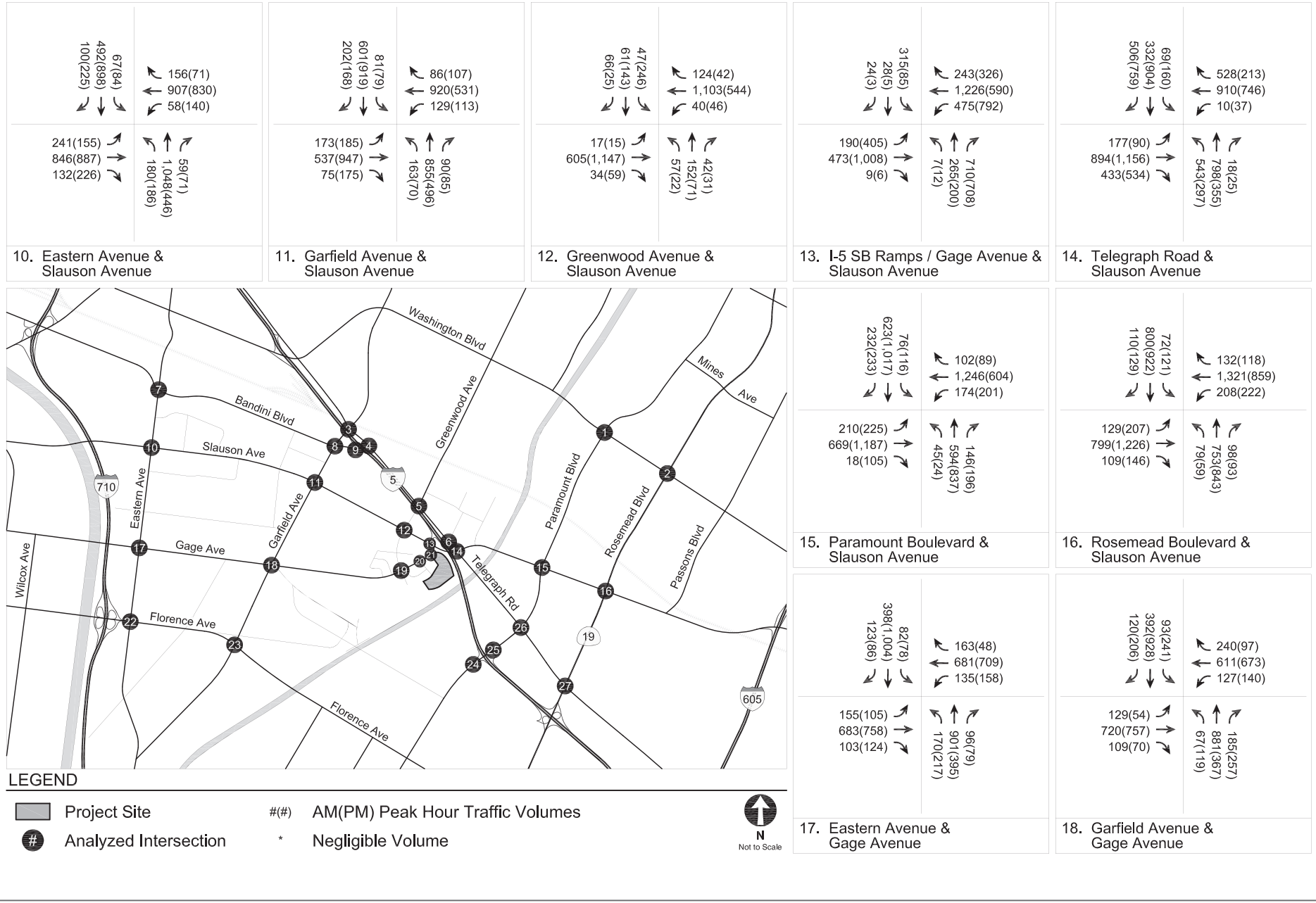

SOURCE: Gibson Transportation Consulting Inc. 2019

DUDEK

FIGURE 3.15-2B

Existing Conditions (Year 2019) Peak Hour Traffic Volumes (cont.)

Modelo Project

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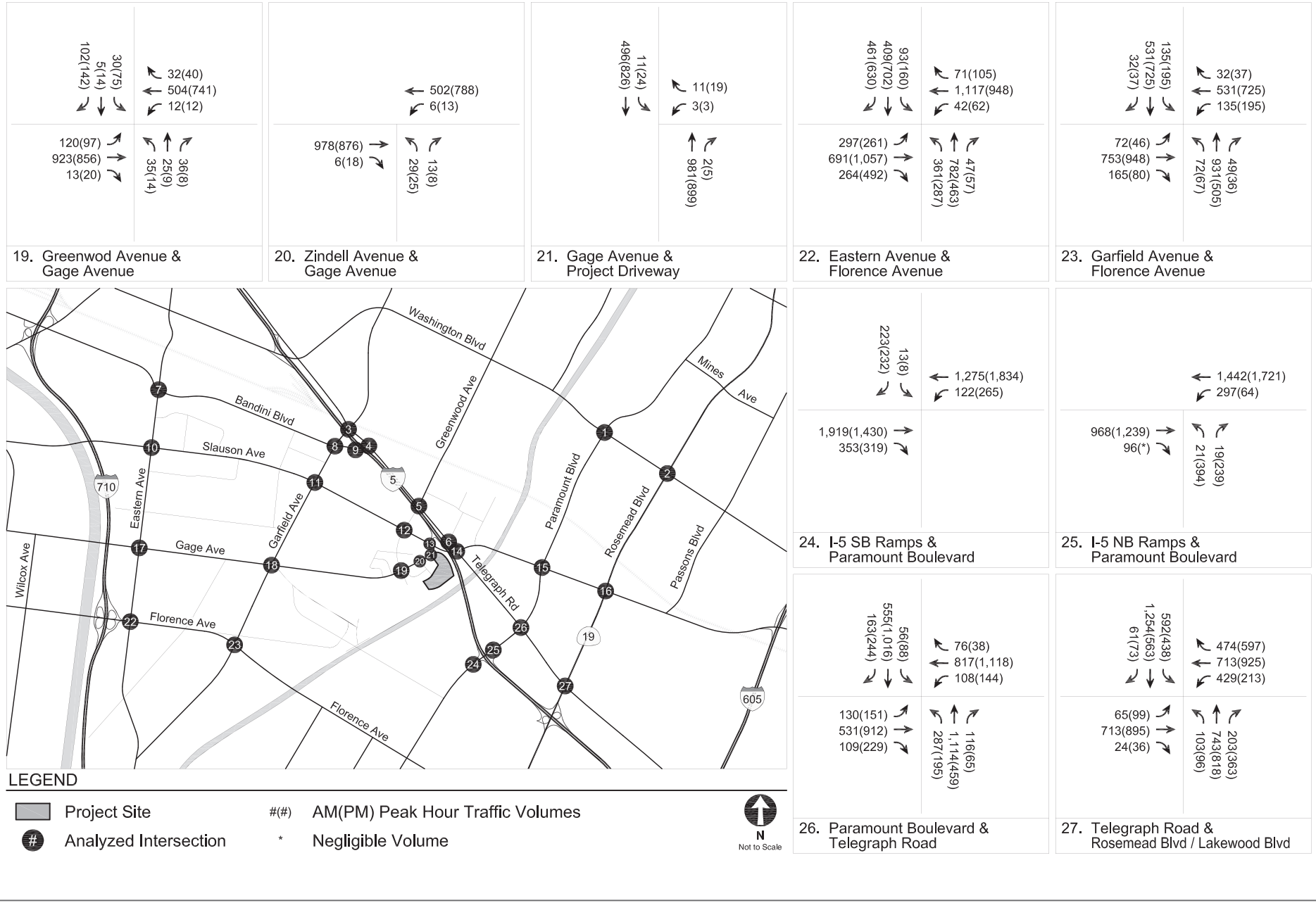

SOURCE: Gibson Transportation Consulting Inc. 2019

DUDEK

FIGURE 3.15-2C

Existing Conditions (Year 2019) Peak Hour Traffic Volumes (cont.)

Modelo Project

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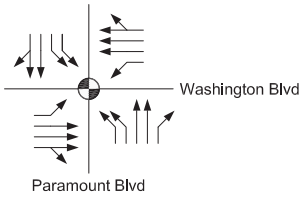
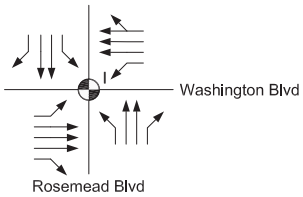
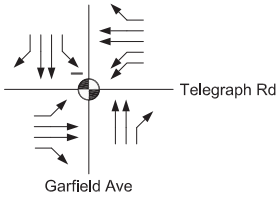
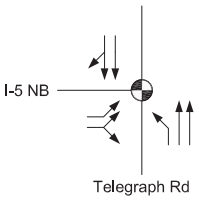
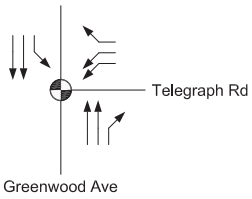
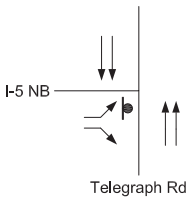
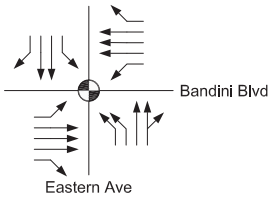
LEGEND

Traffic Signal
Stop Sign

	EXISTING CONDITIONS (YEAR 2019)	FUTURE WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2023)
1. Paramount Boulevard & Washington Boulevard		Same as Existing Conditions
2. Rosemead Boulevard & Washington Boulevard		Same as Existing Conditions
3. Garfield Avenue & Telegraph Road		Same as Existing Conditions
4. Telegraph Road & I-5 NB Ramps		Same as Existing Conditions
5. Greenwood Avenue & Telegraph Road		Same as Existing Conditions
6. Telegraph Road & I-5 NB Off-Ramp		Same as Existing Conditions
7. Eastern Avenue & Bandini Boulevard		Same as Existing Conditions

SOURCE: Gibson Transportation Consulting Inc. 2019

FIGURE 3.15-3A

Intersection Lane Configurations

Modelo Project

DUDEK

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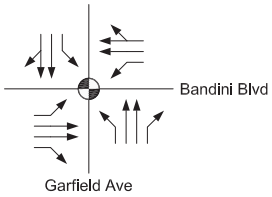
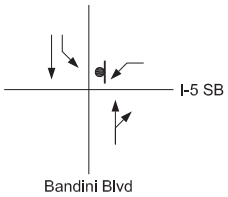
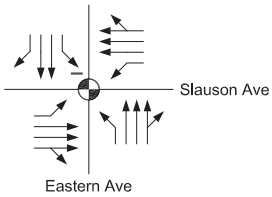
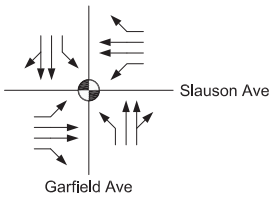
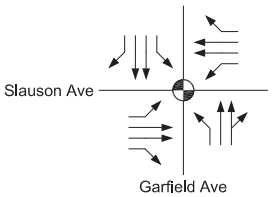
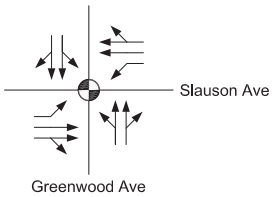
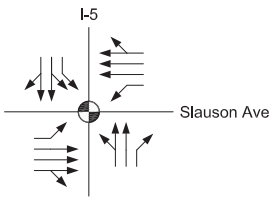
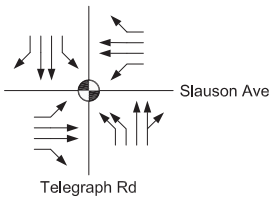
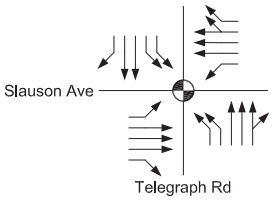
LEGEND

Traffic Signal
Stop Sign

	EXISTING CONDITIONS (YEAR 2019)	FUTURE WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2023)
8. Garfield Avenue & Bandini Boulevard		Same as Existing Conditions
9. Bandini Boulevard & I-5 SB Ramps		Same as Existing Conditions
10. Eastern Avenue & Slauson Avenue		Same as Existing Conditions
11. Garfield Avenue & Slauson Avenue		
12. Greenwood Avenue & Slauson Avenue		Same as Existing Conditions
13. I-5 SB Ramps / Gage Avenue & Slauson Avenue		Same as Existing Conditions
14. Telegraph Road & Slauson Avenue		

SOURCE: Gibson Transportation Consulting Inc. 2019

FIGURE 3.15-3B

Intersection Lane Configurations

Modelo Project

DUDEK

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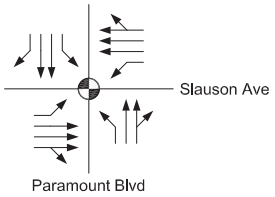
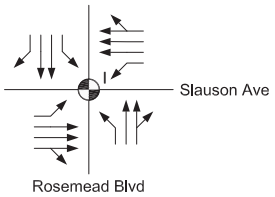
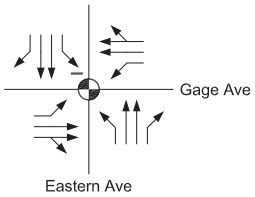
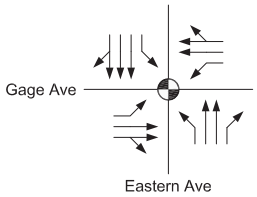
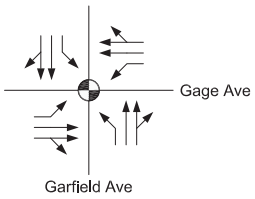
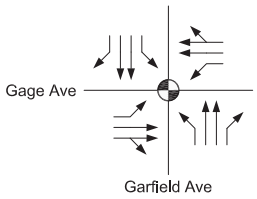
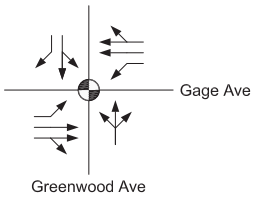
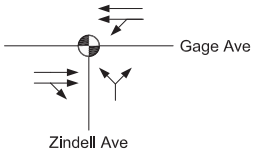
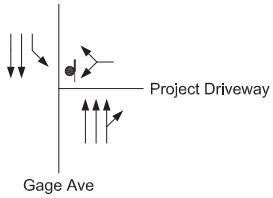
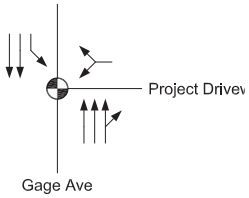
LEGEND

Traffic Signal
Stop Sign

	EXISTING CONDITIONS (YEAR 2019)	FUTURE WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2023)
15. Paramount Boulevard & Slauson Avenue		Same as Existing Conditions
16. Rosemead Boulevard & Slauson Avenue		Same as Existing Conditions
17. Eastern Avenue & Gage Avenue		
18. Garfield Avenue & Gage Avenue		
19. Greenwood Avenue & Gage Avenue		Same as Existing Conditions
20. Zindell Avenue & Gage Avenue		Same as Existing Conditions
21. Gage Avenue & Project Driveway		

SOURCE: Gibson Transportation Consulting Inc. 2019

FIGURE 3.15-3C

Intersection Lane Configurations

Modelo Project

DUDEK

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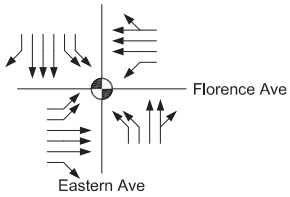
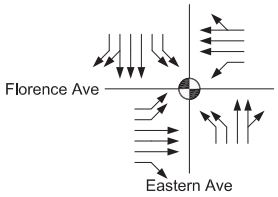
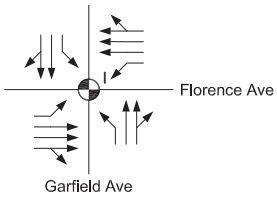
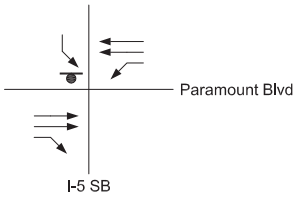
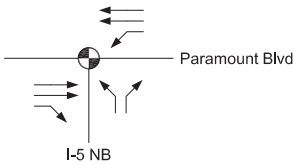
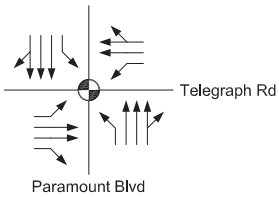
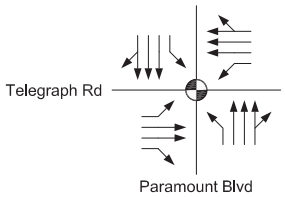
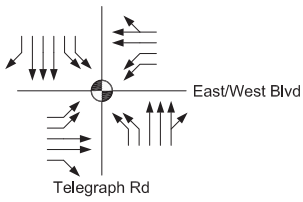
LEGEND

Traffic Signal
Stop Sign

	EXISTING CONDITIONS (YEAR 2019)	FUTURE WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2023)
22. Eastern Avenue & Florence Avenue		
23. Garfield Avenue & Florence Avenue		Same as Existing Conditions
24. I-5 SB Ramps & Paramount Boulevard		Same as Existing Conditions
25. I-5 NB Ramps & Paramount Boulevard		Same as Existing Conditions
26. Paramount Boulevard & Telegraph Road		
27. Telegraph Road & Rosemead Boulevard / Lakewood Boulevard		Same as Existing Conditions

SOURCE: Gibson Transportation Consulting Inc. 2019

FIGURE 3.15-3D

Intersection Lane Configurations

Modelo Project

DUDEK

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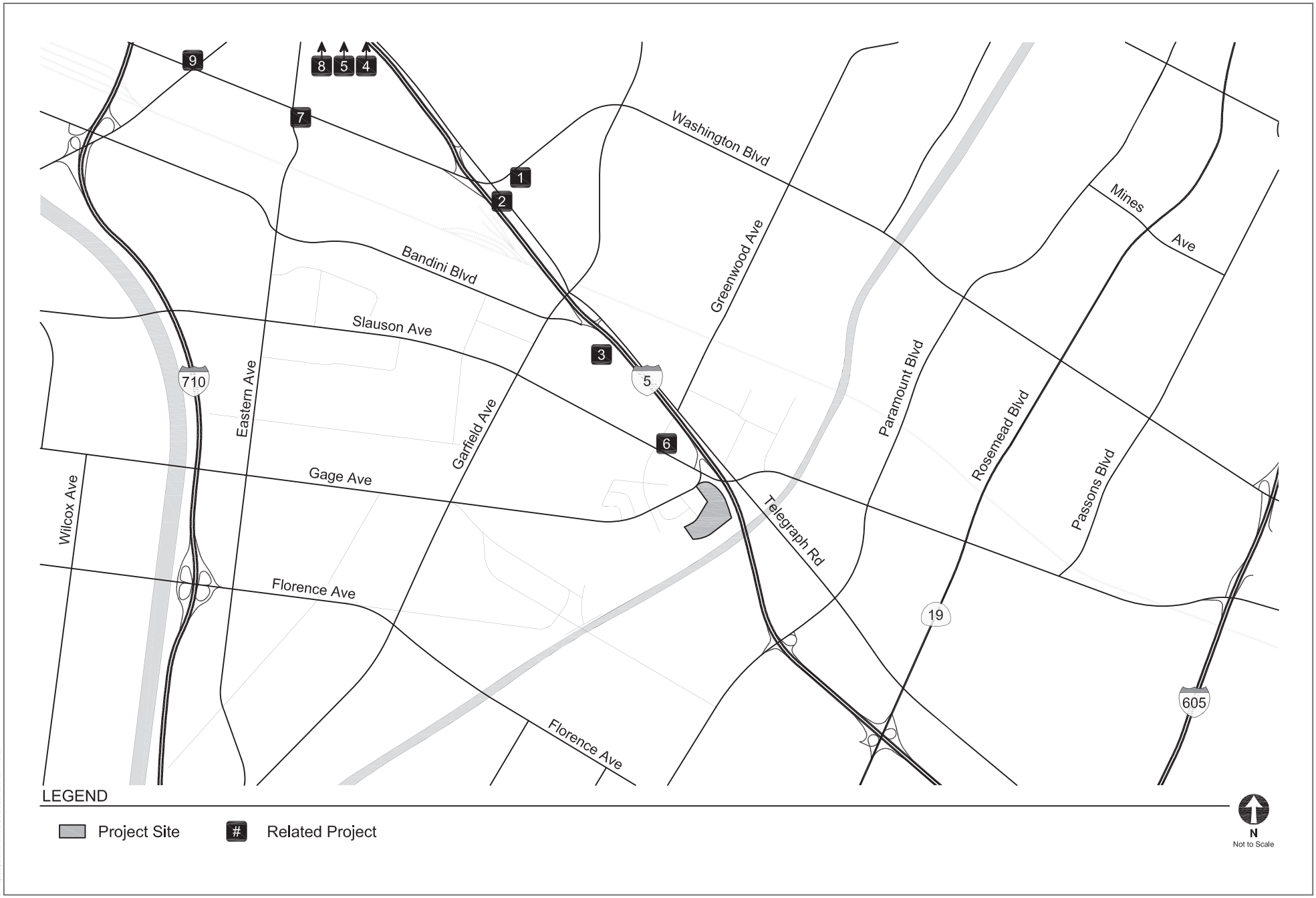

SOURCE: Gibson Transportation Consulting Inc. 2019

DUDEK

FIGURE 3.15-4

Locations of Related Projects

Modelo Project

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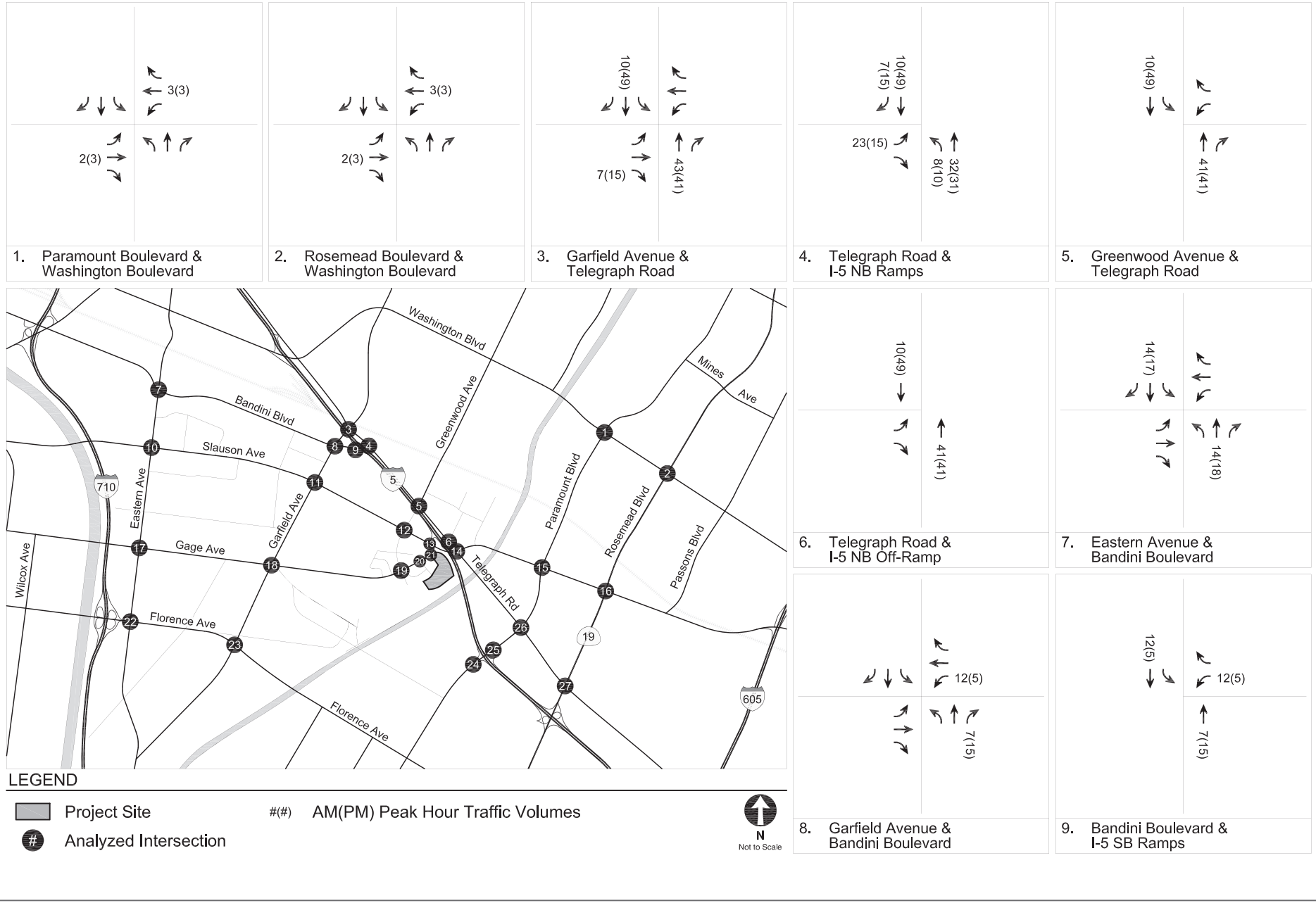

SOURCE: Gibson Transportation Consulting Inc. 2019

DUDEK

FIGURE 3.15-5A

Related Project-Only Peak Hour Traffic Volumes

Modelo Project

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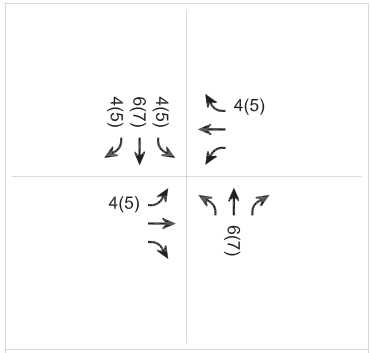
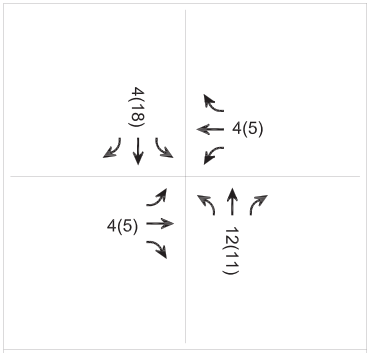
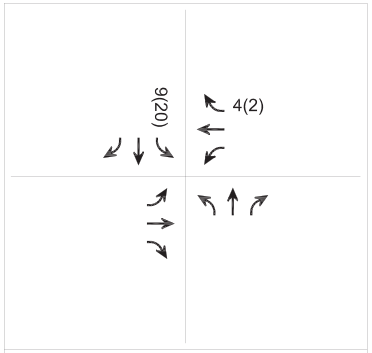


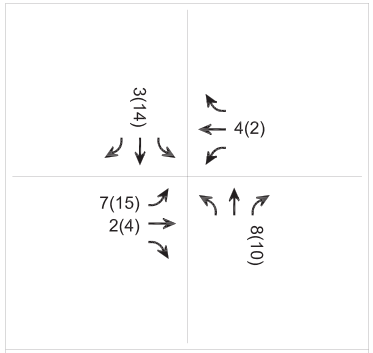
10. Eastern Avenue & Slauson Avenue



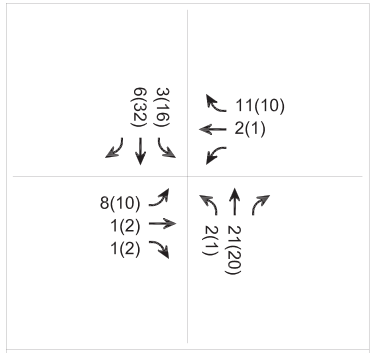
11. Garfield Avenue & Slauson Avenue



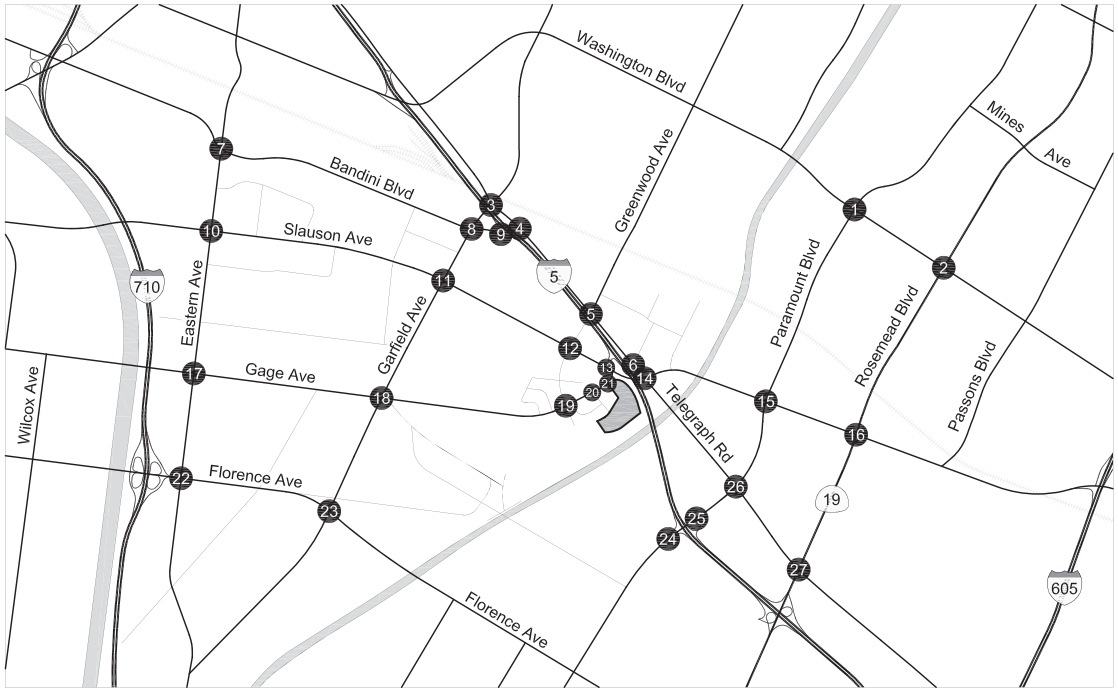
12. Greenwood Avenue & Slauson Avenue

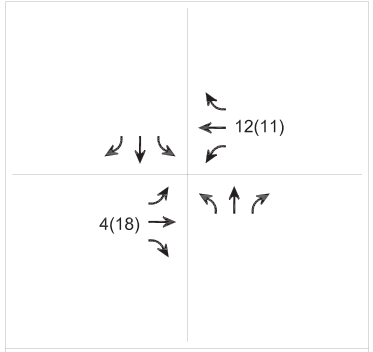


13. I-5 SB Ramps / Gage Avenue & Slauson Avenue

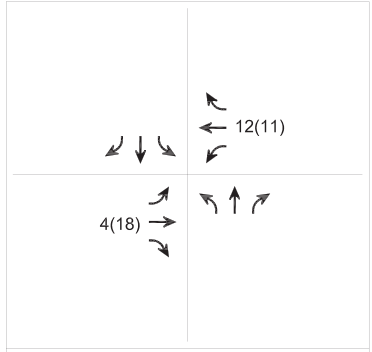


14. Telegraph Road & Slauson Avenue

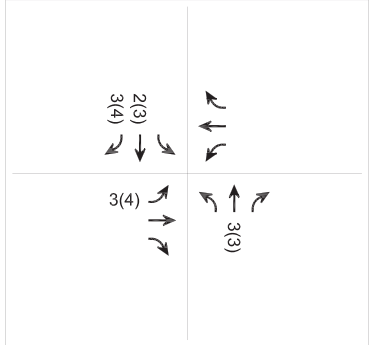




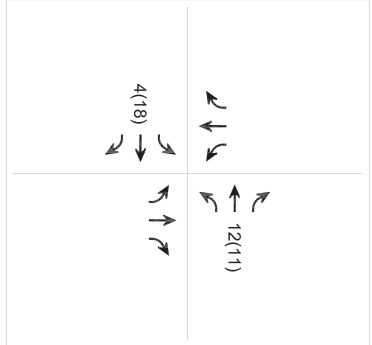
15. Paramount Boulevard & Slauson Avenue



16. Rosemead Boulevard & Slauson Avenue



17. Eastern Avenue & Gage Avenue



18. Garfield Avenue & Gage Avenue

LEGEND

Project Site

Analyzed Intersection

#(#) AM(PM) Peak Hour Traffic Volumes

N
Not to Scale

SOURCE: Gibson Transportation Consulting Inc. 2019

DUDEK

FIGURE 3.15-5B

Related Project-Only Peak Hour Traffic Volumes (cont.)

Modelo Project

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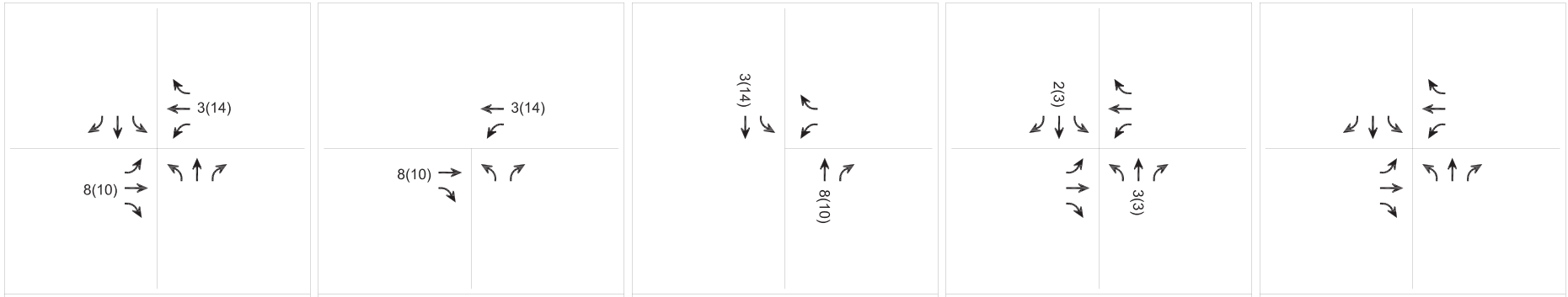

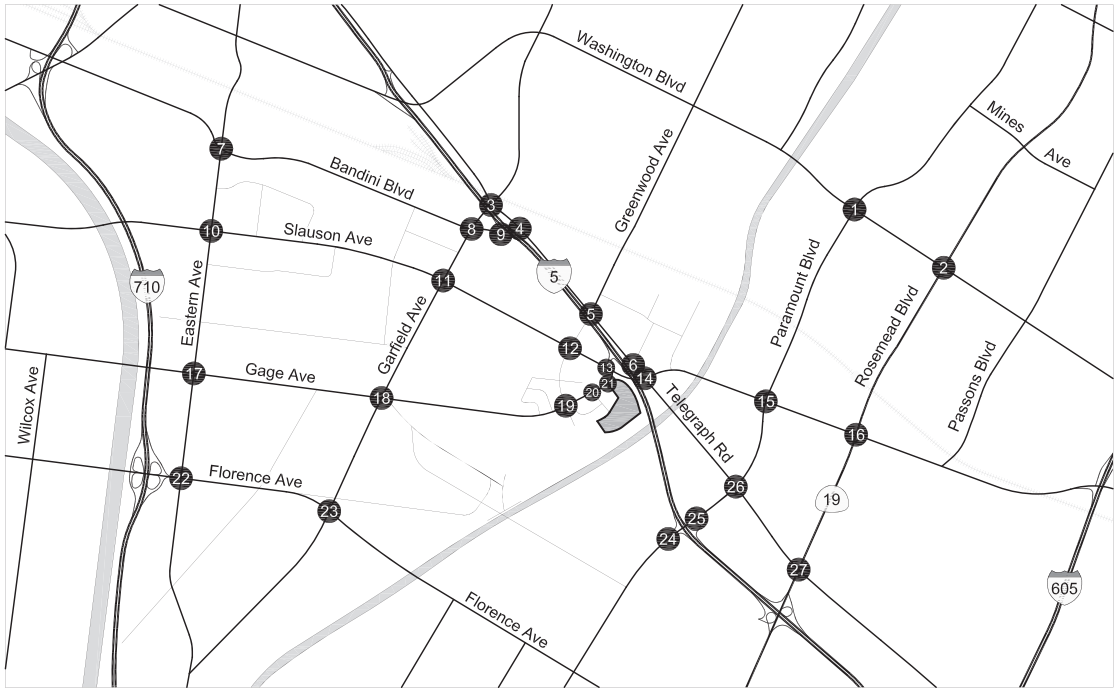

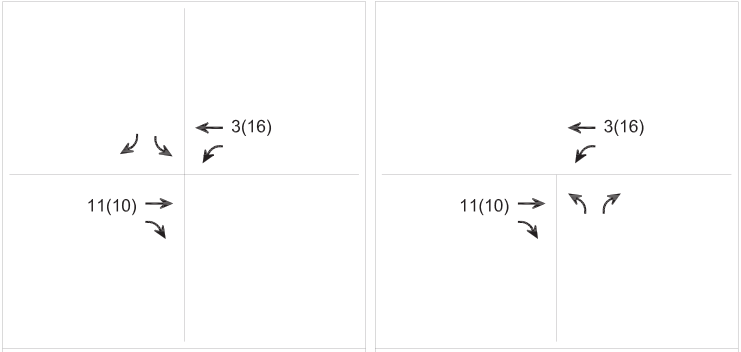

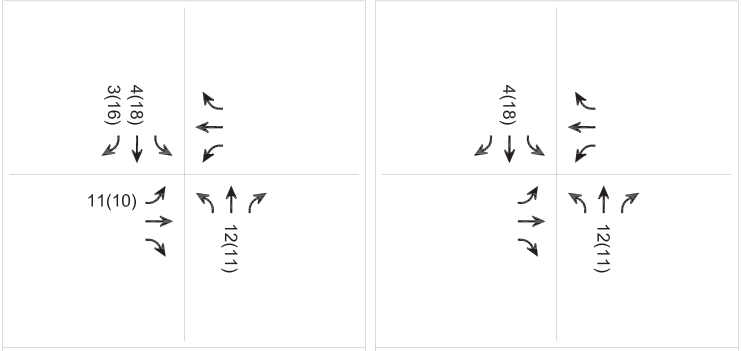

LEGEND

Project Site

Analyzed Intersection

#(#) AM(PM) Peak Hour Traffic Volumes

N
Not to Scale

SOURCE: Gibson Transportation Consulting Inc. 2019

DUDEK

FIGURE 3.15-5C

Related Project-Only Peak Hour Traffic Volumes (cont.)

Modelo Project

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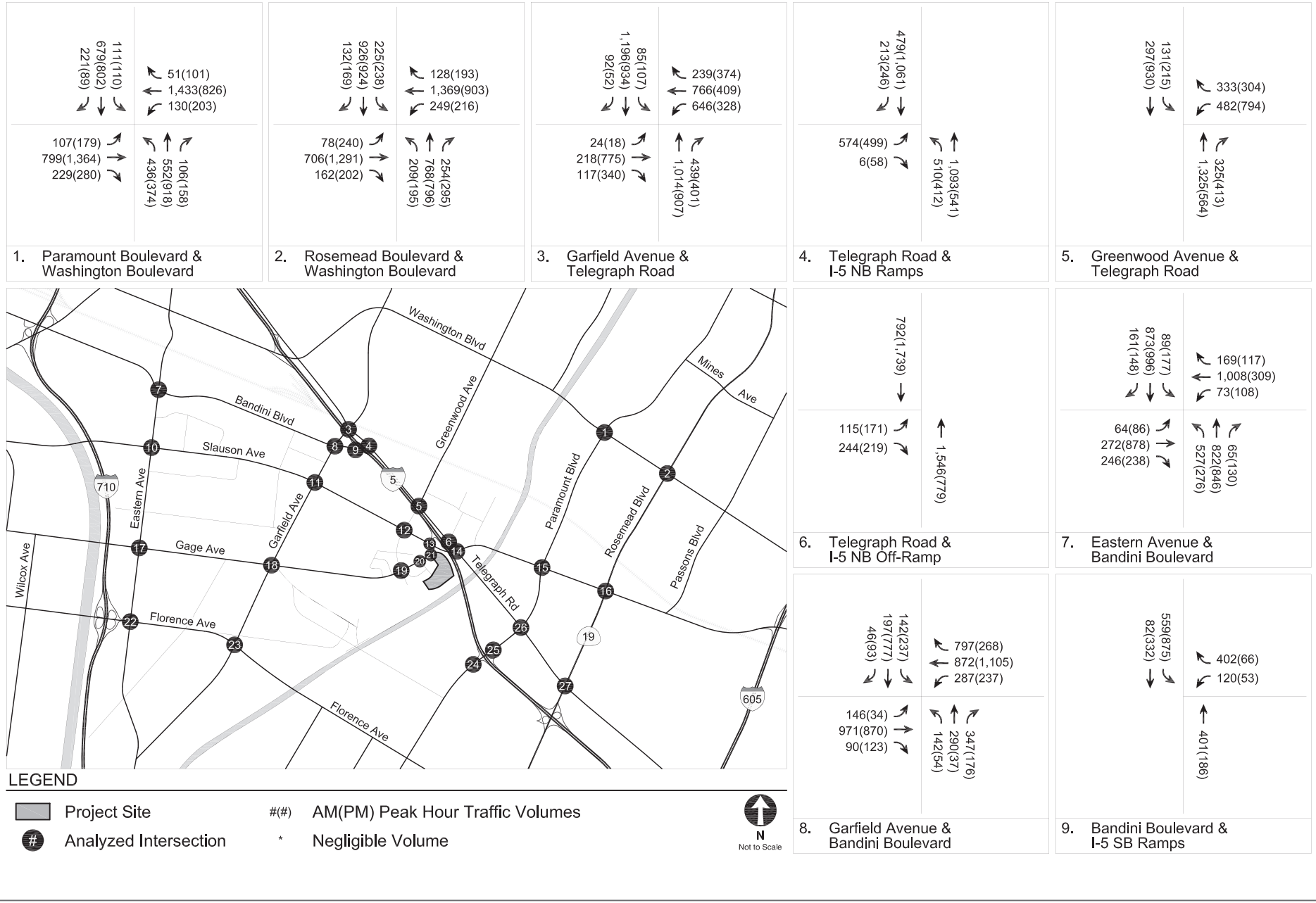

SOURCE: Gibson Transportation Consulting Inc. 2019

FIGURE 3.15-6A

Future without Project Conditions (Year 2023) Peak Hour Traffic Volumes

Modelo Project

DUDEK

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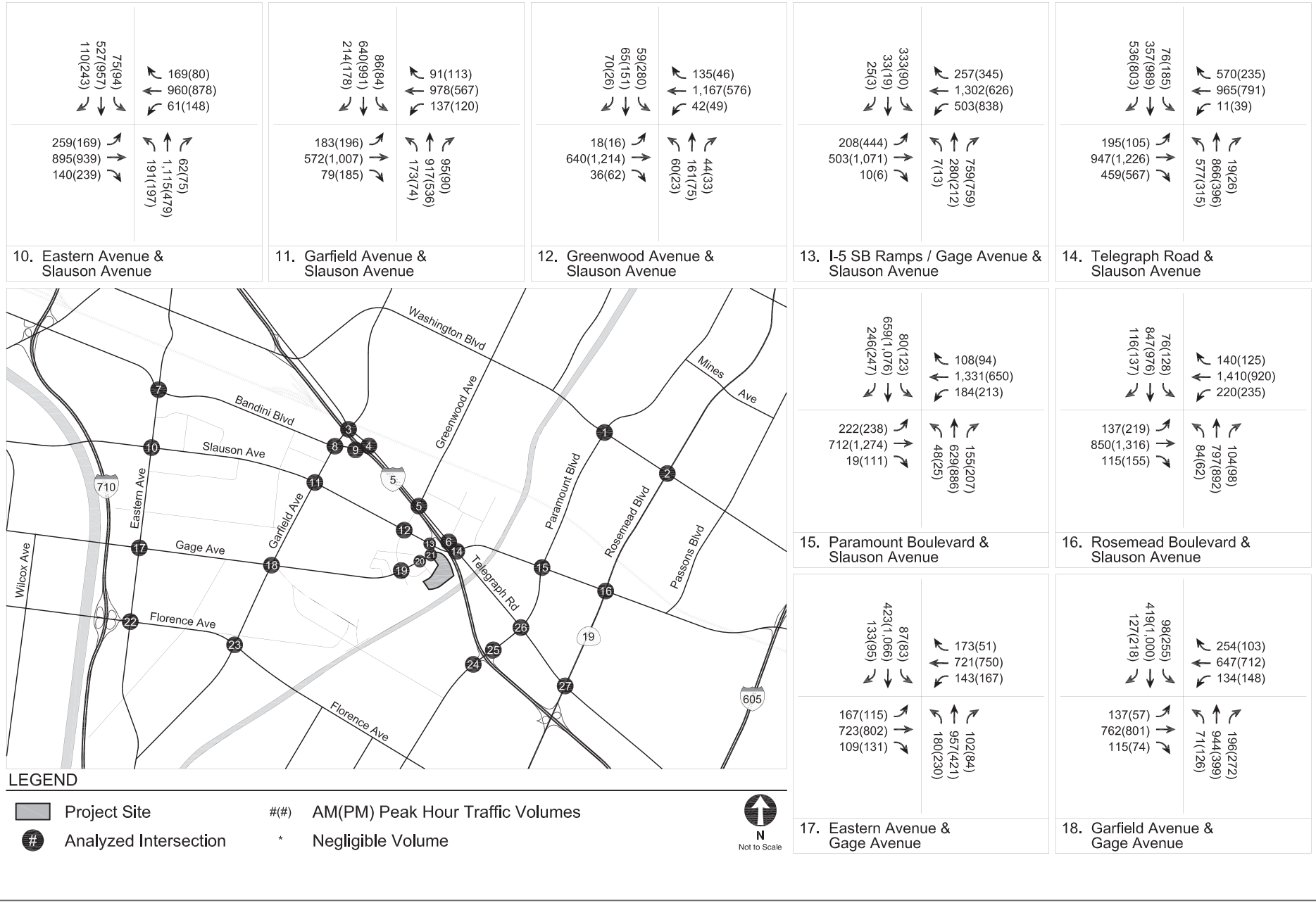

SOURCE: Gibson Transportation Consulting Inc. 2019

DUDEK

FIGURE 3.15-6B

Future without Project Conditions (Year 2023) Peak Hour Traffic Volumes (cont.)

Modelo Project

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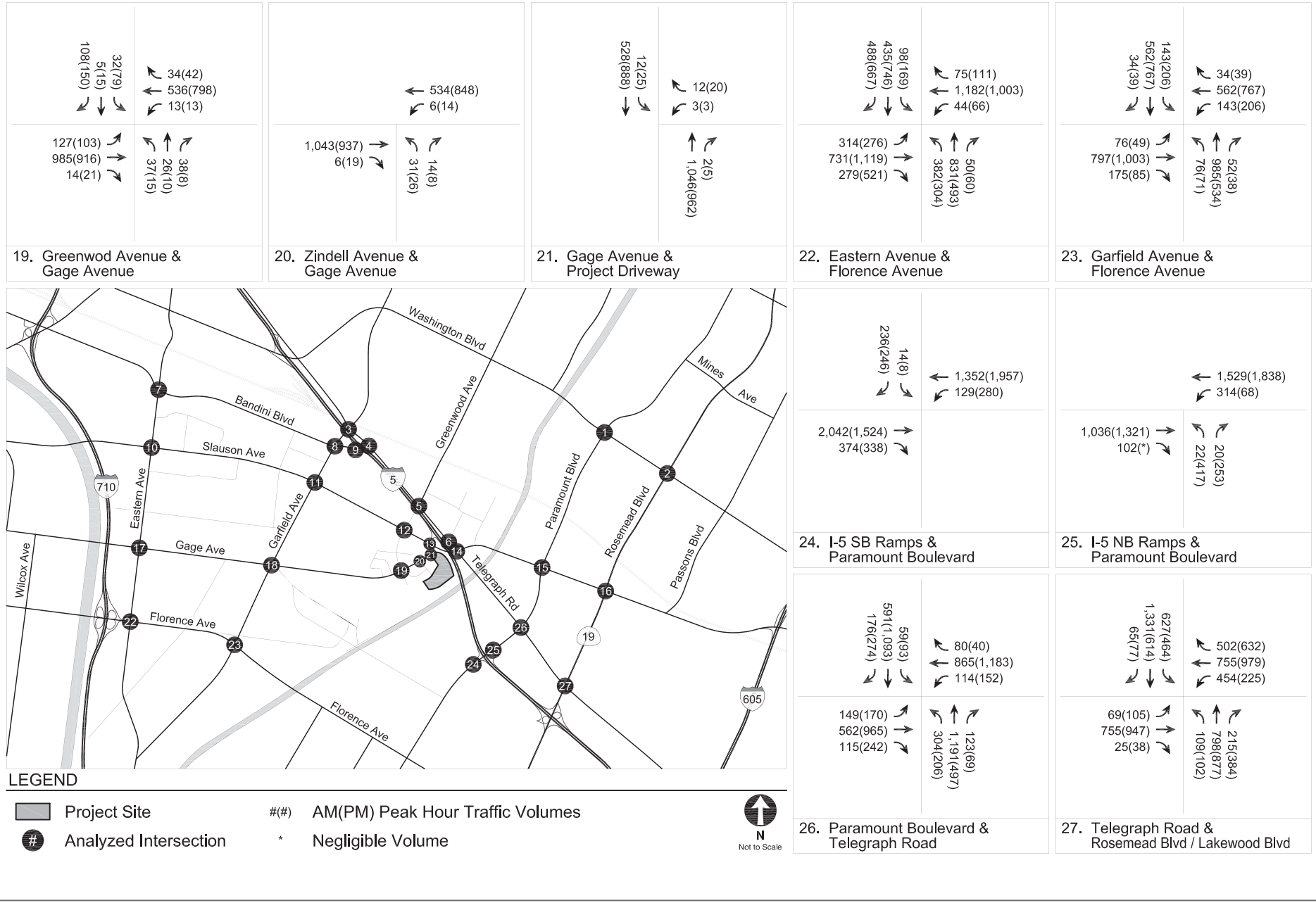


SOURCE: Gibson Transportation Consulting Inc. 2019

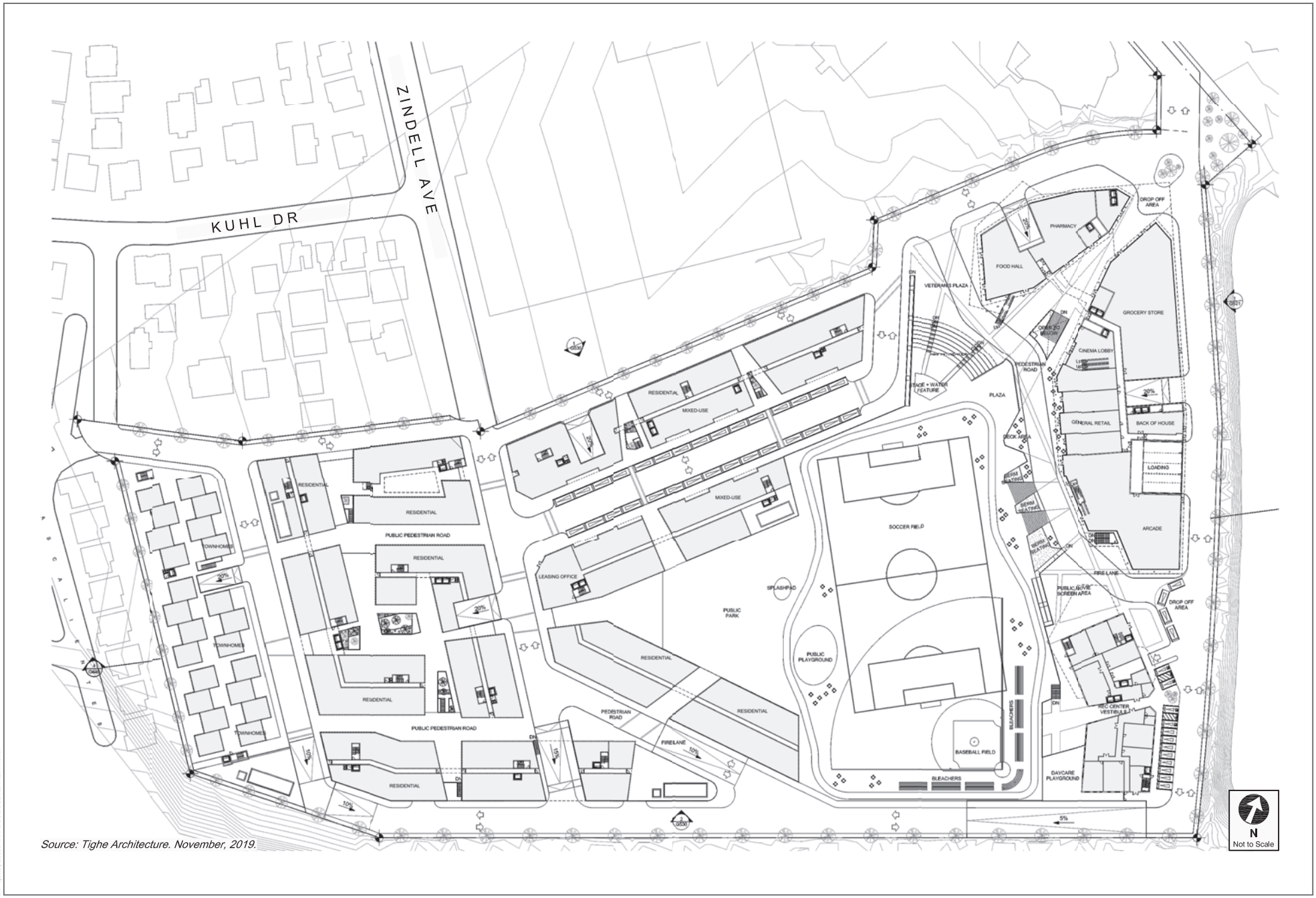
FIGURE 3.15-6C

Future without Project Conditions (Year 2023) Peak Hour Traffic Volumes (cont.)

Modelo Project

DUDEK

INTENTIONALLY LEFT BLANK



Source: Tighe Architecture. November, 2019.

SOURCE: Gibson Transportation Consulting Inc. 2019

DUDEK

FIGURE 3.15-7

Project Site Plan

Modelo Project

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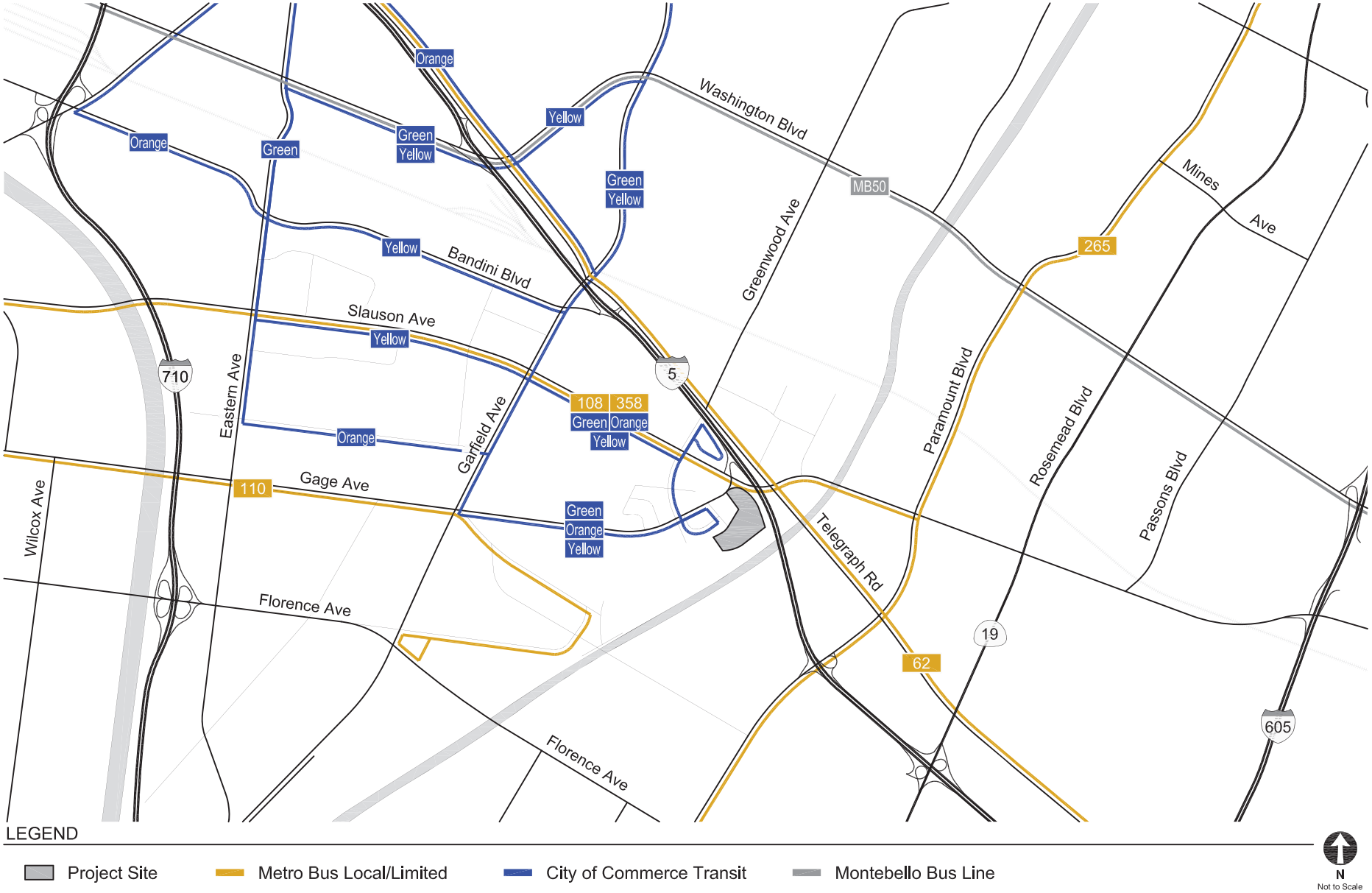

SOURCE: Gibson Transportation Consulting Inc. 2019

DUDEK

FIGURE 3.15-8

Existing Transit Services

Modelo Project

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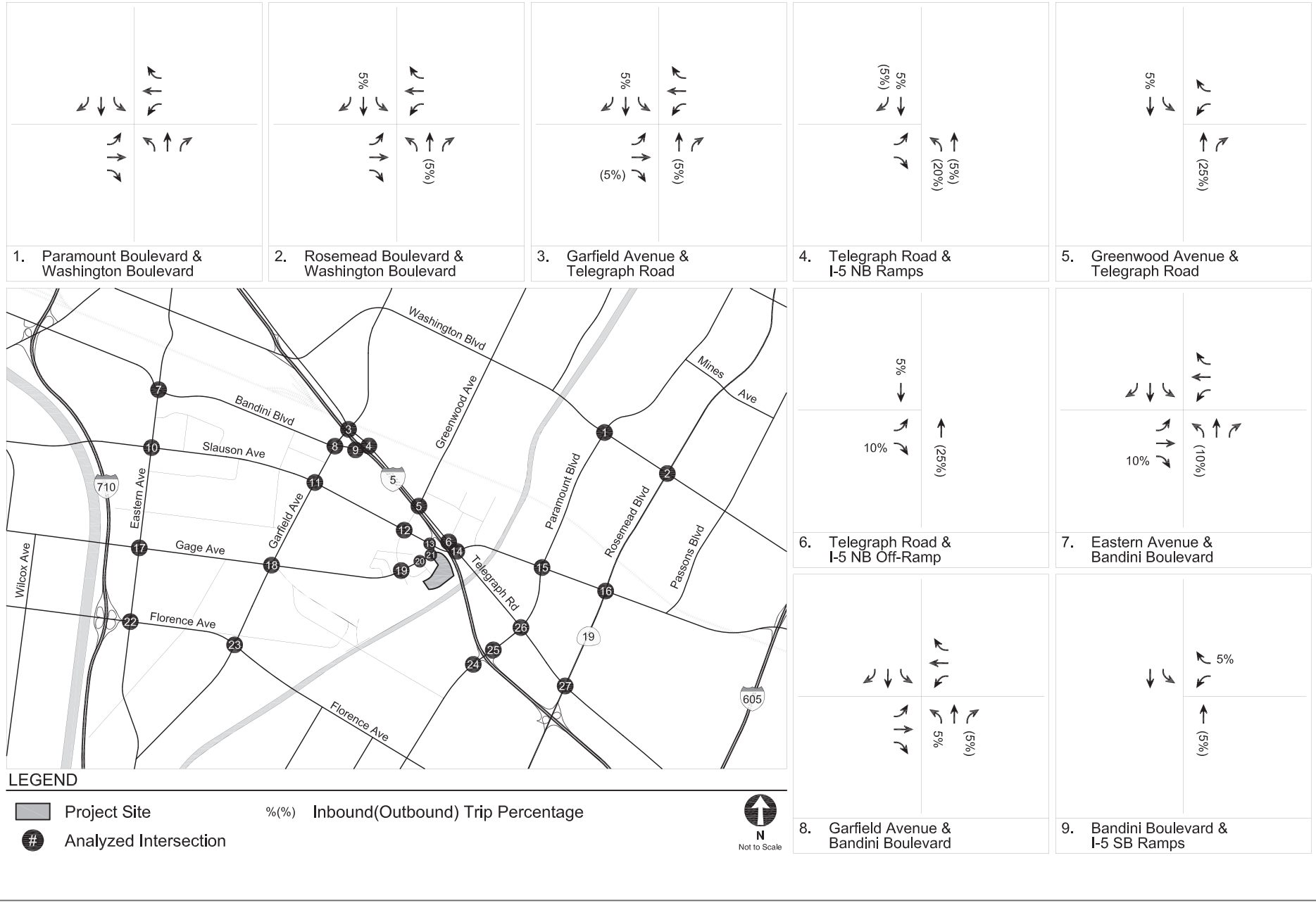

SOURCE: Gibson Transportation Consulting Inc. 2019

DUDEK

FIGURE 3.15-9A

Project Trip Distribution – Residential

Modelo Project

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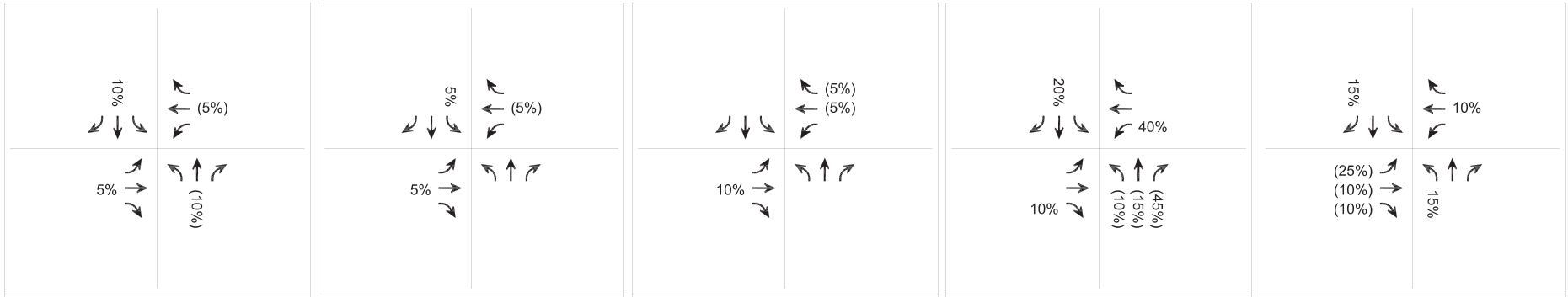


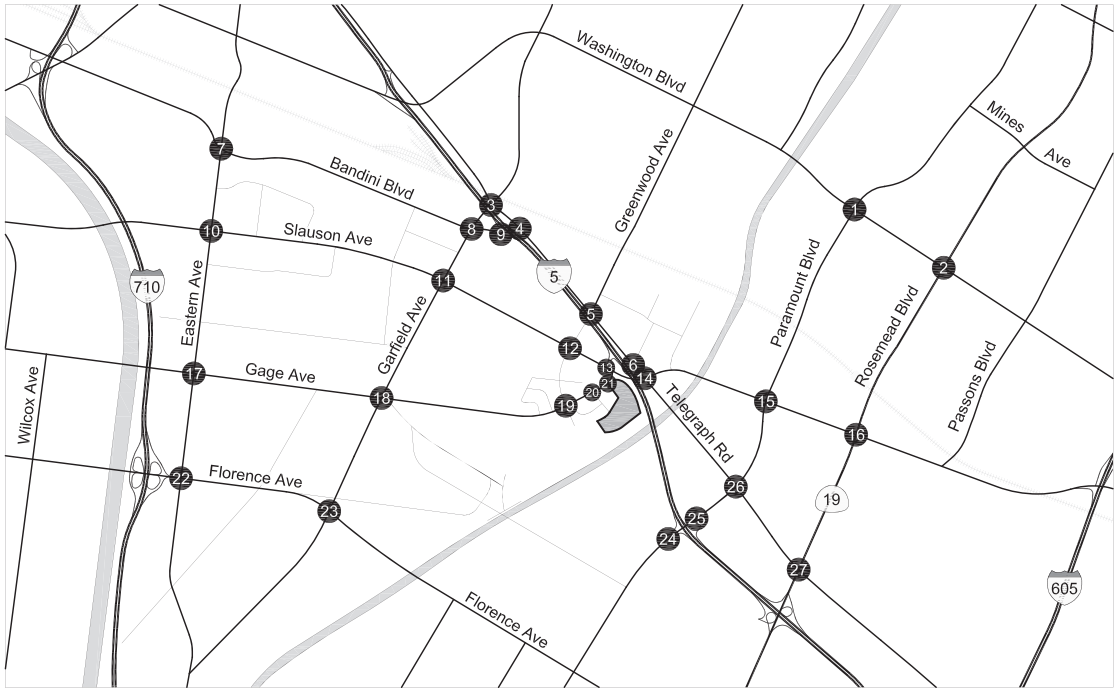
10. Eastern Avenue & Slauson Avenue

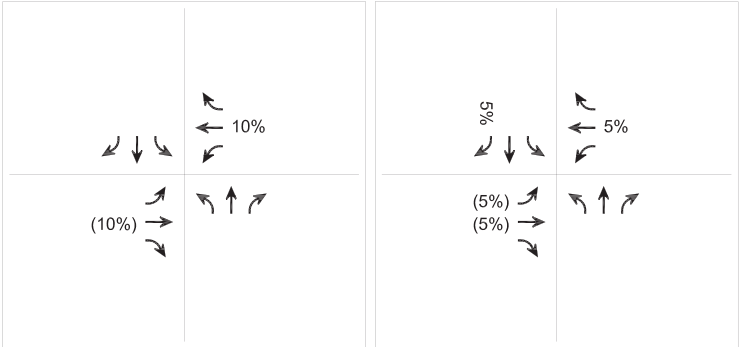
11. Garfield Avenue & Slauson Avenue

12. Greenwood Avenue & Slauson Avenue

13. I-5 SB Ramps / Gage Avenue & Slauson Avenue

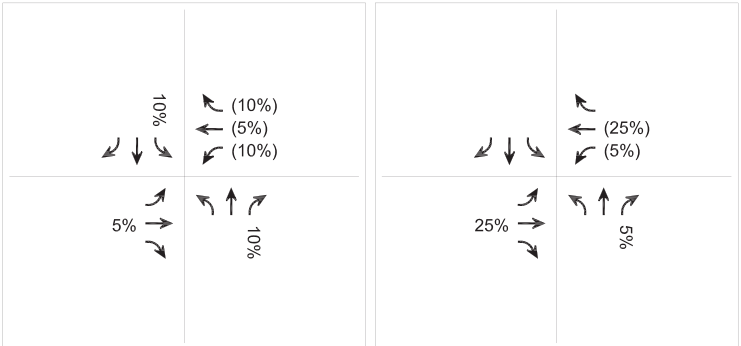
14. Telegraph Road & Slauson Avenue





15. Paramount Boulevard & Slauson Avenue

16. Rosemead Boulevard & Slauson Avenue



17. Eastern Avenue & Gage Avenue

18. Garfield Avenue & Gage Avenue

LEGEND

Project Site

Analyzed Intersection

%(%) Inbound(Outbound) Trip Percentage

N
Not to Scale

SOURCE: Gibson Transportation Consulting Inc. 2019

DUDEK

FIGURE 3.15-9B

Project Trip Distribution – Residential (cont.)

Modelo Project

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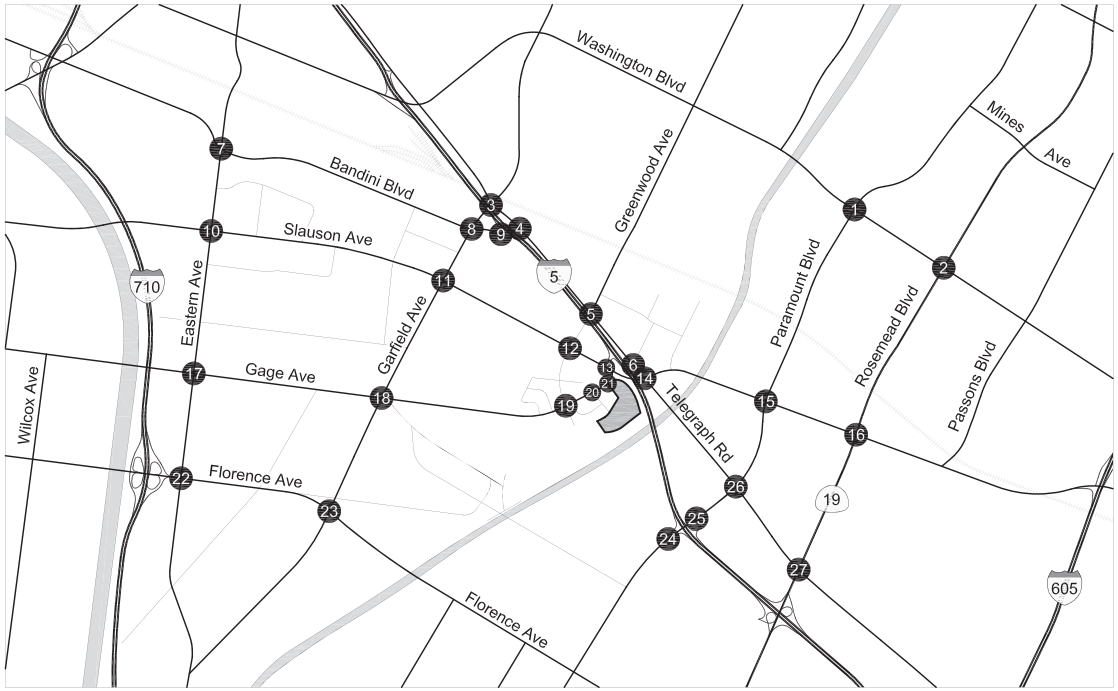
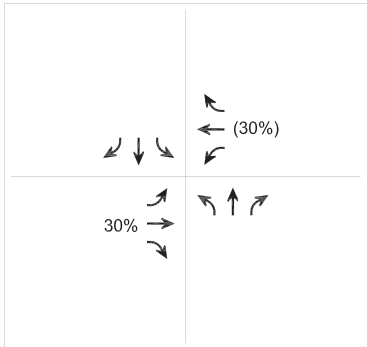
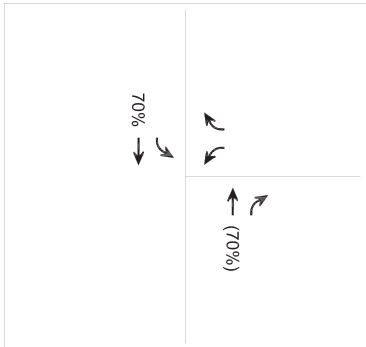


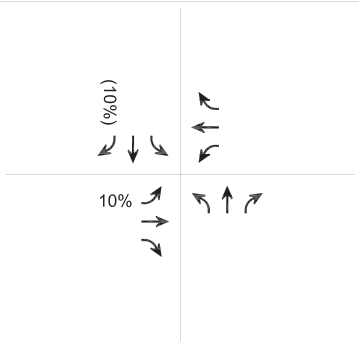


19. Greenwod Avenue & Gage Avenue

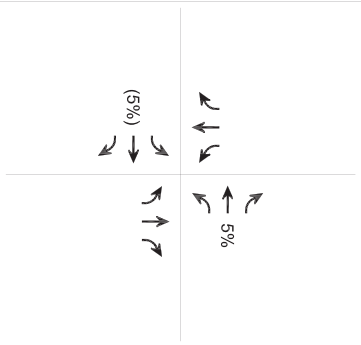
20. Zindell Avenue & Gage Avenue



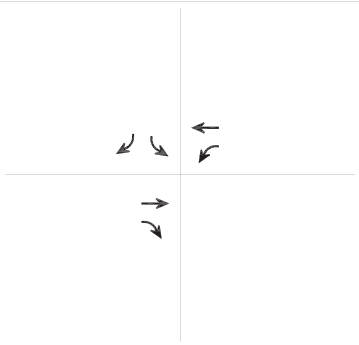
21. Gage Avenue & Project Driveway



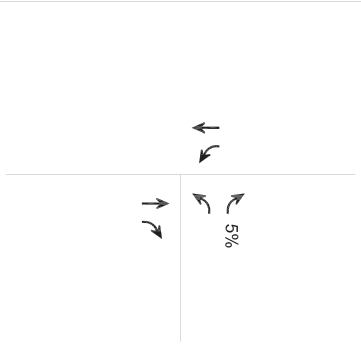
22. Eastern Avenue & Florence Avenue



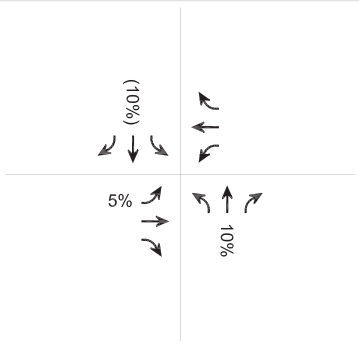
23. Garfield Avenue & Florence Avenue



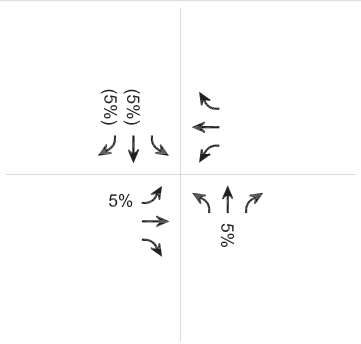
24. I-5 SB Ramps & Paramount Boulevard



25. I-5 NB Ramps & Paramount Boulevard



26. Paramount Boulevard & Telegraph Road



27. Telegraph Road & Rosemead Blvd / Lakewood Blvd

LEGEND

Project Site

Analyzed Intersection

%(%) Inbound(Outbound) Trip Percentage

N
Not to Scale

SOURCE: Gibson Transportation Consulting Inc. 2019

DUDEK

FIGURE 3.15-9C

Project Trip Distribution – Residential (cont.)

Modelo Project

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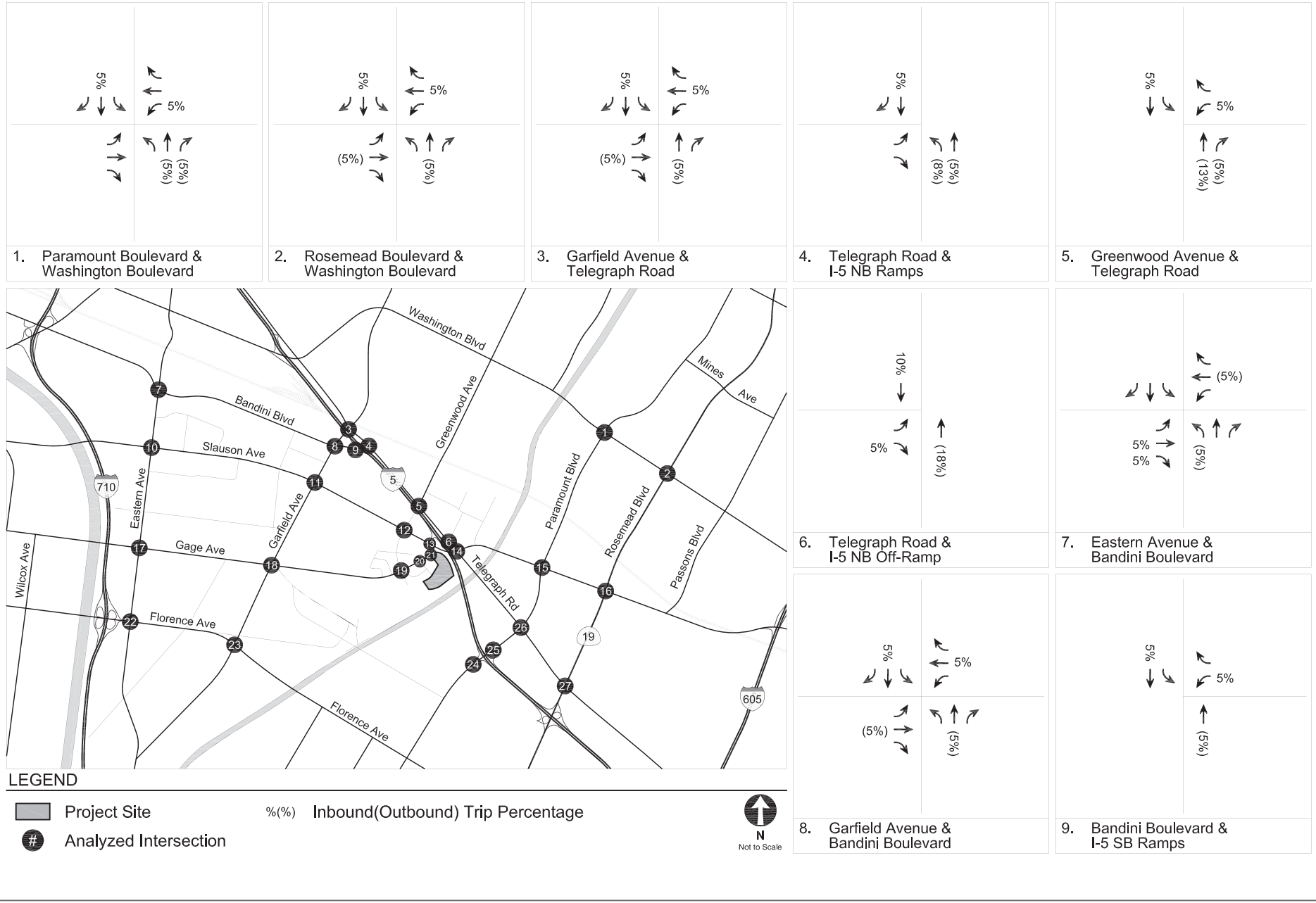

SOURCE: Gibson Transportation Consulting Inc. 2019

DUDEK

FIGURE 3.15-10A

Project Trip Distribution - Commercial

Modelo Project

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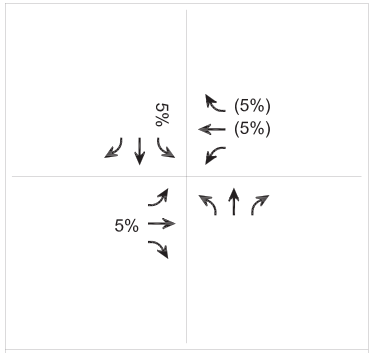
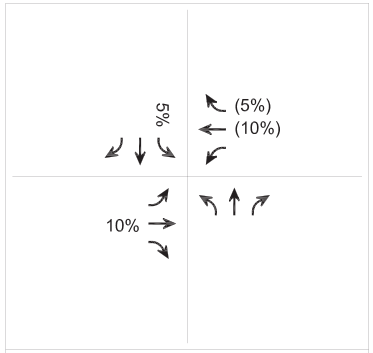
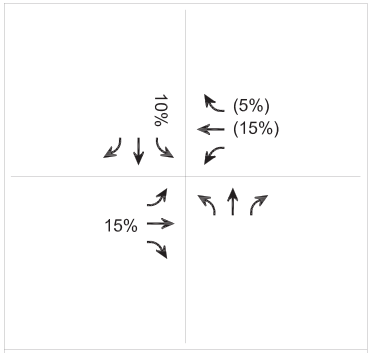


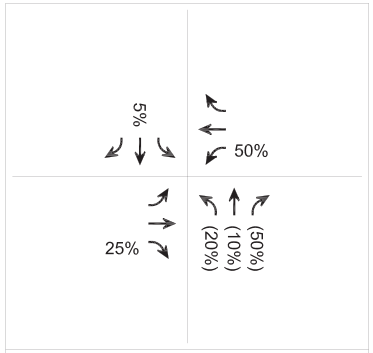
10. Eastern Avenue & Slauson Avenue



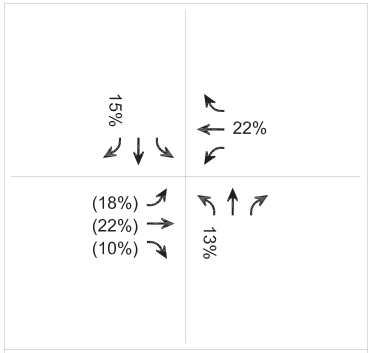
11. Garfield Avenue & Slauson Avenue



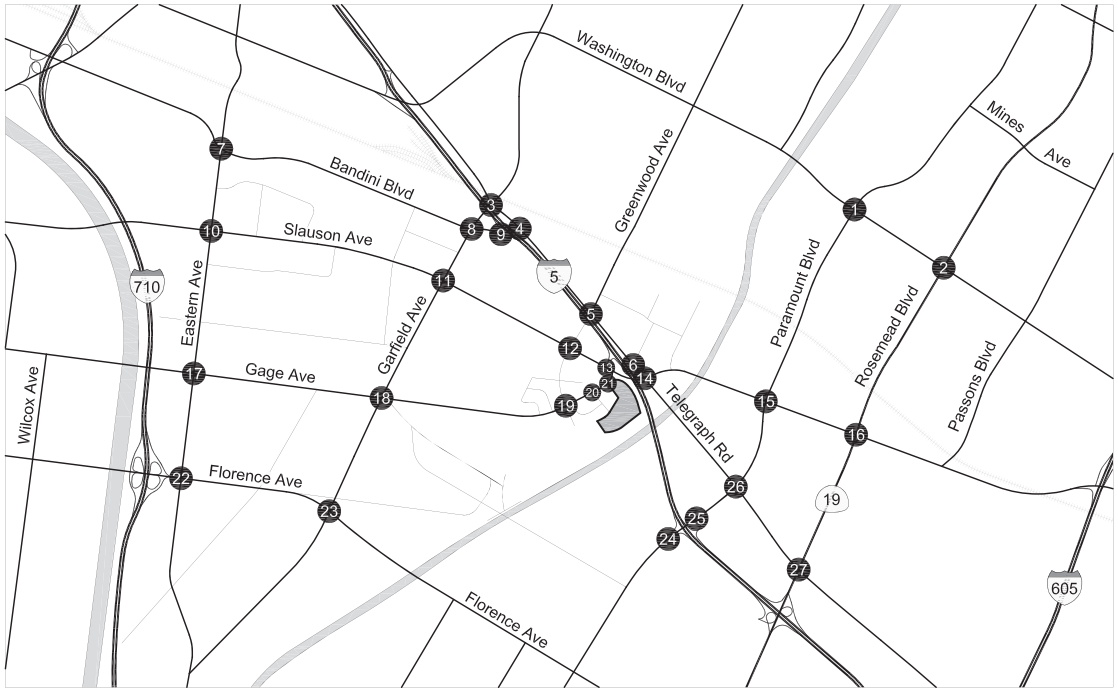
12. Greenwood Avenue & Slauson Avenue

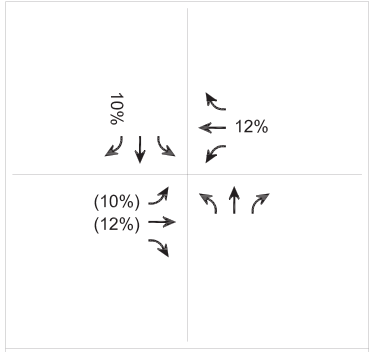


13. I-5 SB Ramps / Gage Avenue & Slauson Avenue

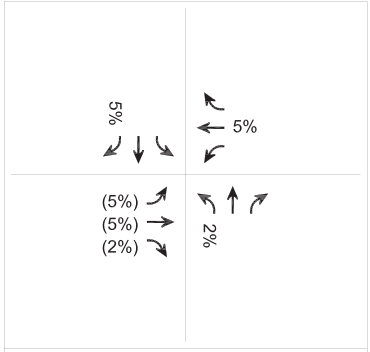


14. Telegraph Road & Slauson Avenue

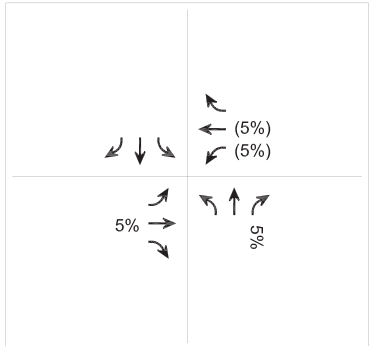




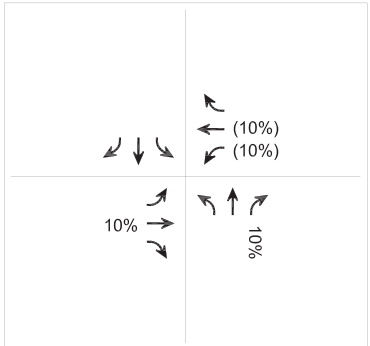
15. Paramount Boulevard & Slauson Avenue



16. Rosemead Boulevard & Slauson Avenue



17. Eastern Avenue & Gage Avenue



18. Garfield Avenue & Gage Avenue

LEGEND

Project Site

Analyzed Intersection

%(%) Inbound(Outbound) Trip Percentage

N
Not to Scale

SOURCE: Gibson Transportation Consulting Inc. 2019

DUDEK

FIGURE 3.15-10B

Project Trip Distribution - Commercial (cont.)

Modelo Project

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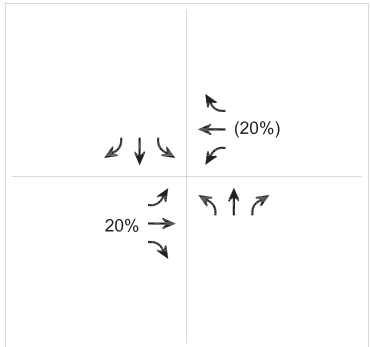
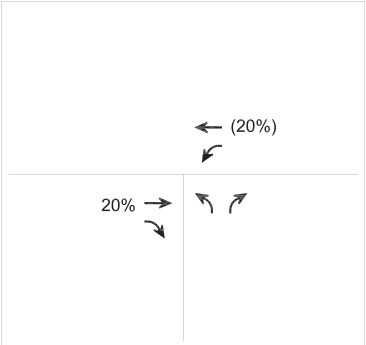
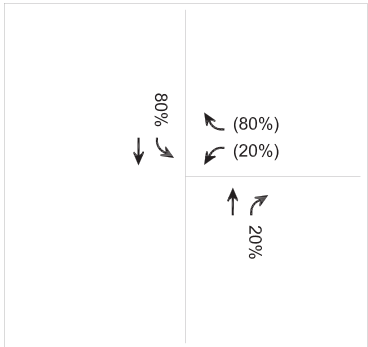


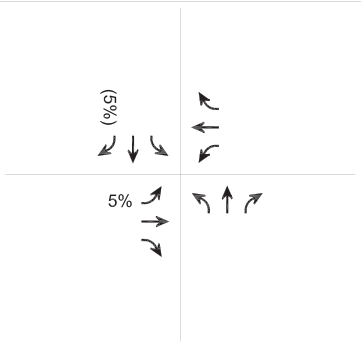
19. Greenwod Avenue & Gage Avenue



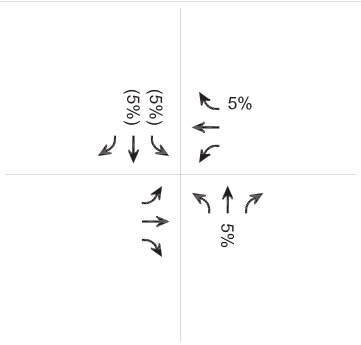
20. Zindell Avenue & Gage Avenue



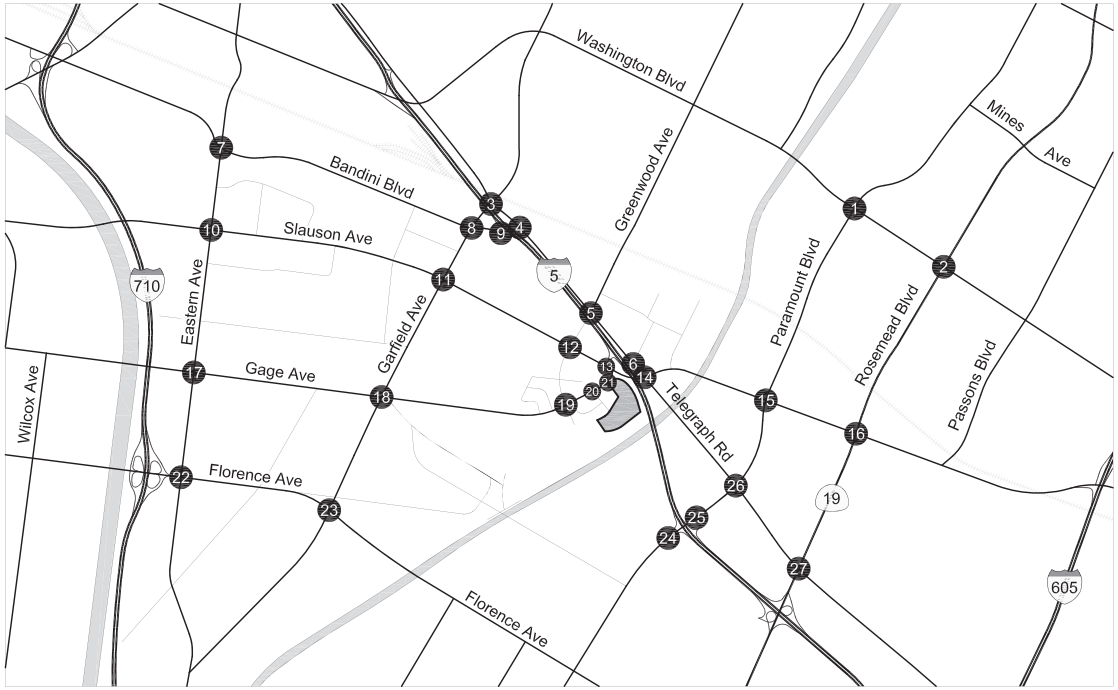
21. Gage Avenue & Project Driveway

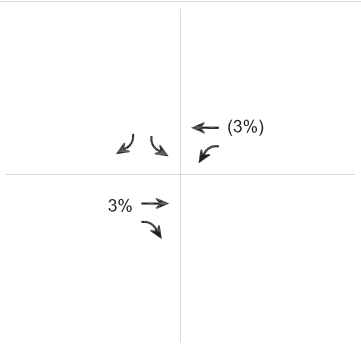


22. Eastern Avenue & Florence Avenue

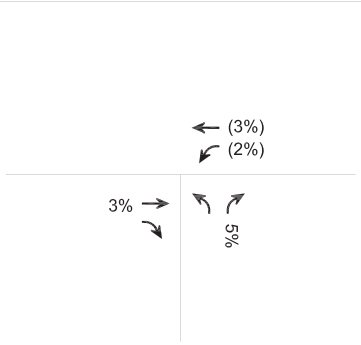


23. Garfield Avenue & Florence Avenue

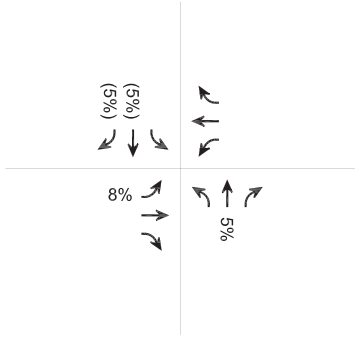




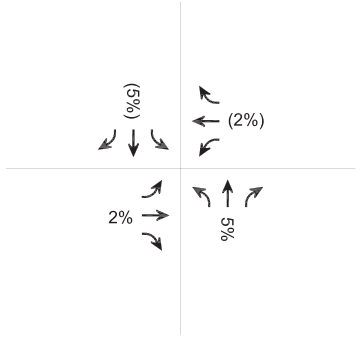
24. I-5 SB Ramps & Paramount Boulevard



25. I-5 NB Ramps & Paramount Boulevard



26. Paramount Boulevard & Telegraph Road



27. Telegraph Road & Rosemead Blvd / Lakewood Blvd

LEGEND

Project Site

Analyzed Intersection

%(%) Inbound(Outbound) Trip Percentage

N
Not to Scale

SOURCE: Gibson Transportation Consulting Inc. 2019

DUDEK

FIGURE 3.15-10C

Project Trip Distribution - Commercial (cont.)

Modelo Project

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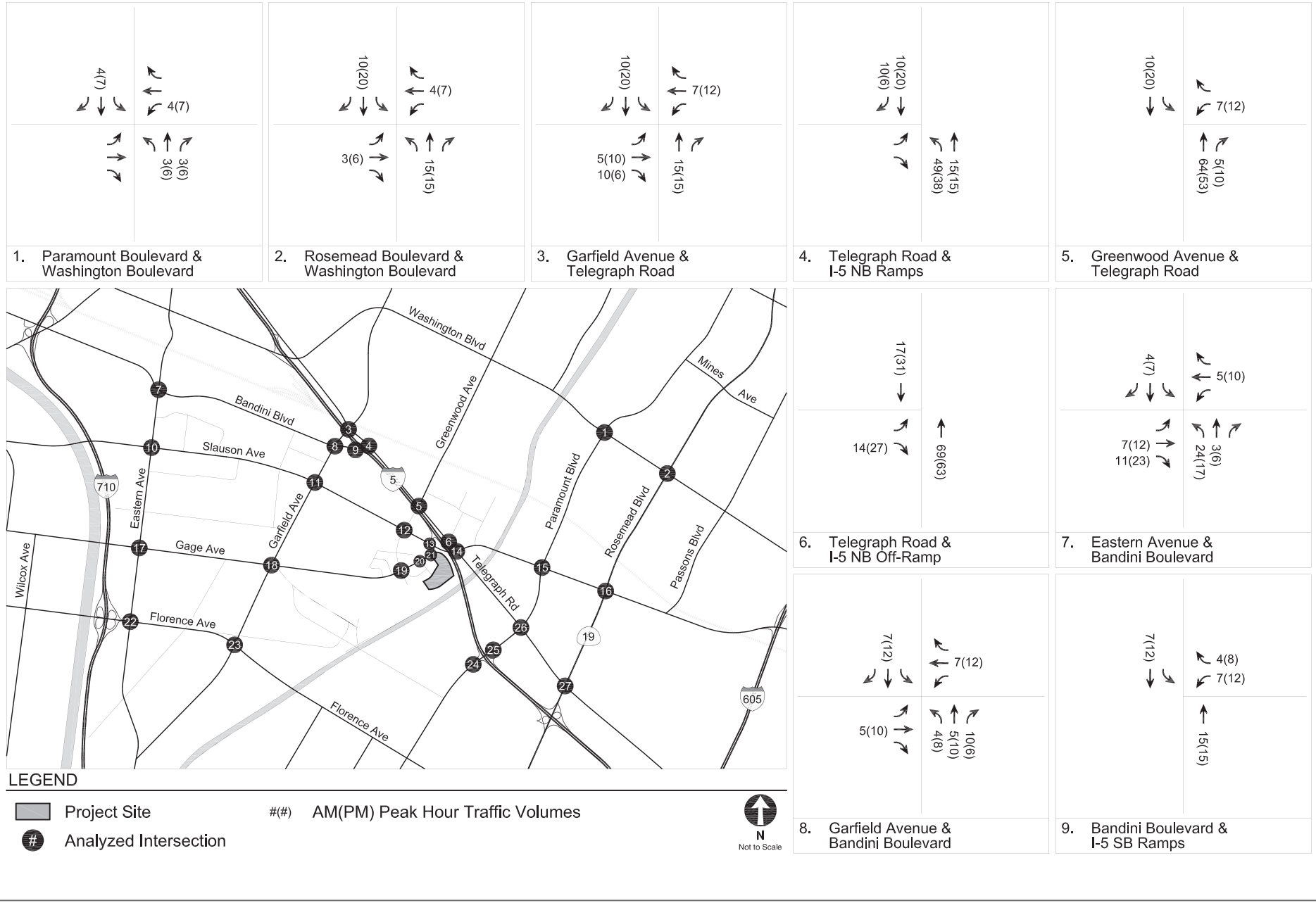

SOURCE: Gibson Transportation Consulting Inc. 2019

DUDEK

FIGURE 3.15-11A

Project-Only Peak Hour Traffic Volumes

Modelo Project

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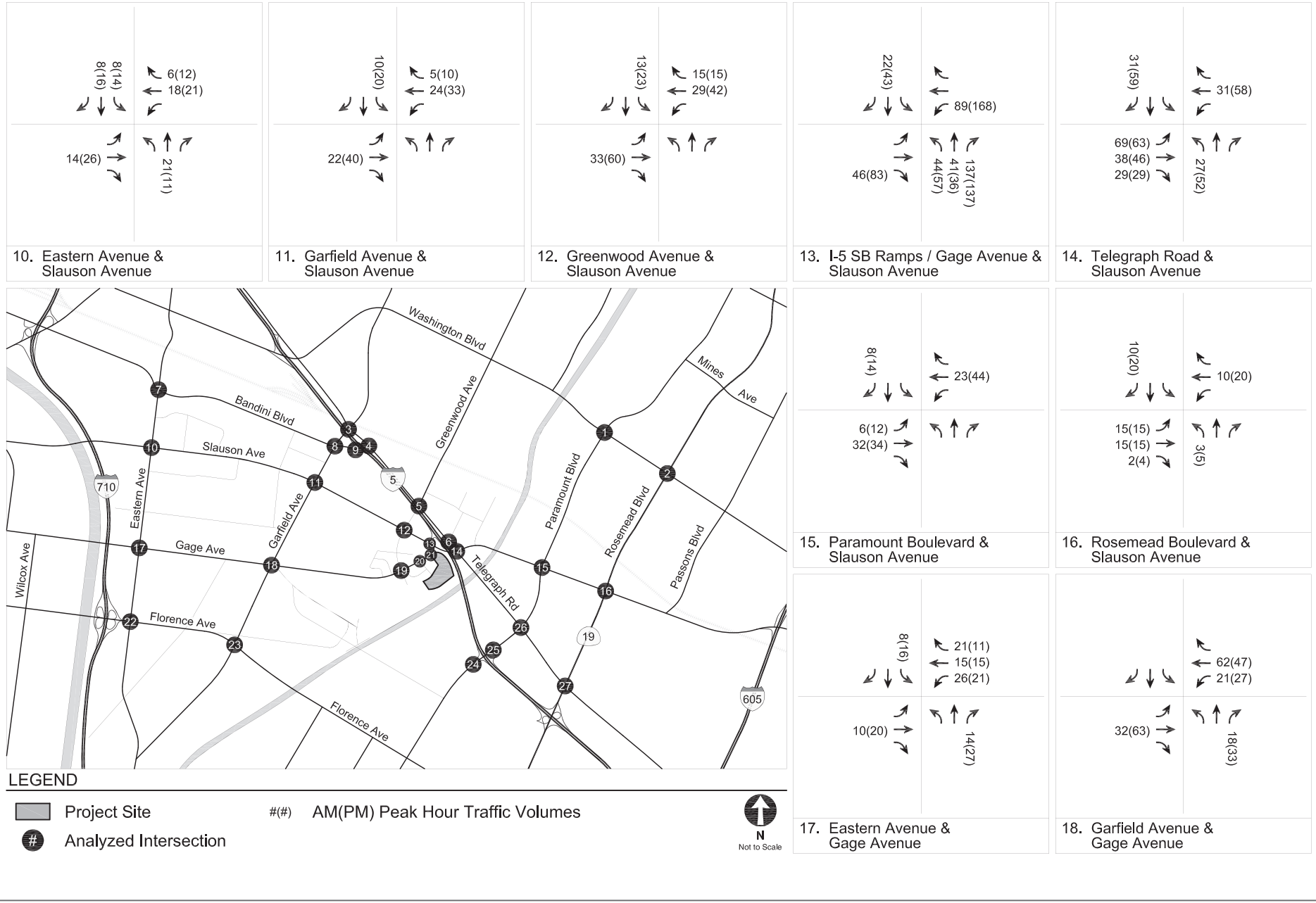

SOURCE: Gibson Transportation Consulting Inc. 2019

DUDEK

FIGURE 3.15-11B

Project-Only Peak Hour Traffic Volumes (cont.)

Modelo Project

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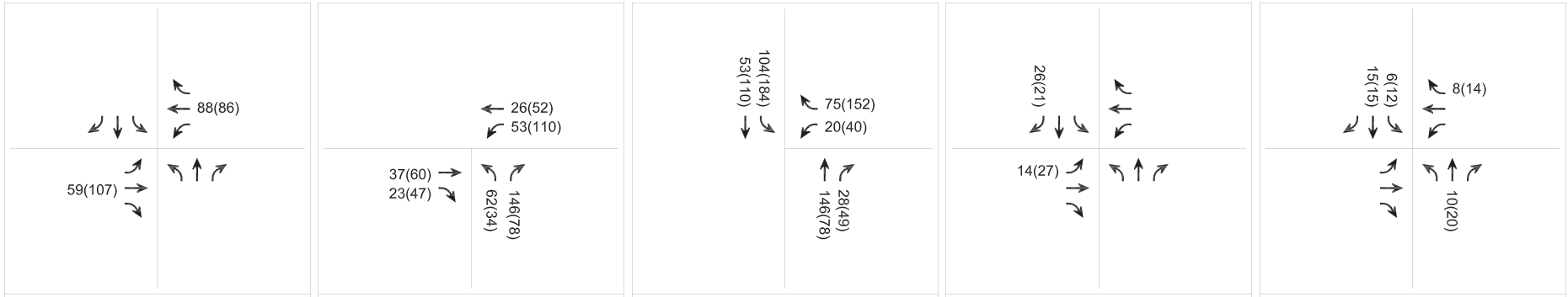

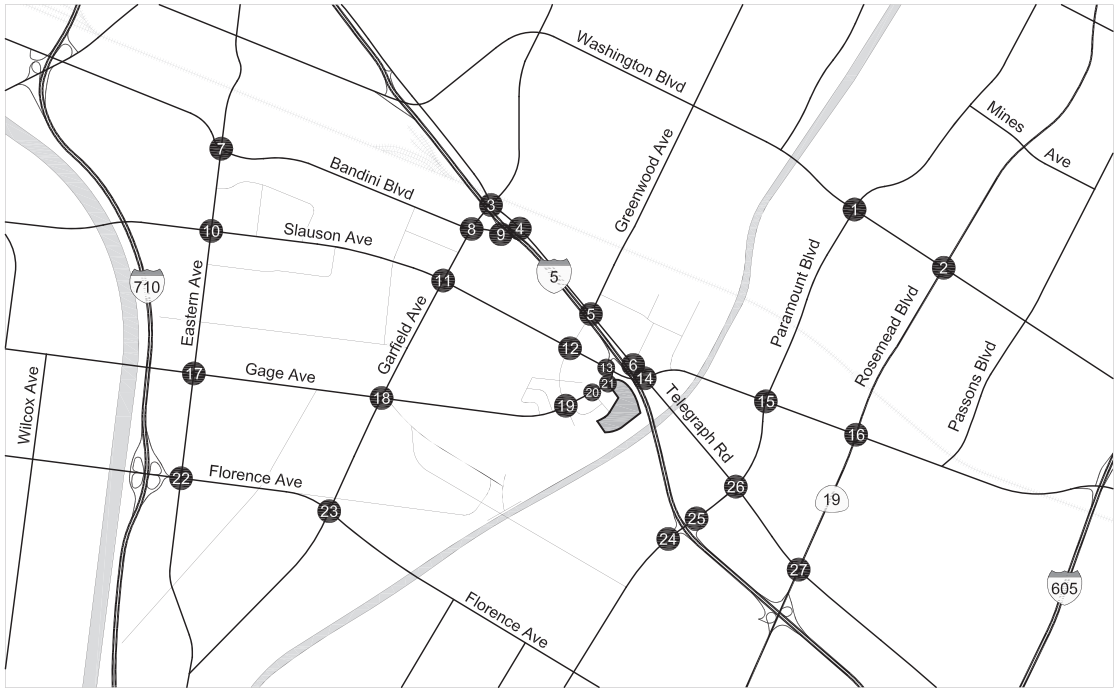

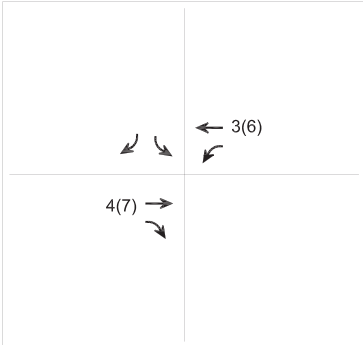

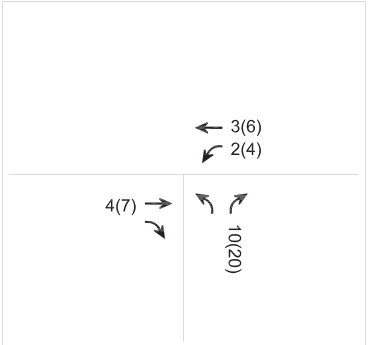

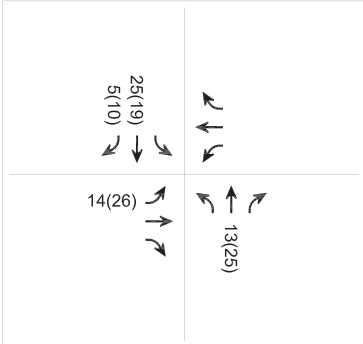

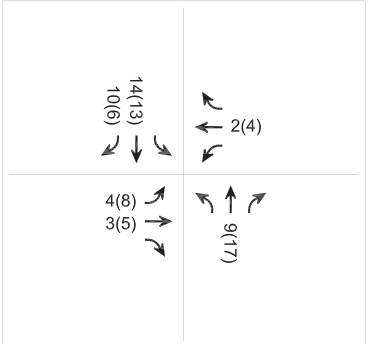

LEGEND

Project Site

Analyzed Intersection

#(#) AM(PM) Peak Hour Traffic Volumes

N
Not to Scale

SOURCE: Gibson Transportation Consulting Inc. 2019

DUDEK

FIGURE 3.15-11C

Project-Only Peak Hour Traffic Volumes (cont.)

Modelo Project

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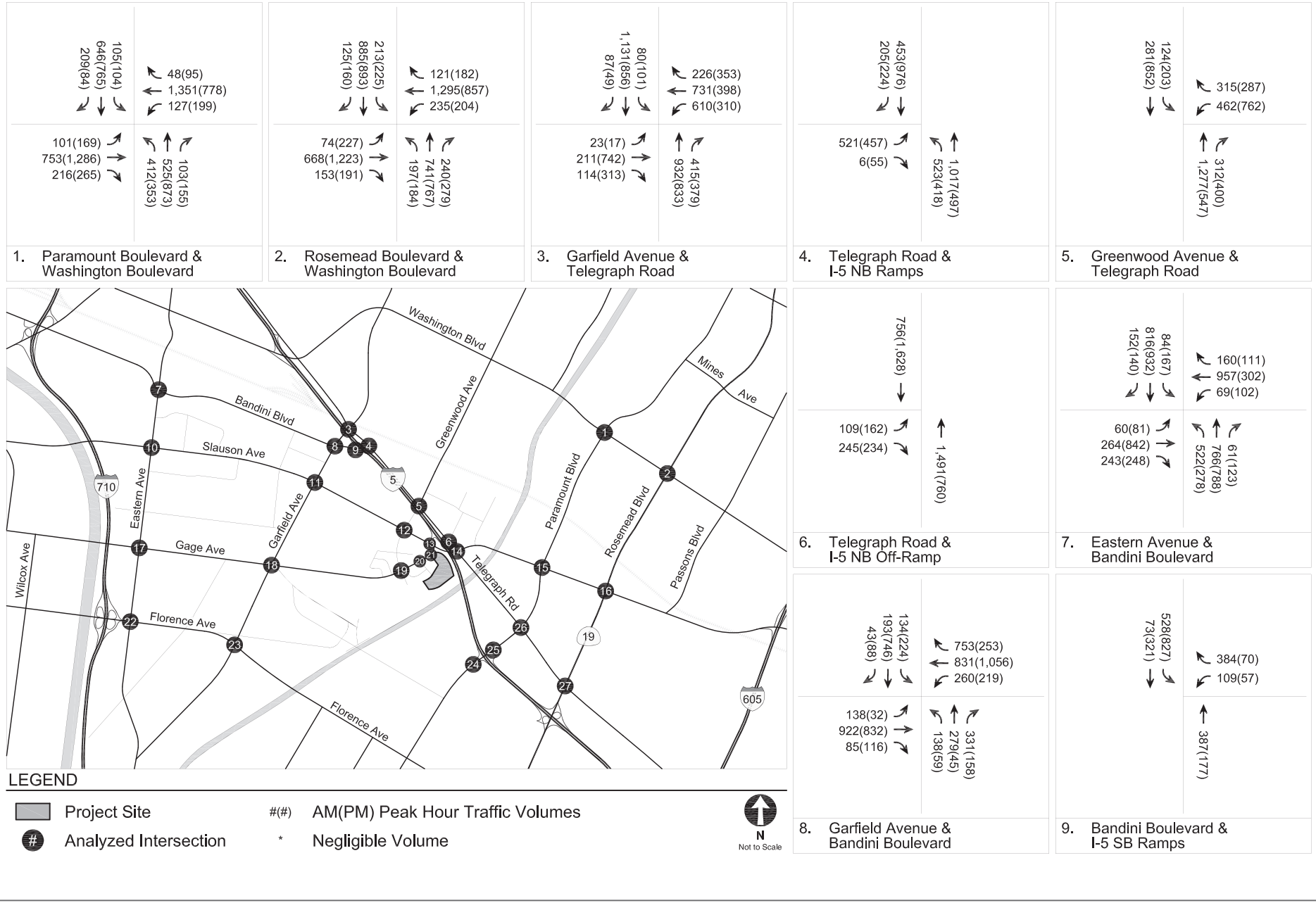

SOURCE: Gibson Transportation Consulting Inc. 2019

DUDEK

FIGURE 3.15-12A

Existing with Project Conditions (Year 2019) Peak Hour Traffic Volumes

Modelo Project

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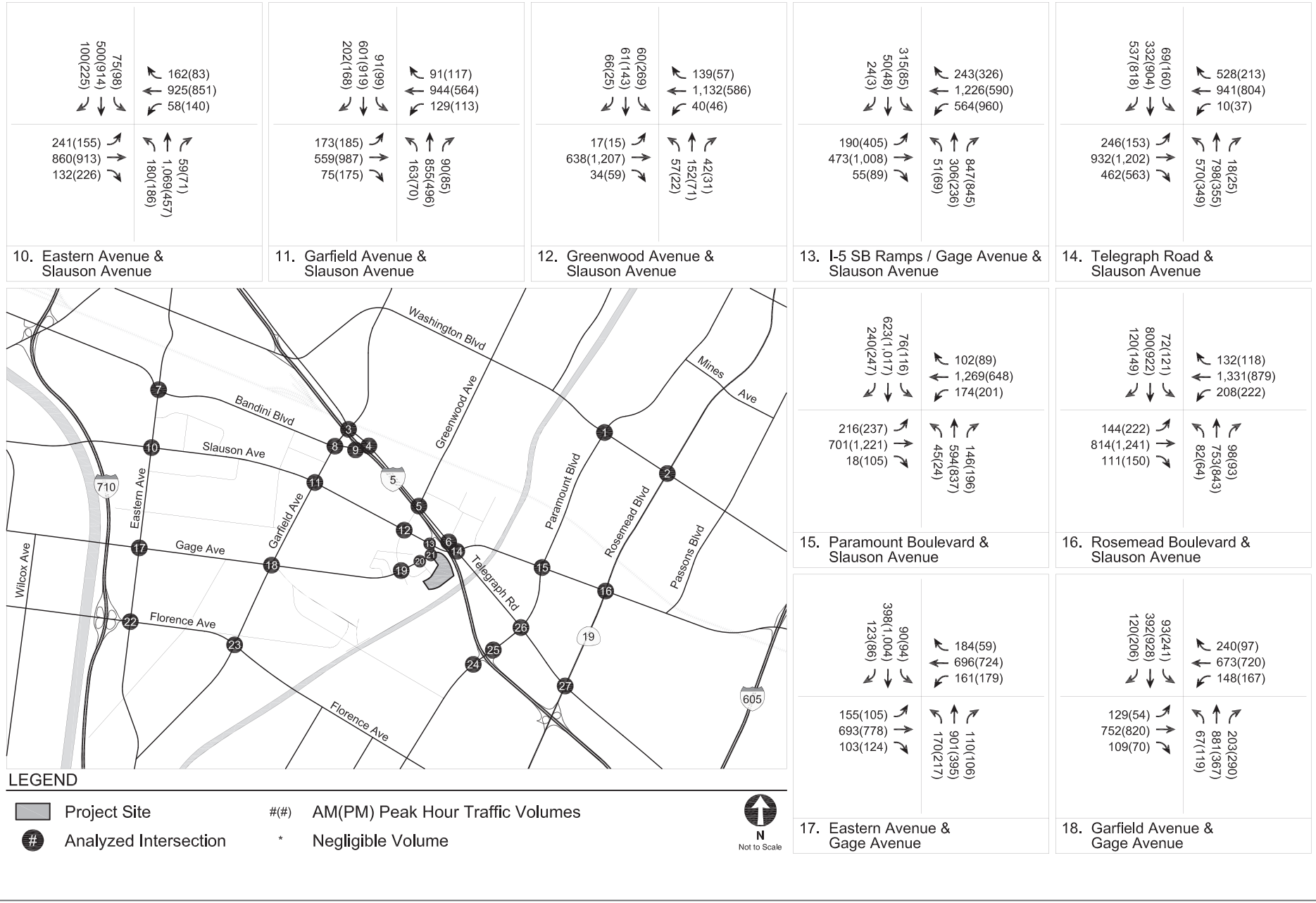

SOURCE: Gibson Transportation Consulting Inc. 2019

DUDEK

FIGURE 3.15-12B

Existing with Project Conditions (Year 2019) Peak Hour Traffic Volumes (cont.)

Modelo Project

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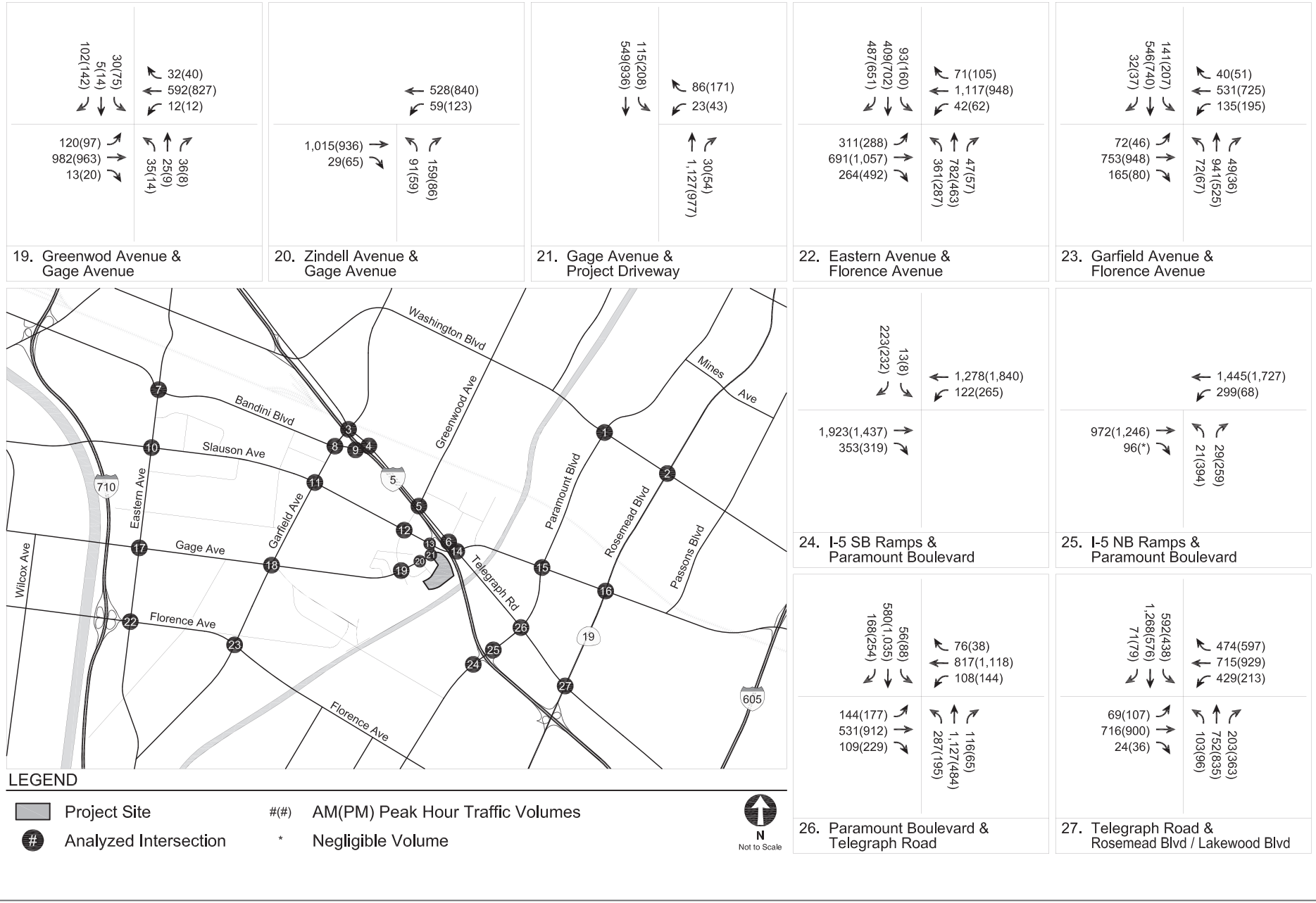

SOURCE: Gibson Transportation Consulting Inc. 2019

DUDEK

FIGURE 3.15-12C

Existing with Project Conditions (Year 2019) Peak Hour Traffic Volumes (cont.)

Modelo Project

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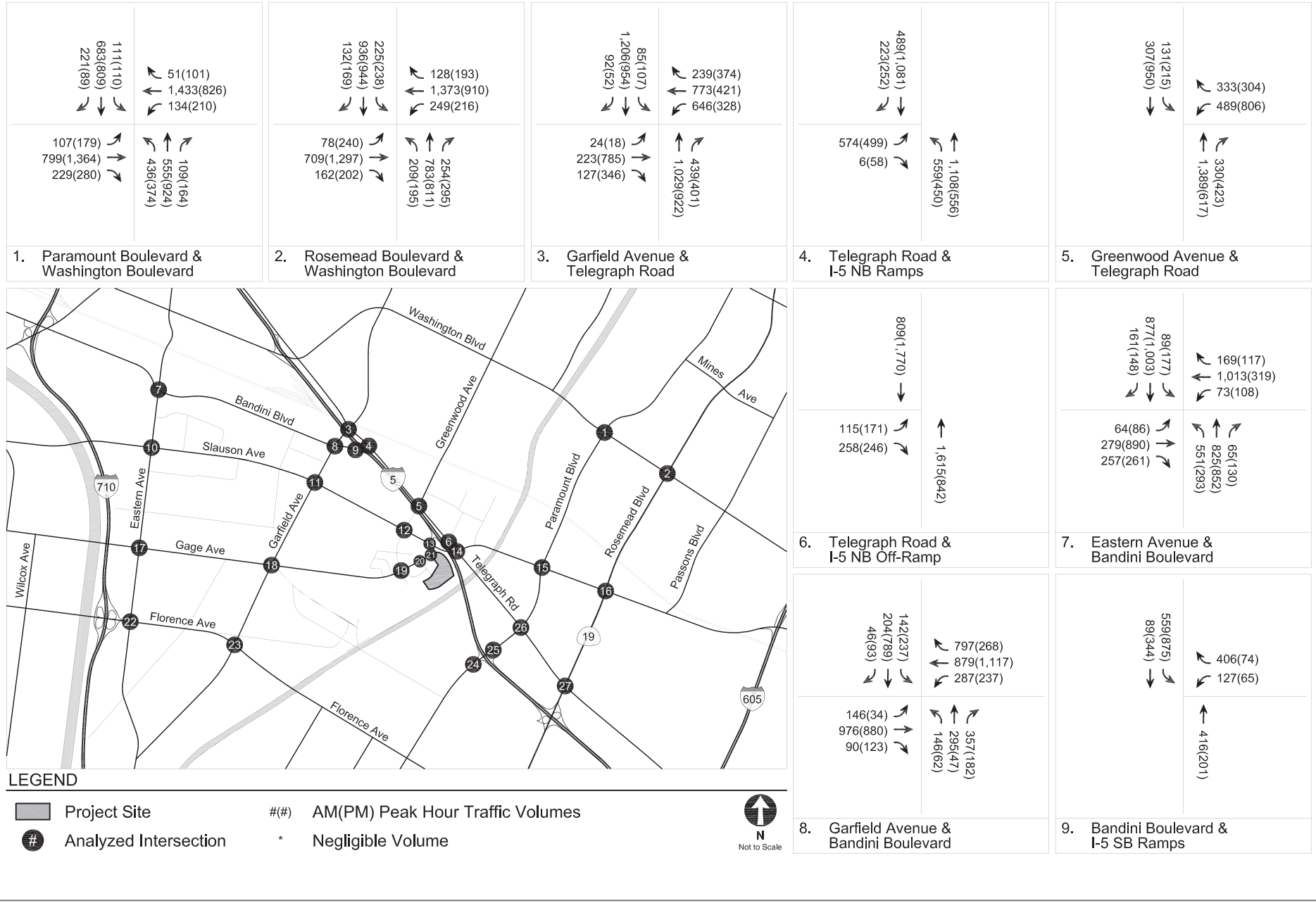

SOURCE: Gibson Transportation Consulting Inc. 2019

DUDEK

FIGURE 3.15-13A

Future with Project Conditions (Year 2023) Peak Hour Traffic Volumes

Modelo Project

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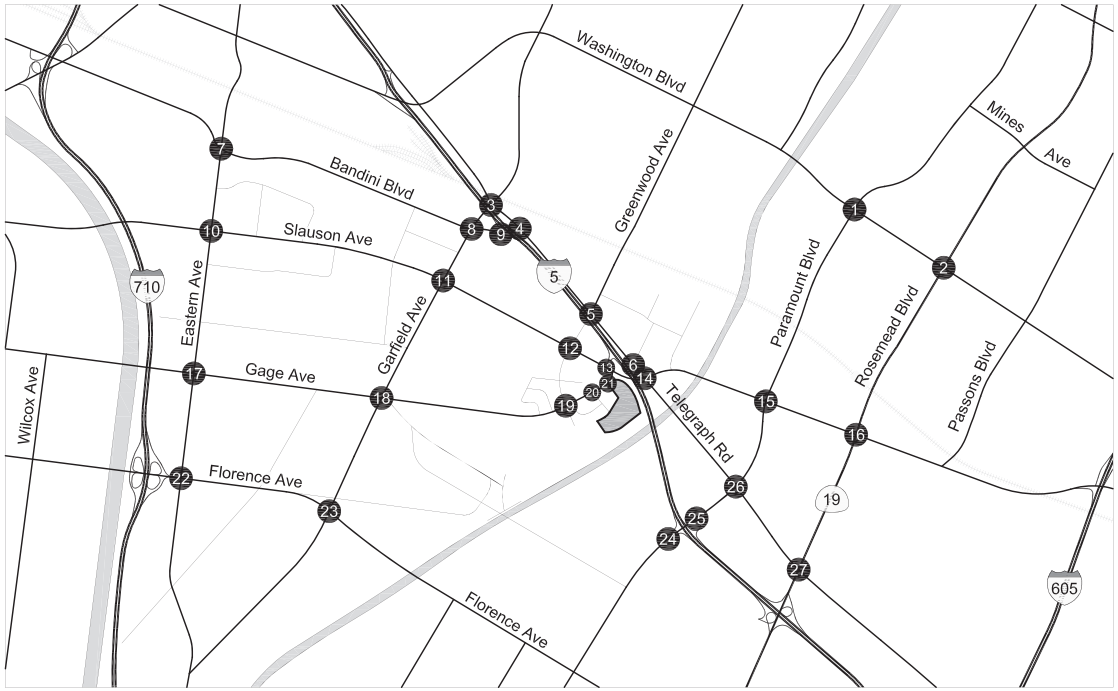

10. Eastern Avenue & Slauson Avenue

83(108)	535(973)	110(243)
175(92)	978(899)	61(148)
259(169)	909(965)	140(239)
62(75)	1,136(490)	191(197)

11. Garfield Avenue & Slauson Avenue

96(104)	640(991)	214(178)
96(123)	1,002(600)	137(120)
183(196)	594(1,047)	79(185)
95(90)	917(536)	173(74)

12. Greenwood Avenue & Slauson Avenue

72(303)	65(151)	70(26)
150(61)	1,196(618)	42(49)
18(16)	673(1,274)	36(62)
44(33)	161(75)	60(23)

13. I-5 SB Ramps / Gage Avenue & Slauson Avenue

333(90)	55(62)	25(3)
257(345)	1,302(626)	592(1,006)
208(444)	503(1,071)	56(89)
896(896)	321(248)	51(70)

14. Telegraph Road & Slauson Avenue

76(185)	357(989)	567(862)
570(235)	996(849)	11(39)
264(168)	985(1,272)	488(596)
19(26)	866(396)	604(367)

15. Paramount Boulevard & Slauson Avenue

80(123)	659(1,076)	254(261)
108(94)	1,354(694)	184(213)
228(250)	744(1,308)	19(111)
155(207)	629(886)	48(25)

16. Rosemead Boulevard & Slauson Avenue

76(128)	847(976)	126(157)
140(125)	1,420(940)	220(235)
152(234)	865(1,331)	117(159)
104(98)	797(892)	87(67)

17. Eastern Avenue & Gage Avenue

95(99)	423(1,066)	133(95)
194(62)	736(765)	169(188)
167(115)	733(822)	109(131)
116(111)	957(421)	180(230)

18. Garfield Avenue & Gage Avenue

98(255)	419(1,000)	127(218)
254(103)	709(759)	155(175)
137(57)	794(864)	115(74)
214(305)	944(399)	71(126)

LEGEND

- Project Site
- # Analyzed Intersection
- #(#) AM(PM) Peak Hour Traffic Volumes
- * Negligible Volume

N
Not to Scale

SOURCE: Gibson Transportation Consulting Inc. 2019

DUDEK

FIGURE 3.15-13B

Future with Project Conditions (Year 2023) Peak Hour Traffic Volumes (cont.)

Modelo Project

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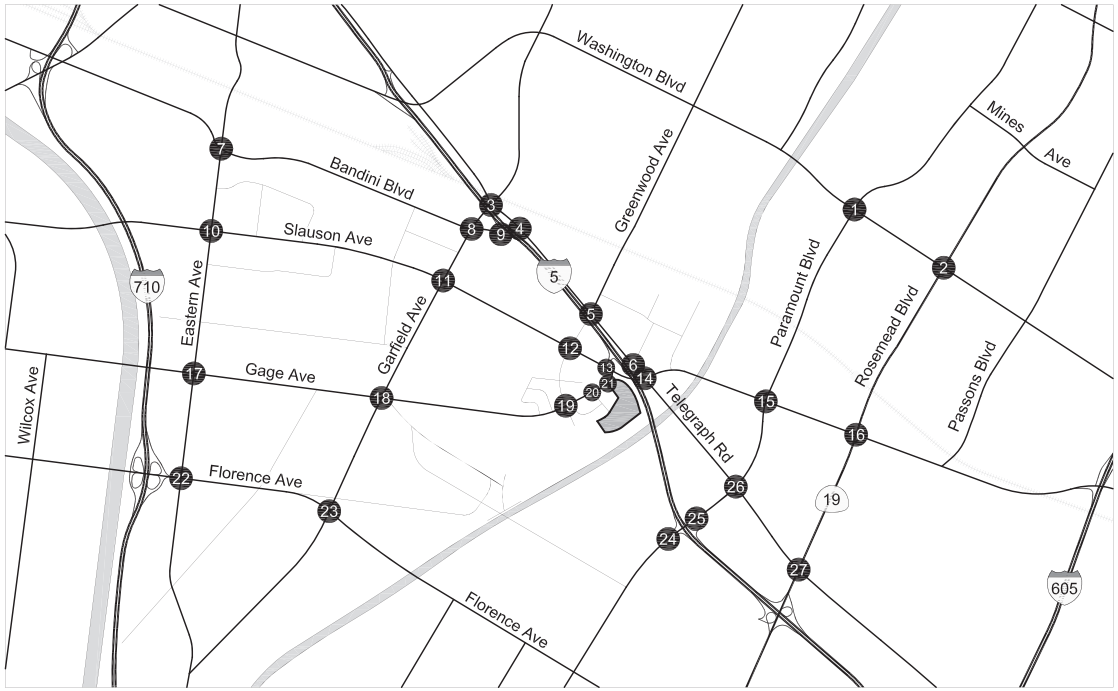
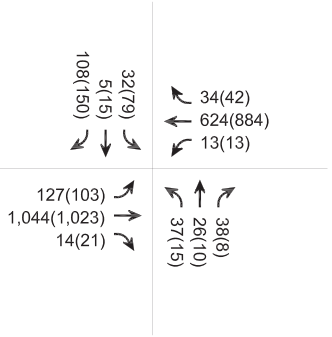
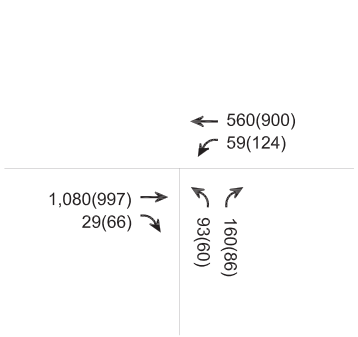


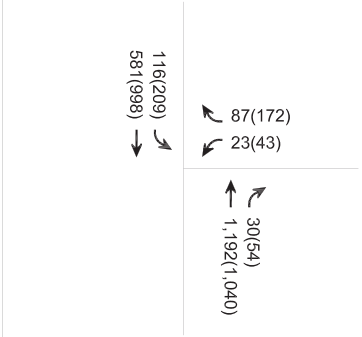
19. Greenwod Avenue & Gage Avenue



20. Zindell Avenue & Gage Avenue

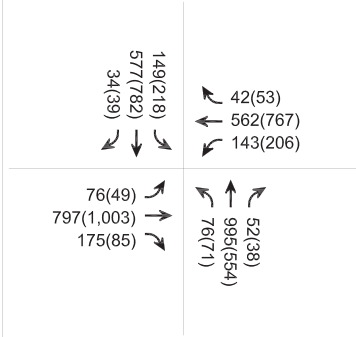


21. Gage Avenue & Project Driveway

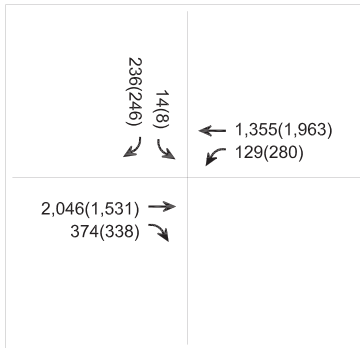


22. Eastern Avenue & Florence Avenue

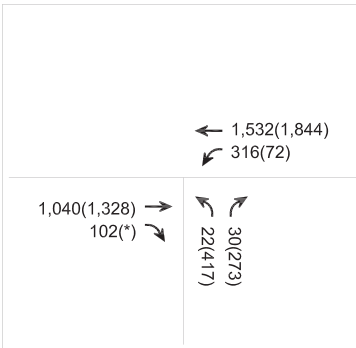
23. Garfield Avenue & Florence Avenue



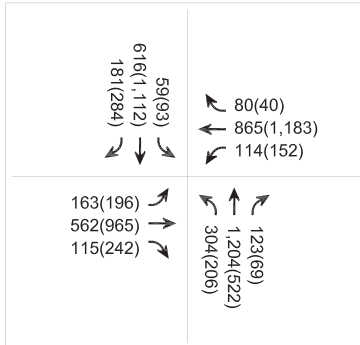
24. I-5 SB Ramps & Paramount Boulevard



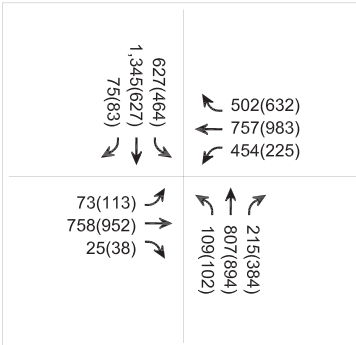
25. I-5 NB Ramps & Paramount Boulevard



26. Paramount Boulevard & Telegraph Road



27. Telegraph Road & Rosemead Blvd / Lakewood Blvd



LEGEND

- Project Site
- # Analyzed Intersection
- #(#) AM(PM) Peak Hour Traffic Volumes
- * Negligible Volume

N
Not to Scale

SOURCE: Gibson Transportation Consulting Inc. 2019

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FIGURE 3.15-13C

Future with Project Conditions (Year 2023) Peak Hour Traffic Volumes (cont.)

Modelo Project

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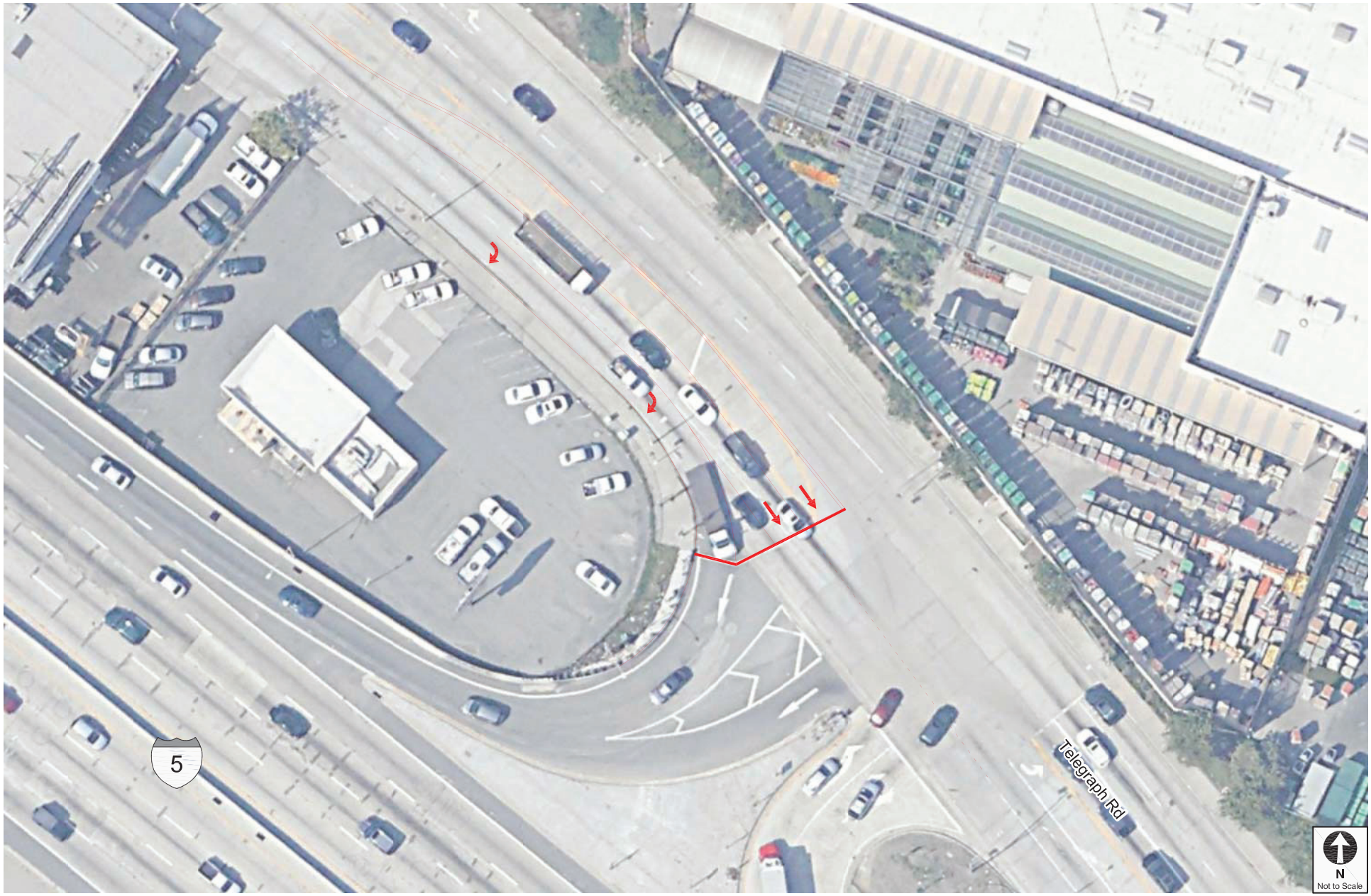

SOURCE: Gibson Transportation Consulting Inc. 2019

FIGURE 3.15-14

Proposed Mitigation- Intersection 4: Telegraph Road & I-5 NB Ramps

Modelo Project

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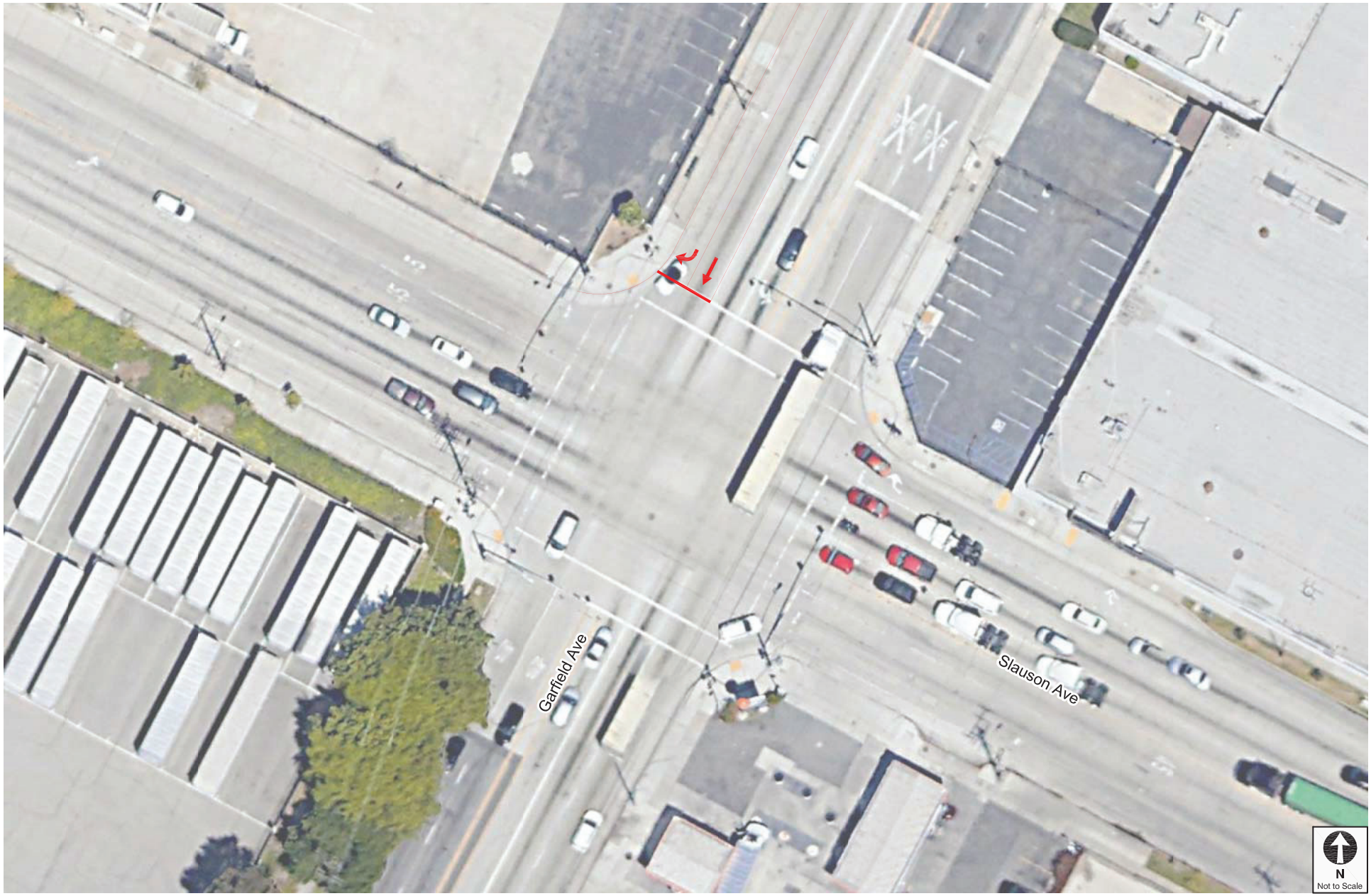

SOURCE: Gibson Transportation Consulting Inc. 2019

FIGURE 3.15-15

Proposed Mitigation- Intersection 11: Garfield Avenue & Slauson Avenue

Modelo Project

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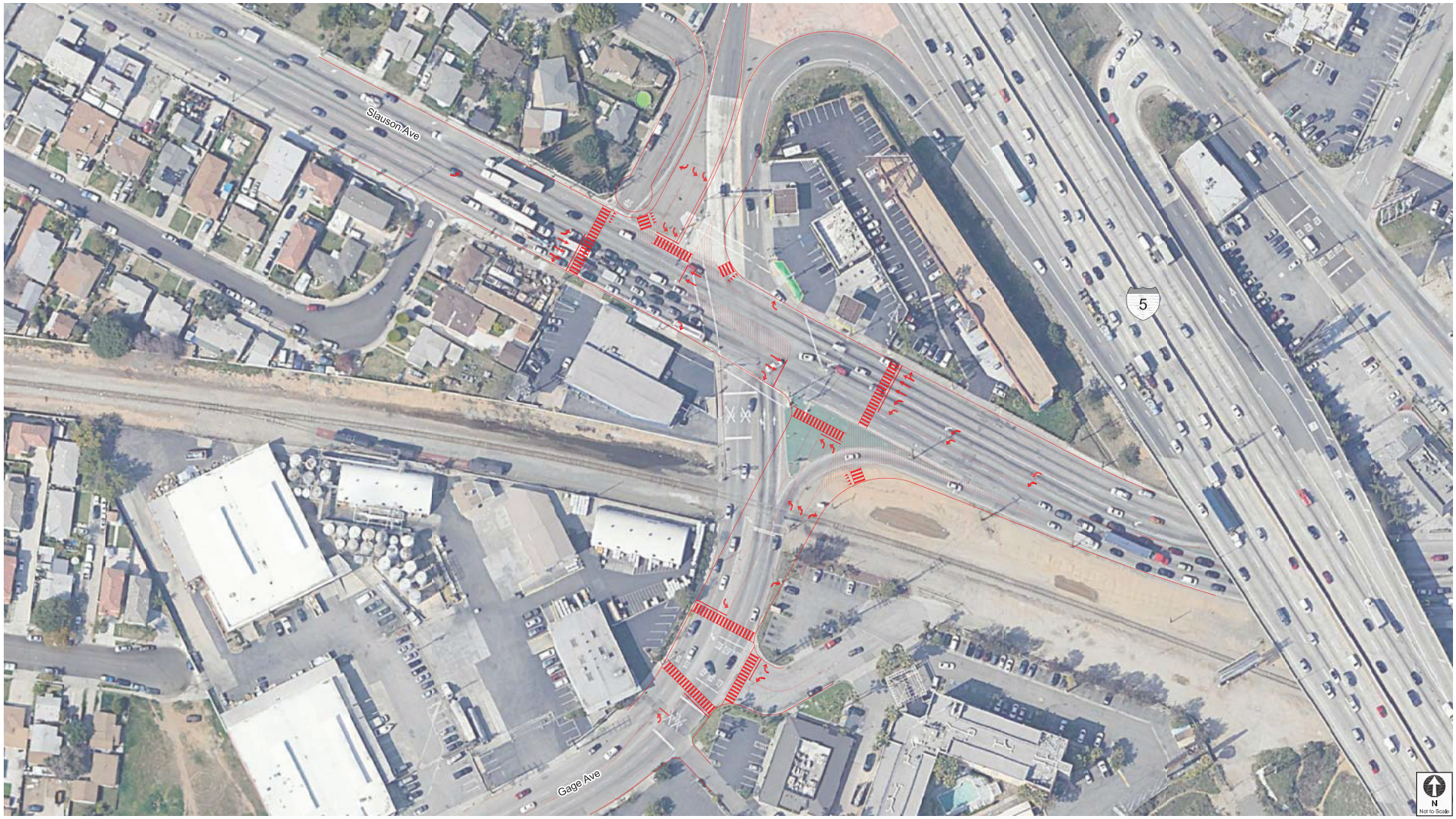

SOURCE: Gibson Transportation Consulting Inc. 2019

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FIGURE 3.15-16

Proposed Mitigation- Intersection 13: Gage Avenue & Slauson Avenue

Modelo Project

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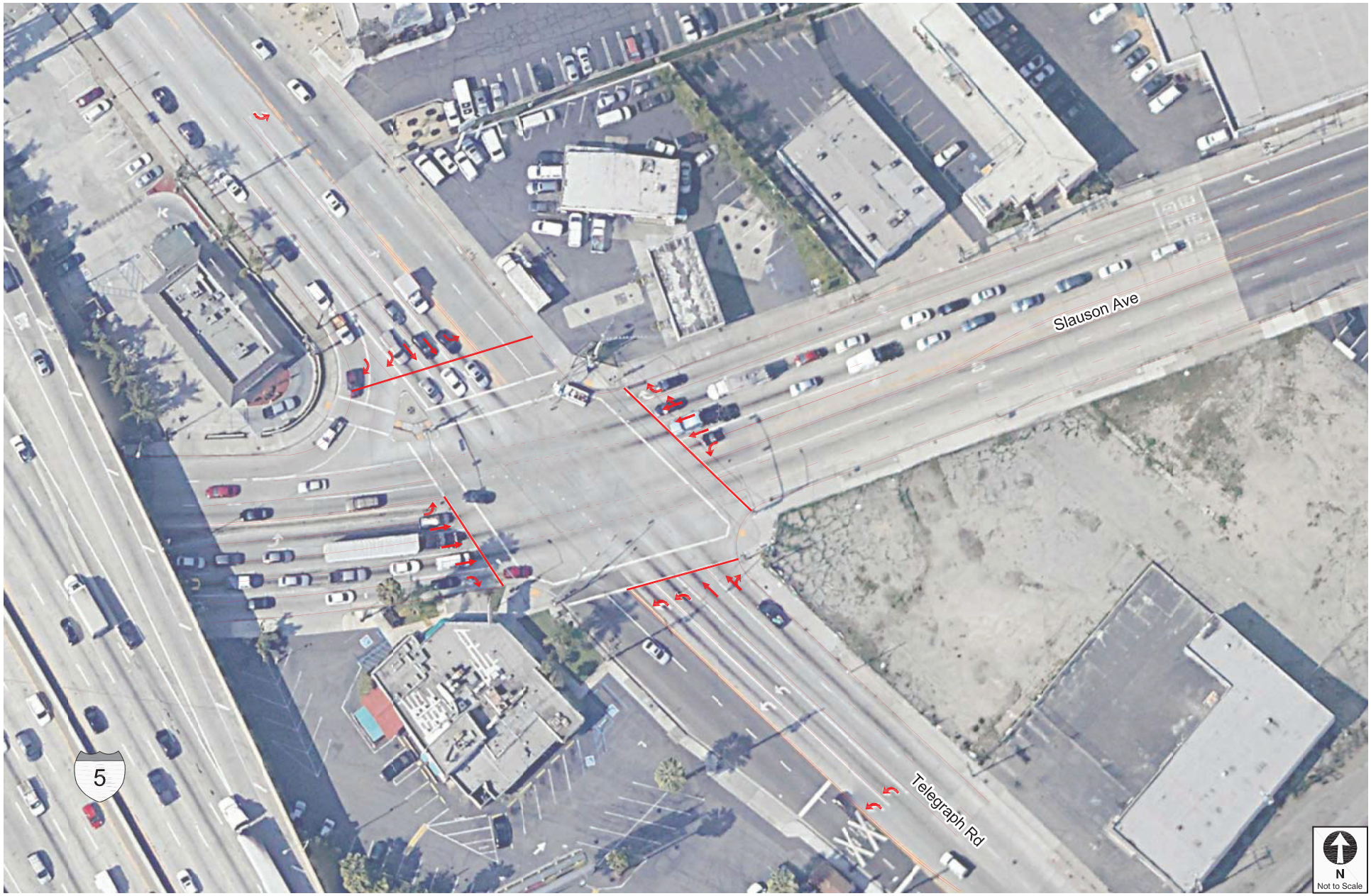

SOURCE: Gibson Transportation Consulting Inc. 2019

FIGURE 3.15-17

Proposed Mitigation- Intersection 14: Telegraph Road & Slauson Avenue

Modelo Project

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SOURCE: Gibson Transportation Consulting Inc. 2019

FIGURE 3.15-18

Proposed Mitigation- Intersection 17: Eastern Avenue & Gage Avenue

Modelo Project

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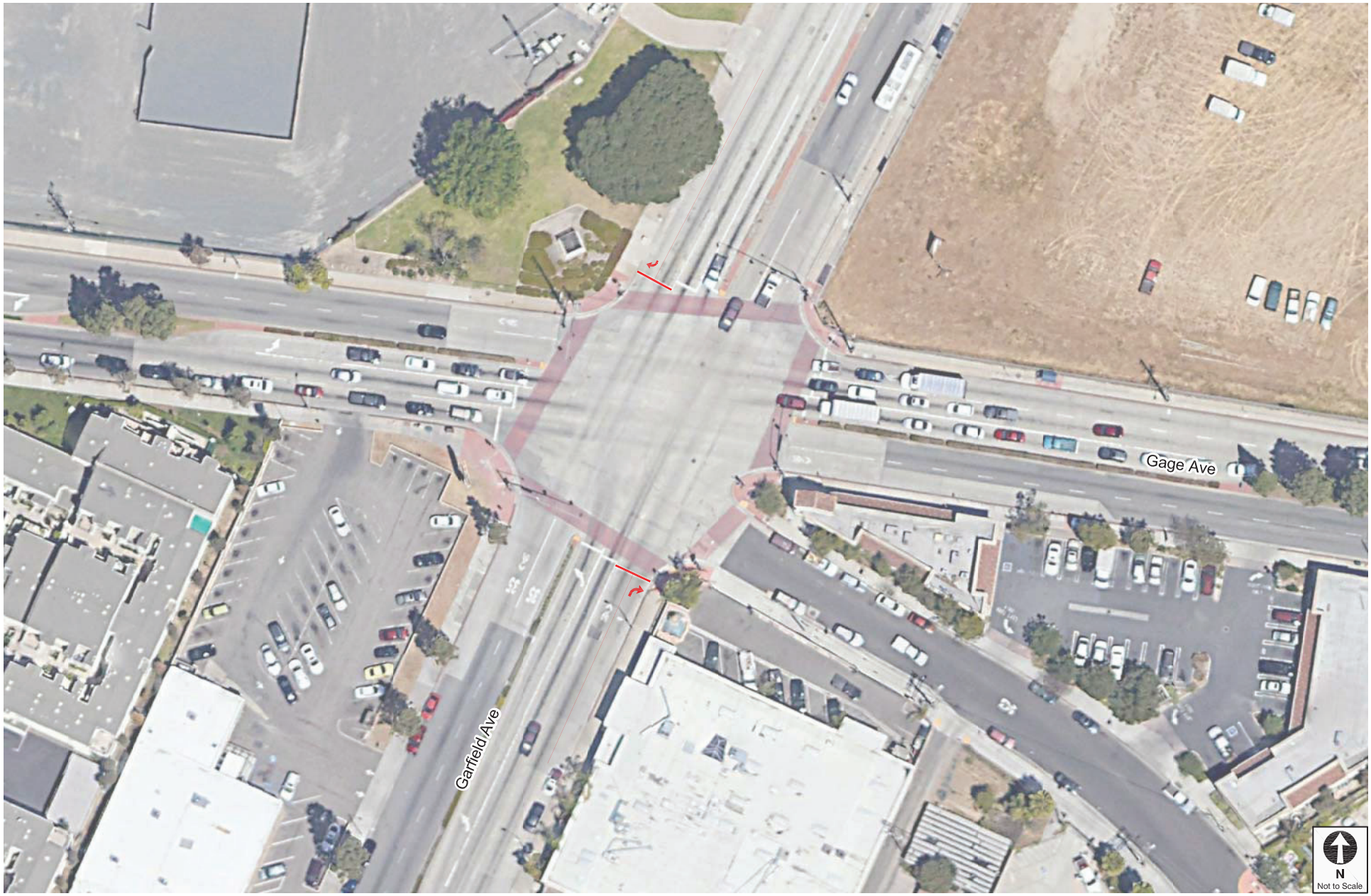

SOURCE: Gibson Transportation Consulting Inc. 2019

FIGURE 3.15-19

Proposed Mitigation- Intersection 18: Garfield Avenue & Gage Avenue

Modelo Project

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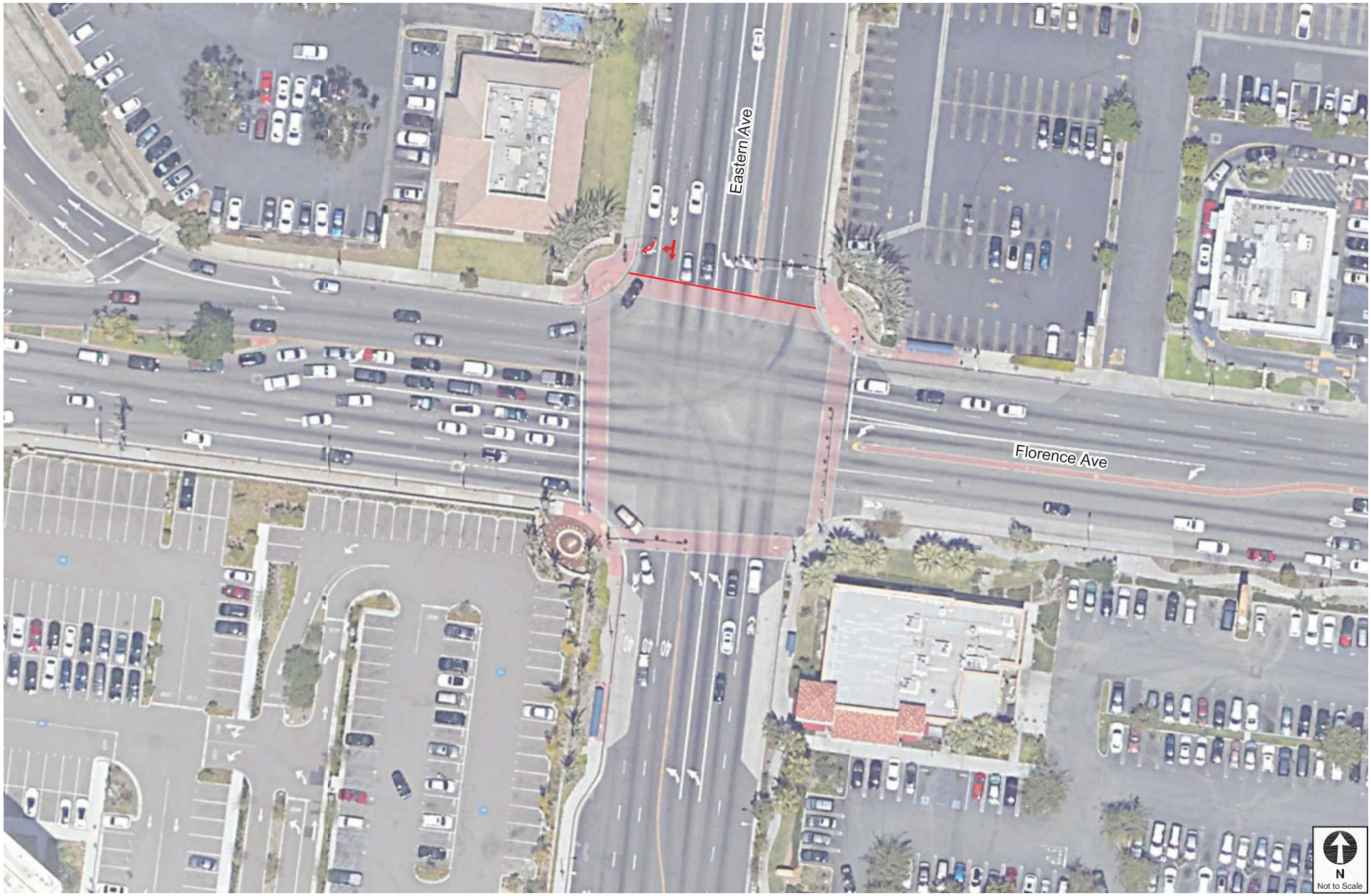

SOURCE: Gibson Transportation Consulting Inc. 2019

FIGURE 3.15-20

Proposed Mitigation- Intersection 22: Eastern Avenue & Florence Avenue

Modelo Project

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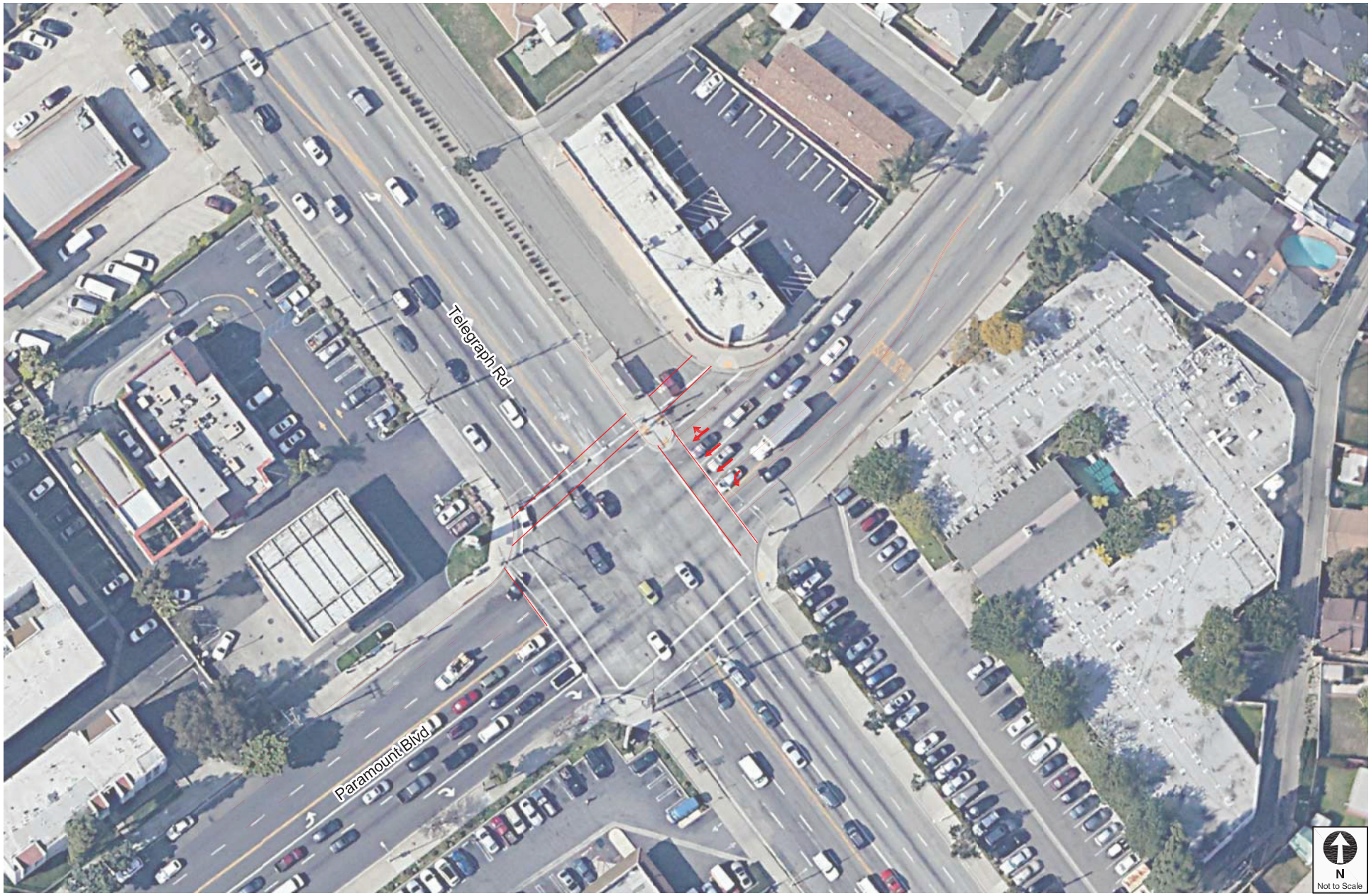

SOURCE: Gibson Transportation Consulting Inc. 2019

FIGURE 3.15-21

Proposed Mitigation- Intersection 26: Paramount Boulevard & Telegraph

Modelo Project

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3.16 Tribal Cultural Resources

This section describes the existing tribal cultural resources within the Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed Project.

Comments received in response to the Notice of Preparation (see Appendix A) included instructions for complying with Assembly Bill 52 and Senate Bill 18 (tribal consultation processes) and recommendations for cultural resources assessments.

Information contained in this section is based on a California Historical Resources Information System (CHRIS) records search; coordination with the California Native American Heritage Commission (NAHC); and tribal consultation initiated by the City of Commerce (City) pursuant to California Assembly Bill (AB) 52 and Senate Bill (SB) 18. (conducted by the City of Commerce on December 11, 2019). Other sources consulted are listed in Section 3.16.9 References.

3.16.1 Environmental Setting

South Central Coast Information Center Records Search

As previously discussed, in Section 3.4, Cultural Resources, Dudek conducted a CHRIS records search at the SCCIC on November 14, 2019 of the Project site and a 0.5-mile search radius at the SCCIC, located on the campus of California State University, Fullerton. This search included mapped prehistoric, historical, and built-environment resources; Department of Parks and Recreation (DPR) site records; technical reports; archival resources; and ethnographic references.

SCCIC records indicate that 11 previous cultural resources technical investigations have been conducted within 0.5-mile of the Project site. Of these, one study overlaps the Project site. Less than 25% of the Project site has been previously investigated. Additionally, the SCCIC records indicate that four previously recorded cultural resources exist within the surrounding 0.5-mile search radius. All four resources are built environment resources. No previously recorded prehistoric or historic-era archaeological resources were identified within 0.5-mile of the Project site as a result of the records search.

Native American Coordination

Sacred Lands File Search and Tribal Outreach

Dudek contacted the NAHC on November 12, 2019 to request a search of the SLF. Results of the SLF (received November 26, 2019) were negative. Because the SLF search does not include an exhaustive list of Native American cultural resources, the NAHC suggesting contacting five Native American individuals and/or tribal organizations who may have direct knowledge of cultural resources in or near the proposed Project site. No informal tribal consultation was initiated by Dudek for the proposed Project.

Assembly Bill 52

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

On October 16, 2019, the City sent notification of the proposed Project to all California Native American tribal representatives that have requested project notifications from the City pursuant to AB 52 and that are on file with the NAHC as being traditionally or culturally affiliated with the geographic area. These notification letters included a Project description, and inquired if the tribe would like to consult to discuss the proposed Project and the potential to impact any TCRs. AB 52 allows tribes 30 days after receiving notification to request consultation. If a response is not received within the allotted 30 days, it is assumed that consultation is declined. To date, government-to-government consultation initiated by the City has not resulted in the identification of a TCR within or near the proposed Project site. To date, one response has been received as a result of the City's AB 52 consultation notification. Table 3.16-1 summarizes the results of the AB 52 process for the proposed Project followed by a brief summary of the consultation results between the City and the consulting tribe. The confidential AB 52 consultation record is on file with the City.

Table 3.16-1. Assembly Bill 52 Native American Tribal Outreach Results

Native American Tribal Representatives	Method and Date of Notification	Response to City Notification Letters	Consultation Date
Joseph Ontiveros, Cultural Resources Director Soboba Band of Luiseno Indians	Certified mail; October 16, 2019	No Response	As no response was received, consultation was concluded.
Andrew Salas, Chairperson Gabrieleno Band of Mission Indians – Kizh Nation	Certified mail; October 16, 2019	Response received October 21, 2019 via email from Chairman Salas. In the response, Chairman Salas requests consulting party status.	Consultation was conducted on December 11, 2019.

On October 21, 2019, the Gabrieleno Band of Mission Indians – Kizh Nation (Tribe) responded to the City's AB 52 notification letter. Consultation between the City and the Tribe was conducted on December 11, 2019. During that consultation, the Tribe shared an oral history of tribal land use and stated that the Project site may potentially impact TCRs. Further the Tribe stated that they would be providing information pertaining to the significance of TCRs within the Project site. Additionally, the Tribe stated that they would provide their mitigation measures to be considered for the Project. On December 19, 2019, the Tribe followed-up with the City via email and provided a series of historic map images along with a review of each map and screen shots of text from unknown literary resources, including undated maps. Table 3.16-2, below, provides the Tribe's summary for each respective map.

Table 3.16-2 . Summary of Historic Maps Provided by the Gabrieleno Band of Mission Indians - Kizh Nation

Map Year	Map Source	Resources Addressed in Map/Tribal Comments
1938	Kirkman-Harriman Map superimposed on Google Earth	According to the Tribe, this map indicates the Project site is within a Village.
1898	Unknown Map superimposed on Google Earth	The Tribe provided this map to show the Project's close proximity to a railroad.
1871	Unknown Map superimposed on Google Earth	The Tribes states that there are many trade routes around the Project site. Additionally, the Tribe states that often along these trade routes were isolated burials and cremations of those that died along the trail.
1881	Unknown Map superimposed on Google Earth	The Tribe stated that this map shows the many trade routes around the Project site.
1881, 1901, and 1920	Unknown Map superimposed on Google Earth	These map were provided to show the hydrography or waterways that existed around the Project site. The Tribe states that seasonal or permanent hamlets, permanent trade depots, ceremonial and religious sites, and burials and cremations took place along these watercourses. Additionally, the Tribe states that these waterways are considered "cultural landscapes." Furthermore, there is higher than average potential to encounter TCRs and human remains during ground-disturbing activities near larger bodies of water.

According to the summary in Table 3.16-1, which appears from the unknown literary sources and maps provided, the Tribe believes that there is a high potential to impact TCRs within the Project site. As such, the Tribe has provided a mitigation measure to the City for consideration to address the potential impacts they have identified for the Project. The mitigation measure provided by the Tribe is on file with the City. Consultation between the City and the Tribe concluded on January 17, 2020.

Senate Bill 18

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

The City sent notification of the proposed Project to all California Native American tribal representatives that have requested Project notifications pursuant to SB 18 and that are on file with the NAHC as being traditionally or culturally affiliated with the geographic area on October 16, 2019. These notification letters included a Project description and inquired if the tribe would like to consult on the proposed Project. To date, government-to-government consultation initiated by the City has not resulted in the identification of a TCR within or near the proposed Project site. To date, one response has been received as a result of the City's SB 18 consultation notification. Table 3.16-2 summarizes the results of the SB 18 process for the proposed Project. The confidential SB 18 consultation record is on file with the City.

Table 3.16-2. Senate Bill 18 Native American Tribal Outreach Results

Native American Tribal Representatives	Method and Date of Notification	Response to City Notification Letters	Consultation Date
Joseph Ontiveros, Cultural Resources Director Soboba Band of Luiseno Indians	Certified mail; October 16, 2019	No Response	As no response was received, consultation was concluded.
Andrew Salas, Chairperson Gabrieleno Band of Mission Indians – Kizh Nation	Certified mail; October 16, 2019	Response received October 21, 2019 via email from Chairman Salas. In the response, Chairman Salas requests consulting party status.	Consultation was conducted on December 11, 2019. See consultation results from AB 52 consultation results provided in previous section. Consultation was concluded on January 17, 2020.

3.16.2 Relevant Plans, Policies, and Ordinances

Federal

No federal requirements related to TCRs are applicable to the proposed Project.

State

California Register of Historical Resources

In California, the term "historical resource" includes "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (California PRC Section 5020.1(j)). In 1992, the California legislature established the California Register of Historical Resources (CRHR) "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Section 5024.1(a)). The criteria for listing resources on the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the National Register of Historic Places (NRHP), enumerated below. According to PRC Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains "substantial integrity," and (ii) meets at least one of the following criteria:

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

To understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than 50 years old may be

considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (14 CC) 4852(d)(2)).

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

California Environmental Quality Act

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

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

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

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

1. Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or
2. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the PRC or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the PRC,

unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

3. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.

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

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

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

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

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

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

California State Assembly Bill 52

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

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

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

Section 1 (a)(9) of AB 52 establishes that "a substantial adverse change to a TCR has a significant effect on the environment." Effects on TCRs should be considered under CEQA. Section 6 of AB 52 adds Section 21080.3.2 to the PRC, which states that parties may propose mitigation measures "capable of avoiding or substantially lessening potential significant impacts to a TCR or alternatives that would avoid significant impacts to a tribal cultural resource." Further, if a California Native American tribe requests consultation regarding project alternatives, mitigation measures, or significant effects to TCRs, the consultation shall include those topics (PRC Section 21080.3.2(a)). The environmental document and the mitigation monitoring and reporting program (where applicable) shall include any mitigation measures that are adopted (PRC Section 21082.3(a)).

Senate Bill 18

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

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

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

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

California Health and Safety Code Section 7050.5

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

3.16.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to tribal cultural resources are based on Appendix G of the State CEQA Guidelines. Through the analysis in the Initial Study (see Appendix A), it was determined that the proposed Project could have a potentially significant impact to tribal cultural resources. Accordingly, all of the thresholds are further analyzed in the EIR. According to Appendix G of the State CEQA Guidelines, a significant impact related to tribal cultural resources would occur if the Project would:

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

3.16.4 Methodology

The analysis contained in this section is based, in part, on a review of existing resources and applicable laws, regulations, and guidelines. The analysis also used the California Historical Resources Information System (CHRIS) records search; included coordination with the California Native American Heritage Commission (NAHC); and relied on tribal consultation initiated by the City pursuant to California Assembly Bill (AB) 52 and Senate Bill (SB) 18 (conducted by the City of Commerce on December 11, 2019).

3.16.5 Impacts Analysis

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

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

As described above and under Section 3.4, Cultural Resources, no archaeological resources were identified within the Project site as a result of the CHRIS records search or Native American outreach. Further, no previously recorded TCRs listed in the CRHR or a local register were identified within the Project site. Additionally, no TCRs have been identified by California Native American tribes as part of the City's AB 52 and SB 18 notification and consultation process. Impacts are considered **less than significant**. No mitigation is required.

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

There are no resources on the proposed Project site that have been determined by the City to be significant pursuant to the criteria set forth in PRC Section 5024.1. Further, no TCRs were identified in the proposed Project site by California Native American tribes as part of the City's AB 52 and SB 18 notification and consultation process.

One response to AB 52 and SB 18 outreach letters to tribal contacts was received by the City requesting consulting party status for both AB 52 and SB 18. On October 21, 2019, Chairman Andrew Salas of the Gabrieleno Band of Mission Indians – Kizh Nation, responded via email. In the response letter, Chairman Salas requests consulting party status. Additionally, Chairman Salas provided a map of tribal territories and county boundaries, including mitigation measures for tribal cultural resources within the Kizh Nation Tribal Territory, though the letter did not identify any TCRs or other known cultural resources that could be directly impacted by the proposed Project.

As no information regarding TCRs has been received by the City, the City has determined that no TCRs are present in the proposed Project site. However, there is still a low potential for unknown subsurface TCRs to be impacted by the proposed Project, which could result in a significant impact. Therefore, protocols for the inadvertent discovery of TCRs is included as mitigation measure **MM-TCR-1**, which would reduce the potential impact to a **less-than-significant level with mitigation incorporated**.

3.16.6 Cumulative Impacts

The geographic scope of the cumulative cultural resources analysis is the region surrounding the proposed Project site. The proposed Project site is located in a highly urbanized, developed commercial, residential, and industrial area. The parcels comprising the approximately 17.32-acre Project site was subject to extensive subsurface disturbance as it was previously part of a construction borrow-pit type of landfill created for, and during, the construction of the Interstate (I)-5 freeway. For these reasons, these past activities greatly limits the potential for buried, unrecorded cultural resources to underlay the proposed Project site. Nonetheless, mitigation measure **MM-TCR-1** is required to help to ensure that, in the event of an unanticipated find of a significant tribal cultural resource, the resource is protected, researched, and potentially preserved (if subsequently deemed warranted) to maintain integrity and significance.

The cumulative impacts analysis on tribal cultural resources considers whether the impacts of the proposed Project and other related cumulative projects, when taken as a whole, substantially diminish the number of tribal resources within the same or similar context or property type. As discussed throughout this section, the proposed Project could have significant impacts to unknown tribal cultural resources, and mitigation would be required to reduce adverse impacts to levels less than significant. It is anticipated that tribal cultural resources that are potentially affected by related projects would also be subject to the same requirements of CEQA as the proposed Project and mitigate for their impacts, if applicable. The determinations of significance would be made on a case-by-case basis, and the effects of cumulative development on cultural resources would be mitigated to the extent feasible in accordance with CEQA and other applicable legal requirements. Therefore, the proposed Project would not contribute to a cumulatively considerable impact associated with tribal cultural resources due to the fact that impacts to tribal cultural resources would be mitigated to a less than significant level. Cumulative impacts would be **less than significant with mitigation incorporated**.

3.16.7 Mitigation Measures

The following mitigation measure would ensure that the Project has a less-than-significant impact on tribal cultural resources.

MM-TCR-1 While no TCRs have been identified that may be affected by the proposed Project, the following approach for the inadvertent discovery of TCRs has been prepared to ensure there are no impacts to unanticipated resources. Should a potential TCR be encountered, construction activities near the encounter shall be temporarily halted within 50 feet of the discovery and the City notified. The City will notify Native American tribes that have been identified by the NAHC to be traditionally and culturally affiliated with the geographic area of the Project. If the potential resource is archaeological in nature, appropriate management requirements shall be implemented as outlined in mitigation measure **MM-CUL-1**. If the City determines that the potential resource is a TCR (as defined by PRC, Section 21074), tribes consulting under AB 52 and SB 18 would be provided a reasonable period of time, typically 5 days from the date of a new discovery is made, to conduct a site visit and make recommendations regarding future ground disturbance activities as well as the treatment and disposition of any discovered TCRs. A qualified archaeologist shall implement a plan for the treatment and disposition of any discovered TCRs based on the nature of the resource and considering the recommendations of the tribe(s). Implementation of proposed recommendations will be made based on the determination of the City that the approach is reasonable and feasible. All activities would be conducted in accordance with regulatory requirements.

3.16.8 Level of Significance After Mitigation

With the implementation of mitigation measure **MM-TCR-1**, impacts would be **less than significant**.

3.16.9 References

None.

3.17 Utilities and Service Systems

This section describes the existing utility conditions of the Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to the implementation of the proposed Project.

No comments were received in response to the Notice of Preparation (see Appendix A) regarding impacts associated with utilities and service systems.

The information presented in this section was collected from a number of sources and technical reports, including:

- *Water Demand Table*, prepared by KPFF (2019a)
- *Wastewater Generation Table*, prepared by KPFF (2019b)
- *Wastewater Infrastructure Capacity Will-Serve Letter*, prepared by the Los Angeles County Sanitation District (LACSD) (Appendix I)
- *Water Supply and Water Service Will-Serve Letter*, prepared by California Water Service Company (Cal Water), East Lost Angeles District (Appendix I)
- *2015 Urban Water Management Plan for East Los Angeles District*, prepared by Cal Water Service Company (Cal Water 2016)
- *Countywide Integrated Waste Management Plan*, prepared by County of Los Angeles (2019)

Other sources consulted are listed in Section 3.17.9 References.

3.17.1 Environmental Setting

Water Service

Water service is provided to the City of Commerce by Cal Water East Los Angeles District, which is one of 25 districts within Cal Water. The Cal Water East Los Angeles District service area encompasses a large section of unincorporated Los Angeles County known as East Los Angeles, and portions of the cities of Montebello, Commerce, Vernon, and Monterey Park. The system is bounded on the west and north by the City of Los Angeles, on the north by the city of Monterey Park, on the east by the city of Montebello, and on the south by the cities of Commerce, Bell, and Vernon. A portion of the District's southern boundary is the Los Angeles River (Cal Water 2016).

Water supplies for the Cal Water East Los Angeles District are derived from two principal sources: local groundwater and imported purchased groundwater. Local groundwater is pumped from the Central Basin. Imported water is purchased from the Central Basin Municipal Water District (CBMWD), one of the 27 member agencies of the Metropolitan Water District of Southern California (MWD). MWD imports water through either the Colorado River Aqueduct, which is owned by MWD, or the California Aqueduct, a facility of the State Water Project, which is owned and operated by the California Department of Water Resources (DWR). CBMWD serves as the regional water wholesaler. In 2015, water supply in the Cal Water East Los Angeles District was derived from 63% groundwater and 37% purchased water. The amount of groundwater pumping is expected to increase as a new well has been placed on-line (Cal Water 2016).

In accordance with the Sustainable Groundwater Management Act (SGMA), the California DWR has classified the Central Basin in regard to prioritizing completion of a Groundwater Sustainability Plan (GSP). The Central Basin has a very low priority in regards to enacting a GSP (DWR 2019). In addition, the Central Basin is adjudicated and thus has a managed groundwater extraction rate, reducing the potential for over-extraction. The Central Basin has a total annual allowed pumping allocation of 217,367 acre-feet (AF), which is 80% of the adjudicated rights established under the judgment. This limitation was imposed on all basin groundwater pumpers due to the historically severe overdraft condition of the basin. The Cal Water East Los Angeles District exercises an annual adjudicated right of 14,717 AF, which has been limited under the judgment to an annual allowed pumping allocation of 11,774 AF, or 80% of the adjudicated right (Cal Water 2016).

Existing Water Use

The Project site encompasses 17.32 acres within the central portion of the City. The Project site consists of the Veterans Memorial Park and a vacant lot. Existing water use for the Project site is estimated in Table 3.17-1.

Table 3.17-1, Existing Water Demand

Existing Land Use	Units (SF)	Units of Usage (SF)	Generate Rate (gpd/unit)	Total Sewer Generation (gpd)
Sports Complex - 1 field	130,000	1,000	60	7,800
Community Center[1,2]	40,650	1,000	144	5,854
			Subtotal Existing	13,654
The average daily flow is based on 120% of the Los Angeles County Sanitation District No. 4's Connection Mean Loadings Per Unit of Usage				

Sources: KPFF 2019a
Notes: SF=square feet; gpd = gallons per day.
1 Assumes 50 gpd/1,000 SF of sports field
2 Community Centers are assessed as "Counseling Center", which generate 120 gpd/1,000 SF

Based on the land use identified above, the estimated existing water demand is 13,654 gallons per day (gpd) or 15.3 acre-feet per year (AFY).

Water Infrastructure

Based on a Water Infrastructure Map provided by the City of Commerce, water service for existing infrastructure within the Project area is provided by a 10-inch water line located in Zindell Avenue, as well as an existing 6-inch waterline which extends laterally from Kuhl Drive to the northwest corner of the Veterans Memorial Park. The 10-inch water main extends to the northwest corner of the vacant lot (see Figure 2-1, Existing Conditions).

Wastewater

Existing Wastewater Generation

Table 3.17-2 shows the estimated wastewater generated at the Project site under existing conditions.

Table 3.17—2, Existing Wastewater Generation

Existing Land Use	Units (SF)	Units of Usage (SF)	Generate Rate (gpd/unit)	Total Sewer Generation (gpd)
Sports Complex – 1 field	130,000	1,000	50	6,500
Community Center[1]	40,650	1,000	120	4,878

Table 3.17—2, Existing Wastewater Generation

Existing Land Use	Units (SF)	Units of Usage (SF)	Generate Rate (gpd/unit)	Total Sewer Generation (gpd)
			Subtotal Existing	11,378
The average daily flow is based on the Los Angeles County Sanitation District No. 4's Connection Mean Loadings Per Unit of Usage.				

Source: KPFF 2019b
Notes: SF = square feet; gpd = gallons per day
[1] Community Centers are assessed as "Counseling Center", which generate 120 gpd/1,000 SF

Based on the land use identified above, the estimated existing wastewater generation is 11,378 gpd, or 12.7 AFY.

Sewer Infrastructure

LACSD No. 2 provides sewer collection and treatment to the City of Commerce (LACSD 2019a). LACSD No. 2 is part of the larger Sanitation Districts of Los Angeles County, overseeing 24 independent special districts that provide wastewater treatment and disposal to approximately 5.5 million people in Los Angeles County. The service area covers approximately 824 square miles and encompasses 78 cities and unincorporated territory within the county (LACSD 2019b). As of 2016, wastewater from existing infrastructure within the Project site is served by 8-inch diameter local sewer lines within Zindell Ave and Avenida Aguas Calientes (see Figure 2-1, Existing Conditions) (LADWP 2019). From there, wastewater flows are conveyed to LACSD's Montebello Trunk Sewer, located in Florence Place at Toler Avenue in Bell Gardens. LACSD's 21-inch diameter trunk sewer has a capacity of 3.6 million gallons per day (mgd) and conveyed a peak flow of 1.1 mgd when last measured in 2016 (Appendix I).

The City of Commerce and LACSD No. 2 discharges effluent to the Joint Water Pollution Control Plan (JWPCP) which serves a population of approximately 3.5 million people throughout Los Angeles County. The JWPCP provides primary, secondary, and tertiary treatment capacity for an average of 261.1 mgd of wastewater and has a total permitted capacity of 400 mgd (Appendix I). After treatment, treated water is discharged into the Pacific Ocean (LACSD 2019b).

Stormwater Drainage

The Project site and surrounding area are characterized as an urban, developed commercial and residential area with a mix of pervious and impervious surfaces. Vegetation with the Project site consists of ornamental landscaping associated with the existing development, as well as natural vegetation within the vacant lot portion of the Project site. Planters with ornamental trees, shrubs, and grasses are scattered throughout the Project site.

Site stormwater on the vacant lot presently infiltrates, although there is a drainage ditch between Interstate 5 and this parcel, sloping south to a flood control basin. Site stormwater at the existing park is presently conveyed to five catch basins along the center of the park, which drain via a 24" reinforced concrete pipe into the flood control basin to the south of the park (see Figure 3.9-3). Impervious areas of the Project site are limited to parking areas, a building, and concrete walkways. Most of the site allows for infiltration of groundwater.

In the larger vicinity, stormwater runoff is collected in streets through inlets, catch basins and underground storm drains maintained by the Los Angeles County Flood Control District. Stormwater is then conveyed through the storm drain system to the Rio Hondo channel, located south of the Project site. Therefore, the "receiving waters"

for the Project (i.e., all waters within the flow network downstream of the Project site) include Rio Hondo, the Los Angeles River and the Pacific Ocean.

Solid Waste

Regionally, the Sanitation Districts operate a comprehensive solid waste management system serving the needs of a large portion of Los Angeles County, including the City of Commerce. Locally, the collection, transport, and disposal of solid waste and recyclables from business use in the City is provided by CalMet Services (City of Commerce 2019). Solid waste collected by CalMet is taken to one of three transfer stations: the Downey Area Recycling and Transfer Facility, the Puente Hills Materials Recovery Facility, and the South Gate Transfer Station.[1] Waste such as tires, green waste, steel, and wood are sent to special facilities for disposal and recycling. Commingled commercial recycling is separated and sold to different markets according to value. Green waste is trucked to landfills for use as daily cover. For the remainder of the waste, LACSD has selected two landfills, the Calabasas Landfill and the Scholl Canyon Landfill, as the target destination for the County's waste (LACSD 2019b). Details on these two landfills are provided below.

- Calabasas Landfill is located approximately 36 miles northwest of the Project site, in Los Angeles County. This landfill is owned and operated by County Sanitation District No. 2 of Los Angeles. Calabasas Landfill has a maximum permitted throughput of 3,500 tons of solid waste per day and receives an average load of 1,128 tons per day. The landfill has a remaining capacity of 5,559,480 tons and receives 441,720 tons of solid waste per year. As of 2017, the landfill was expected to remain open for another 12 years (County of Los Angeles 2019).
- Scholl Canyon is located approximately 13 miles northwest of the Project site in Los Angeles County. This landfill is owned and operated by the County Sanitation District No. 2 of Los Angeles County. Scholl Canyon Landfill has a maximum throughput of 3,400 tons of solid water per day and receives an average load of 1,254 tons per day. The landfill has a remaining capacity of 4,697,842 tons and receives approximately 457,710 tons of solid waste per year. As of 2017, the landfill was expected to remain open for another 12 years (County of Los Angeles 2019).

Construction waste is typically disposed of at inert landfills, which are facilities that accept materials such as soil, concrete, asphalt, and other construction and demolition debris. The Azusa Land Reclamation landfill, located 15 miles northeast of the Project site, only accepts inert waste. The landfill has a maximum permitted daily capacity of 6,500 tons of waste and receives an average of 1,356 tons of inert waste per day. The landfill has a remaining capacity of 55,705,480 tons and is expected to remain open for approximately 28 years, as of 2017. There are other facilities that process inert waste and other construction and demolition waste in the County. Collectively, these facilities have a maximum capacity of 32,496 tons per day and process an average of 8,535 tons per day. There are numerous processing facilities for construction and demolition wastes throughout the County, the nearest of which is Construction and Demolition Recycling, located at 9309 Rayo Avenue, in South Gate. This facility is 3.4 miles to the southwest of the Project site, has a permitted capacity of 3,000 tons of waste per day, and has a recycling rate of 80% (County of Los Angeles 2019).

[1] https://www.lacsd.org/services/solidwaste/default.asp

Table 3.17-3 shows the estimated solid waste generated at the Project site under existing conditions.

Table 3.17-3, Estimated Existing Solid Waste Generation

Use	Solid Waste Generation (tons per year)[1]
City Park	0.52
Parking Lot	0
Racquet Club	367.31
Total	**367.83**

Source: CalEEMod Existing Calculations (Appendix B)
[1] Assumes 50% of waste diverted in accordance with Assembly Bill 939

Electric Power

Electric service is provided to the City of Commerce by Southern California Edison (SCE) (City of Commerce 2019). Using the current CalEEMod factors, the estimated electricity demand associated with the current uses at the Project site are summarized in Table 3.17-4.

Table 3.17-4, Estimated Existing Electricity Demand

	Electricity Use
Land Use	*kWh/yr*
City Park	0
Parking Lot	16,240
Racquet Club	715,328
Estimated Project Demand	**731,568**

Source: CalEEMod Existing Calculations (Appendix B)
Notes: KWh/yr = Kilowatts per hour per year.

Natural Gas

Natural gas is supplied to the City by Southern California Gas Company (SoCal Gas) (City of Commerce 2019). Using the current CalEEMod factors, the estimated natural gas demand associated with the current uses at the Project site are summarized in Table 3.17-5, Estimated Existing Natural Gas Demand.

Table 3.17-5, Estimated Existing Natural Gas Demand[2]

Land Use	Natural Gas Use (kBTU/yr)
City Park	0
Parking Lot	0
Racquet Club	1,664,400
Estimated Project Demand	**1,664,400**

Source: CalEEMod Existing Calculations (Appendix B)
Notes: kBTU/yr = KiloBritish Thermal Units per year.

[2] Natural Gas use is in kiloBritish Thermal Units (kBTU) per size metric for each land use subtype.

Telecommunication Facilities

Telecommunication facilities are installed in the City by a variety of private utility companies including, AT&T, Spectrum, DIRECTV, Dish Network, Exede Satellite Internet, Frontier, Verizon, HughesNet (City of Commerce 2019).

3.17.2 Relevant Plans, Policies, and Ordinances

Federal

The following federal regulations pertaining to Utilities and Service Systems would apply to the proposed Project.

National Pollutant Discharge Elimination System Permit Program

The National Pollution Discharge Elimination System (NPDES) permit program was established in the Clean Water Act (CWA) to regulate municipal and industrial discharges to surface waters of the United States. Discharge from any point source is unlawful unless the discharge is in compliance with an NPDES permit. Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (Code of Federal Regulations, Title 40, Section 268, Subpart D), contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs that include federal landfill criteria. The federal regulations address the location, operation, design, and closure of landfills, as well as groundwater monitoring requirements.

State

The following state regulations pertaining to Utilities and Service Systems would apply to the proposed Project.

California Code of Regulations, Titles 14 and 27

Title 14 (Natural Resources, Division 7) and Title 27 (Environmental Protection, Division 2 (Solid Waste)) of the California Code of Regulations governs the handling and disposal of solid waste and operation of landfills, transfer stations, and recycling facilities.

Assembly Bills 939 and 341: Solid Waste Reduction

The California Integrated Waste Management (CIWM) Act of 1989 (Assembly Bill [AB] 939) was enacted as a result of a national crisis in landfill capacity, as well as a broad acceptance of the desired approach to solid waste management of reducing, reusing, and recycling. AB 939 mandated local jurisdictions to meet waste diversion goals of 25% by 1995 and 50% by 2000 and established an integrated framework for program implementation, solid waste planning, and solid waste facility and landfill compliance. AB 939 requires cities and counties to prepare, adopt, and submit to the California Department of Resources Recycling and Recovery (CalRecycle) a source reduction and recycling element to demonstrate how the jurisdiction will meet the diversion goals. Other

elements included encouraging resource conservation and considering the effects of waste management operations. The diversion goals and program requirements are implemented through a disposal-based reporting system by local jurisdictions under CIWM Board (CIWMB) regulatory oversight. Since the adoption of AB 939, landfill capacity is no longer considered a statewide crisis. AB 939 has achieved substantial progress in waste diversion, program implementation, solid waste planning, and protection of public health, safety, and the environment from landfills operations and solid waste facilities.

In 2011, AB 341 was passed, requiring CalRecycle to require that local agencies adopt strategies that will enable 75% diversion of all solid waste by 2020.

Senate Bill 1374: Construction and Demolition Waste Reduction

SB 1374 requires that annual reports submitted by local jurisdictions to CIWMB include a summary of the progress made in diversion of construction and demolition waste materials. In addition, SB 1374 requires the CIWMB to adopt a model ordinance suitable for adoption by any local agency that required 50% to 75% diversion of construction and demolition waste materials from landfills. Local jurisdictions are not required to adopt their own construction and demolition ordinances, nor are they required to adopt CIWMB's model by default.

Assembly Bill 1327: California Solid Waste Reuse and Recycling Access Act of 1991

AB 1327, which was established in 1991, required CalRecycle to develop a model ordinance for the use of recyclable materials in development projects. Local agencies were then required to adopt the model ordinance, or an ordinance of their own, governing adequate areas for collection and loading of recyclable materials in development projects.

Assembly Bill 1826: Mandatory Commercial Organics Recycling

In October 2014, Governor Brown signed AB 1826 Chesbro (Chapter 727, Statutes of 2014), requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste generated per week. (Organic waste is defined as food waste, green waste, landscape, and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste.) This law also requires local jurisdictions across the state to implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. This law phases in the mandatory recycling of commercial organics over time. In particular, the minimum threshold of organic waste generation by businesses decreases over time, which means an increasingly greater proportion of the commercial sector will be required to recycle organic waste.

Senate Bill X7-7

Senate Bill (SB) X7-7, which became effective on February 3, 2010, is the water conservation component to the Delta legislative package (SB 1, Delta Governance/Delta Plan). The bill implements water use reduction goals established in 2008 to achieve a 20% statewide reduction in urban per capita water use by December 31, 2020. The bill requires each urban retail water supplier to develop urban water use targets to help meet the 20% goal by 2020 and an interim 10% goal by 2015. The bill establishes methods for urban retail water suppliers to determine targets to help achieve water reduction targets. The retail water supplier must select one of the four compliance options. The retail agency may choose to comply with SB X7-7 as an individual or as a region in collaboration with other water suppliers. Under the regional compliance option, the retail water supplier must report the water use target for its individual service area.

Sustainable Groundwater Management Act

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package—AB 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley)—collectively known as the 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 DWR provides ongoing support to local agencies through guidance, financial assistance, and technical assistance. SGMA empowers local agencies to form Groundwater Sustainability Agencies (GSAs) to manage basins sustainably, and requires those GSAs to adopt Groundwater Sustainability Plans for crucial groundwater basins in California.

Urban Water Management Plans

Pursuant to the California Urban Water Management Act (California Water Code Sections 10610-10656), urban water purveyors are required to prepare and update an Urban Water Management Plan (UWMP) every 5 years. UWMPs are prepared by California's urban water suppliers to support long-term resource planning and ensure adequate water supplies. Every urban water supplier that either delivers more than 3,000 AFY of water annually or serves more than 3,000 connections is required to assess the reliability of its water sources over a 20-year period under normal-year, dry-year, and multiple-dry-year scenarios in an UWMP. UWMPs must be updated and submitted to the California DWR every five years for review and approval. The proposed Project site is within the area addressed by Cal Water East Los Angeles District UWMP. The site is also located within the areas covered by other relevant water planning documents including the CBMWD UWMP, and the MWD UWMP. The Cal Water East Los Angeles UWMP takes into account the projections and findings of the CBMWD UWMP and the MWD UWMP.

Senate Bill 610 and Senate Bill 221: Water Supply Assessments

SB 610 and SB 221, amended into state law effective January 1, 2002, improve the linkage between certain land-use decisions made by cities and counties and water supply availability. The statutes require detailed information regarding water availability and reliability with respect to certain developments to be included in the administrative record, to serve as evidentiary basis for an approval action by the City or County on such projects. Under Water Code Section 10912 [a], projects subject to CEQA requiring a water supply assessment include: residential development of more than 500 dwelling units; shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space; commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space; hotel, motel or both, having more than 500 rooms; industrial, manufacturing, or processing plants, or industrial parks planned to house more than 1,000 persons, occupying more than 40 acres of land or having more than 650,000 square feet of floor area; mixed-use projects that include one or more of the projects specified; or a project that would demand an amount of water equivalent to or greater than the amount required by a 500-dwelling-unit project. A fundamental source document for compliance with SB 610 is the UWMP. The UWMP can be used by the water supplier to meet the standard for SB 610. SB 221 applies to the Subdivision Map Act, conditioning a tentative map on the applicant to verify that the public water supplier has sufficient water available to serve the proposed development.

Executive Order B-29-15

During the most recent drought, Executive Order (EO) B-29-15 (April 2015) set a goal in 2013 of achieving a statewide reduction in potable urban water usage of 25% relative to water use. The term of the EO extended through February 28, 2016, although many of the directives became 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 DWR modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

Sanitary Sewer General Waste Discharge Requirements

On May 2, 2006, the State Water Resources Control Board (SWRCB) adopted a General Waste Discharge Requirement (Order No. 2006-0003) for all publicly owned sanitary sewer collection systems in California with more than 1 mile of sewer pipe. The order provides a consistent statewide approach to reducing sanitary sewer overflows by requiring public sewer system operators to take all feasible steps to control the volume of waste discharged into the system, in order to prevent sanitary sewer waste from entering the storm sewer system, and to develop a Sewer System Management Plan. The General Waste Discharge Requirement also requires that storm sewer overflows be reported to the SWRCB using an online reporting system.

California Code of Regulations Title 24, Part 11

In 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code, Part 11 of Title 24, is commonly referred to as CALGreen, and establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency, water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all new construction of residential and non-residential buildings. CALGreen standards are updated periodically. The latest version (CALGreen 2019) will be effective on January 1, 2020.

Mandatory CALGreen standards pertaining to water, wastewater, and solid waste include the following (24 CCR Part 11):

- Mandatory reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings.
- Mandatory reduction in outdoor water use through compliance with a local water-efficient landscaping ordinance or the California Department of Water Resources' Model Water Efficient Landscape Ordinance.
- Diversion of 65% of construction and demolition waste from landfills.

Local

The following local/regional regulations pertaining to Utilities and Service Systems would apply to the proposed Project.

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 Project site is located within the purview of the Los Angeles RWQCB (Region 4), and the proposed Project must comply with

applicable elements of the Basin Plan for Region 4. The Basin Plan gives direction on the beneficial uses of state waters, describes the water quality that must be maintained, and provides programs necessary to achieve the standards established in the Basin Plan.

Integrated Regional Water Management Plans

UWMPs serve as building blocks for integrated regional water management plans (IRWMPs). IRWMPs define a clear vision and strategy for the sustainable management of water resources within a specific region delineated by one or more watersheds. IRWMPs generally contain an assessment of current and future water demand, water supply, water quality, and environmental needs. These plans address the challenges for delivering a stable and clean supply of water for the public, addressing stormwater and urban runoff water quality, providing flood protection, meeting water infrastructure needs, maximizing the use of reclaimed water, enhancing water conservation, and promoting environmental stewardship.

During the planning process, all stakeholders, including water distributors and purveyors, regional waterworks and sanitation districts, local public works departments, environmental organizations, nonprofits, and other vested interests work together to develop common goals, objectives, and strategies. Since water-related issues are addressed on a regional, watershed basis, these plans are instrumental in building consensus among the various stakeholders in the development and prioritization of an action plan that is complementary and leverages inter-jurisdictional cooperation, resources, and available funding. The Project site is located within the Greater Los Angeles County IRWMP area. The IRWMP for this area was last updated in 2014.

County Integrated Waste Management Plan

In compliance with AB 939, the County of Los Angeles has implemented an Integrated Waste Management Plan that contains the County's and the Cities' solid waste reduction planning documents plus the Integrated Waste Management Summary Plan (Summary Plan) and County-Wide Siting Element (CSE). LACDPW is responsible for preparing and administering the Summary Plan and the CSE. The existing CSE, approved by CalRecycle on June 24, 1998, identifies how the County and cities would meet their long-term disposal capacity needs to safely handle solid waste that cannot be reduced, recycled, or composted.

LACDPW also prepares an annual report to summarize the changes that have taken place since the approval of the existing Summary Plan and the existing CSE. The annual reports include assessments of the County's disposal capacity needs, provide detailed updates on the remaining permitted in-County disposal capacity, and include the County's strategy for maintaining adequate disposal capacity through 2027.

General Plan

In 2008, the City of Commerce adopted its General Plan to address the City's future development goals. This document, in part, contains goals aimed at maintaining and improving utilities throughout the City. In order to achieve these goals, the City has adopted the following policies:

- **Resource Management Policy 1.1.** The city of Commerce will do its part in the conservation and protection of air, water, energy, and land in the Southern California region.
- **Resource Management Policy 1.4.** The city of Commerce will encourage the conservation of water resources in residential, commercial, and industrial developments through the use of drought-tolerant plant materials and water-saving irrigation systems.

- **Resource Management Policy 1.5.** The city of Commerce will encourage the development of appropriate federal, state, county, and local water conservation measures in order to assure future supplies for residents.
- **Resource Management Policy 3.1**. The city of Commerce will assist local utility companies with their public education energy conservation programs.
- **Resource Management Policy 3.2.** The city of Commerce will encourage public employees to follow energy conservation procedures designed to reduce energy consumption.
- **Resource Management Policy 3.5.** The city of Commerce will cooperate with the Department of Building and Safety to enforce State energy conservation guidelines that require the incorporation of energy-saving designs and features into new and refurbished buildings.
- **Safety Policy 3.1.** The city of Commerce will continue to cooperate with the efforts of other agencies and special districts involved in monitoring the city's water and sewer systems.
- **Safety Policy 3.2.** The city of Commerce will contribute toward the maintenance of a wastewater treatment system sufficient to protect the health and safety of all residents and businesses.
- **Safety Policy 3.3.** The city of Commerce will continue to request local water purveyors to provide the city with periodic reports concerning water quality

3.17.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to utilities and service systems are based on Appendix G of the State CEQA Guidelines. Through the analysis in the Initial Study (see Appendix A), it was determined that the proposed Project could have a potentially significant impact to utilities and service systems. Accordingly, all of the thresholds are further analyzed in the EIR. According to Appendix G of the State CEQA Guidelines, a significant impact related to utilities and service systems would occur if the Project would:

A. Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
B. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.
C. Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
D. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
E. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

3.17.4 Methodology

The analysis of the proposed Project impacts was based on the following:

- *Wastewater conveyance and treatment infrastructure:* Based on a will-serve letter, prepared by LACSD (Appendix I)
- *Stormwater conveyance infrastructure:*

- *Electricity, natural gas, and telecommunication infrastructure:* Based on assumption that no major offsite upgrades would be required.
- *Water service and supply:* Based on: 1) a will-serve letter, prepared by Cal Water (Appendix I), and 2) anticipated net increase in water demand, which was calculated using the California Emissions Estimator Model (CalEEMod). Modeling outputs from CalEEMod are attached to this EIR as Appendix B, and as discussed in Section 3.7, Greenhouse Gas Emissions, of this EIR. Water supply and availability data were obtained from the Cal Water East Los Angeles District UWMP (Cal Water 2016).
- *Solid waste disposal:* Based on anticipated net increase in solid waste generation, which was calculated using CalEEMod. Modeling outputs from CalEEMod are attached to this EIR as Appendix B, and as discussed in Section 3.7, Greenhouse Gas Emissions, of this EIR. Existing landfill capacity data were obtained from the California Department of Resources Recycling and Recovery database (CalRecycle 2019).

3.17.5 Impacts Analysis

Threshold A: Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Water Facilities

The proposed Project would involve the construction of water distribution infrastructure (i.e., pipes, valves, meters, etc.) to provide domestic water, firewater, and irrigation water to the Project site. The on-site facilities would be connected to off-site water lines in the adjacent rights-of-way. For water service, the proposed Project would connect to an existing 10-inch line within Zindell Ave as well as an existing 6-inch line extending laterally from Kuhl Drive. The on-site facilities and installation/construction of tie-ins are considered part of the proposed Project. All construction work within the City public right-of-way would be subject to City municipal code requirements.

Installation of new water laterals would consist of either trenching to the depth of pipe placement or using a variety of different trenchless technology, which causes substantially less ground disturbance. Trenching results in a temporary stockpiling of soil along the length of the trench, pending backfilling, which could result in potential short-term erosion induced siltation of nearby waterways. Trenchless technology only requires temporary stockpiling of soil adjacent to excavations on both ends of long sections of pipe. In addition, Standard Best Management Practices, installed as part of an NPDES-mandated Storm Water Pollution Prevention Plan, would reduce potential water quality impacts to less than significant levels.

Based on a water service and water supply will-serve letter from Cal Water (Appendix I), the Applicant may need to construct additional water service infrastructure in order to provide sufficient water to the Project. Such infrastructure may include booster pumps, storage tanks, and/or water wells. Impacts associated with construction of these off-site facilities is unknown. However, with the implementation of mitigation measure **MM UTL-1**, impacts are considered **less than significant with mitigation incorporated**.

Wastewater Conveyance and Treatment Facilities

As previously discussed, the Project site is currently served by existing 8-inch local sewer mains present within Zindell Avenue and Avendia Aguas Calientes. These sewer mains are connected to LACSD's 21-inch diameter Montebello Trunk Sewer. Sewer laterals would be extended into each parcel to service the respective land uses, based upon the approved site plans for each parcel.

The LACSD's 21-inch diameter trunk sewer has a capacity of 3.6 mgd and conveyed a peak flow of 1.1 mgd or 30.6% of the sewer's capacity when last measured in 2016. According to calculations done by KPFF, average wastewater expected to be generated by the proposed Project is approximately 0.198 mgd, which would represent a net increase of 0.187 mgd compared to existing levels of 0.011 mgd (Table 3.17-9). This increase would represent approximately 7.5% of the remaining sewer's peak flow capacity. Offsite, the proposed Project would convey wastewater through municipal sewage infrastructure to the LACSD JWPCP, which has an approximate treatment capacity of 400 mgd and currently produces an average flow of 261.1 mgd, or approximately 65% of its total capacity. Projected increase in wastewater from the Project would represent approximately 0.13% of the remaining capacity of the treatment facility.

Similar to KPFF's calculations, in accordance with LACSD's average wastewater generation factors, LACSD has calculated an expected average wastewater flow of approximately 0.186 mgd for the Project site. This wastewater flow would represent approximately 7.4% of the remaining sewer's peak flow capacity, as well as would represent approximately 0.13% of JWPCP's remaining capacity. As such, since the Project would not exceed the available treatment capacity of the JWPCP, as well as can be served by current wastewater lines, it would not require construction of additional wastewater treatment infrastructure.

Additionally, the proposed Project would incorporate water efficiency measures to ensure that water is conserved to the extent feasible, which would include use of low-flow plumbing fixtures. In addition to reducing water use, low-flow fixtures also reduce wastewater generation. As such, the proposed Project would be designed to minimize wastewater generation to the maximum extent practicable.

For the reasons described above, with the exception of Project-related sewer tie-ins/lateral connections, the proposed Project is not expected to require or result in the construction, relocation, or expansion of off-site water/wastewater treatment facilities. All construction work of sewer tie-ins/lateral connections within the City public right-of-way would be subject to City municipal code requirements. On-site sewer upgrades and off-site lateral connection upgrades would likely be completed by either trenchless technology or completion of open trenching, to the depth of the underground sewer lines. Trenching would result in temporary stockpiling of soil, which in turn could result in temporary soil erosion. However, Project construction would occur in accordance with the requirements of the City of Commerce Municipal NPDES Permit. In accordance with this permit, BMPs and pollutant control measures would be employed during Project construction to minimize pollutants and reduce runoff to levels that comply with applicable water quality standards. As a result, impacts associated with new wastewater treatment facilities would be **less than significant.** No mitigation is required.

Stormwater Drainage Facilities

As discussed in Section 3.9, Hydrology and Water Quality, the Project has the potential to increase the rate and amount stormwater runoff. However, per City Ordinance No. 676, the City of Commerce adopted the Los Angeles County MS4 permit, which requires implementation of Low Impact Development (LID) strategies to limit increases in stormwater runoff. Specifically, as indicated in the City of Commerce LID Guidelines, the Project would be required to retain the design storm event through appropriately sized LID Best Management Practices (BMPs). Construction of LID BMPs would result in a decrease in stormwater runoff volumes and rates, such that the Project would not substantially increase the rate or amount of surface runoff. As a result, the Project would not result in the construction of new stormwater drainage facilities. Given that incorporation of these LID features is a required element of the permitting process, it is not considered additional mitigation. Therefore, impacts would be **less than significant** and no mitigation is required.

Electric Power, Natural Gas, and Telecommunication

Upgrades would likely be required with respect to electric power and natural gas facilities, based on the change in land use (i.e., higher density and increase in onsite technology) (see Table 3.17-6 and Table 3.17-7 for estimated proposed electricity and natural gas demand). Natural gas line upgrades may also be similarly required. However, such upgrades would be confined to the lateral connections to the Project site and not any centralized facilities. Upgrades would be coordinated with appropriate service providers (such as SCE, SoCal Gas, etc.) to minimize disruptions on service and would likely be completed by either trenchless technology or completion of open trenching, to the depth of the underground utilities. Trenching would result in temporary stockpiling of soil, which in turn could result in temporary soil erosion. However, Project construction would occur in accordance with the requirements of the NPDES General Construction Permit (Order No. 99-08-DWQ) and the City of Commerce Stormwater and Runoff Pollution Control Ordinance (Chapter 6.17 of the City of Commerce Municipal Code). In accordance with the ordinance, BMPs and pollutant control measures would be employed during Project construction to minimize pollutants and reduce runoff to levels that comply with applicable water quality standards. As a result, impacts associated with upgrades of electric, natural gas, and telecommunication lateral connections to the Project site would be **less than significant.** No mitigation is required.

Table 3.17-6, Estimated Proposed Electricity Demand

	Electricity Use
Land Use	*kWh/yr*
City Park	-305138
Condo/Townhouse High Rise	3,356,520
Enclosed Parking with Elevator	2,356,520
General Office Building	837,982
Health Club	-60,938.3
High Turnover (Sit Down Restaurant)	401,102
Movie Theater (No Matinee)	305,362
Parking Lot	-298,138
Racquet Club	927,517
Recreational Swimming Pool	-305,138
Strip Mall	7,2861.7
Super Market	852,092
Estimated Project Demand	**7,288,512**

Source: CalEEMod Existing Calculations (Appendix B)
Notes: kWH/yr = Kilowatts per hour per year

Table 3.17-7, Estimated Proposed Natural Gas Demand

Land Use	Natural Gas Use (kBTU/yr)
City Park	0
Condo/Townhouse High Rise	1,138,670
Enclosed Parking with Elevator	0
General Office Building	916,080
Health Club	398,200
High Turnover (Sit Down Restaurant)	3,692,160
Movie Theater (No Matinee)	995,500
Parking Lot	0

Table 3.17-7, Estimated Proposed Natural Gas Demand

Land Use	Natural Gas Use (kBTU/yr)
Racquet Club	2,010,000
Recreational Swimming Pool	0
Strip Mall	45,920
Super Market	684,170
Estimated Project Demand	**9,196,530**

Source: CalEEMod Existing Calculations (Appendix B)
Notes: kBTU/yr = KiloBritish Thermal Units per year

Threshold B: Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Water supply in the City of Commerce is served by Cal Water's East Los Angeles District. Water supplies for Cal Water East Los Angeles District are derived from two principal sources: local groundwater and imported purchased groundwater. In 2015, water supply in Cal Water East Los Angeles District was derived from 63% groundwater and 37% purchased water. Cal Water receives groundwater from the adjudicated Central Basin.

Future development under the proposed Project would consist of 850 residential units and approximately 165,000 square feet of entertainment retail uses. Table 3.17-8 summarizes the projected water demand for the Project.

Table 3.17-8, Proposed Water Demand

Proposed Land Use	Quantity of Units	Units of Usage	Generation Rate (gpd/unit)	Total Water Demand (gpd)
Residential: Apt - Bachelor	82	Dwelling Unit	96	7,872
Residential: Apt – 1 Bedroom	289	Dwelling Unit	144	41,616
Residential: Apt – 2 Bedroom	330	Dwelling Unit	192	63,360
Residential: Apt – 3 Bedroom	124	Dwelling Unit	240	29,760
Residential: Duplex/ Townhouse/ SFD – 3 Bedroom	25	1,000	276	6,900
Bowling Alley	20,000 SF	1,000	96	1,920
Theater: Cinema[1]	2,200 Seats	Seat	5	11,000
Sports Complex – 1 field[2]	206,910 SF	1,000 SF	60	12,415
Health Club/Spa	15,000 SF	1,000 SF	960	14,400
Community Center[3]	77,050 SF	1,000 SF	144	11,095
Pharmacy	6,000 SF	1,000 SF	96	576
Grocery Store	25,000 SF	1,000 SF	96	2,400
General Retail	28,000 SF	1,000 SF	96	2,688
Restaurant: Full Service Indoor Seat[4]	16,000 SF	Seat	36	19,200
Museum: All Area	5,000 SF	1,000 SF	24	120
			Proposed Water Demand	*225,322*
			Existing Water Demand	*13,654*
			Net Increase	*211,668*

Source: KPFF 2019a

Notes: sf = square feet; gpd = gallons per day, SFD = single family dwelling

[1] Assumes 40 seats/1,000 SF
[2] Assumes 60 gpd/1,000 SF of sports field
[3] Community Centers are assessed as "Counseling Center", since occupant load is unknown
[4] Assumes 1 seat/30 SF
The average daily flow is based on 120% of the Los Angeles County Sanitation District No. 4's Connection Mean Loadings Per Unit of Usage

As described above, the Project is estimated to generate a potable water demand of 225,322 gpd, which is equivalent to 252.56 AFY. The existing water demand for the Project site is estimated to be 13,654 gpd (15.3 AFY), resulting in a net increase in water demand of approximately 211,668 gpd (237.26 AFY).

The 2015 Cal Water East Los Angeles District's UWMP has planned for growth within the East Los Angeles service area over the next 20 years. Cal Water has made an allowance for future demand estimates. Future demand services are based on historical growth rates in the service area. Based on these projections, it would appear that Cal Water has adequately made allowance for water supply demand increases for both domestic and commercial water supply over the next 20 years. In addition, based on a water service and water supply will-serve letter (Appendix I), Cal Water will have sufficient supplies to provide potable water for the proposed Project.

As long-term water supply is a significant concern in California, Cal Water East Los Angeles District can increase supply to meet future demands increasing production of groundwater based of safe yield allocation and utilization of water in storage, increasing imported water purchases, if available and there is sufficient storage capacity, and by purchasing additional recycled water, if available. Collectively, these additional options would enable water supply to meet or exceed water demand for Cal Water East Los Angeles for now and into the future. Collectively, the UWMP identities a sufficient and reliable water supply for Cal Water East Los Angeles District's service area, now and into the future, including a sufficient water supply for the proposed Project. Based on this fact, in combination with the will-serve letter from Cal Water (Appendix I), water supply impacts would be **less than significant** and no mitigation is required.

Threshold C: Would the project result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

As discussed in Threshold A, LACSD's 21-inch diameter trunk sewer has a capacity of 3.6 mgd and conveyed a peak flow of 1.1 mgd or 30.6% of the sewer's capacity when last measured in 2016. According to calculations by KPFF, average wastewater expected to be generated by the proposed Project is approximately 0.198 mgd, which would represent a net increase of 0.187 mgd compared to existing levels of 0.011 mgd (Table 3.17-9). This increase would represent approximately 7.5% the remaining sewer's peak flow capacity. Offsite, the proposed Project would convey wastewater through municipal sewage infrastructure to the LACSD JWPCP, which has an approximate treatment capacity of 400 mgd and currently produces an average flow of 26.1 mgd, or approximately 6% of its total capacity. Projected increase in wastewater from the Project would represent approximately 0.13% of the remaining capacity of the treatment facility.

Similar to KPFF's calculations, LACSD has calculated an expected average wastewater flow of approximately 0.186 mgd for the Project site. This wastewater flow would represent approximately 7.4% of the remaining sewer's peak flow capacity, as well as would represent approximately 0.13% of JWPCP's remaining capacity. As such, because the Project would represent a very small fraction of the available treatment capacity of the JWPCP, as well as can be served by current wastewater lines, construction of additional wastewater treatment infrastructure would not be required. Table 3.17-9 summarizes the projected wastewater demand for the Project.

Table 3.17-9, Proposed Wastewater Generation

Proposed Land Use	Quantity of Units	Units of Usage	Generation Rate (gpd/unit)	Total Sewer Generation (gpd)
Residential: Apt - Bachelor	82	Dwelling Unit	80	6,720
Residential: Apt – 1 Bedroom	289	Dwelling Unit	120	34,680
Residential: Apt – 2 Bedroom	330	Dwelling Unit	160	52,800
Residential: Apt – 3 Bedroom	124	Dwelling Unit	200	24,800
Residential: Duplex/ Townhouse/ SFD – 3 Bedroom	25	Dwelling Unit	200	24,800
Bowling Alley	20,000 SF	1,000 SF	80	1,600
Theater: Cinema[1]	2,200 Seats	Seat	4	8,800
Sports Complex – 1 field[2]	206,910 SF	1,000 SF	50	10,346
Health Club/Spa	15,000 SF	1,000 SF	800	12,000
Community Center[3]	77,050 SF	1,000 SF	120	9,246
Pharmacy	6,000 SF	1,000 SF	80	480
Grocery Store	25,000 SF	1,000 SF	80	2,000
General Retail	165,000 SF	1,000 SF	80	13,200
Restaurant: Full Service Indoor Seat[4]	16,000 SF	1,000 SF	80	16,000
Museum: All Area	5,000 SF	1,000 SF	20	100
			Subtotal Proposed	*198,362*
			Existing Wastewater Generation	*11,378*
			Net Increase	*186,984*

Source: KPFF 2019b
Notes: sf = square feet; gpd = gallons per day, SFD = single-family dwelling

1 Assumes 40 seats/1,000 SF
2 Assumes 50 gpd/1,000 SF of sports field
3 Community Centers are assessed as "Counseling Center", since occupant load is unknown
4 Assumes 1 seat/30 SF
The average daily flow is based on the Los Angeles County Sanitation District No. 4's Connection Mean Loadings Per Unit of Usage

Furthermore, the LACSD is empowered by the California Health and Safety Code to charge a fee for the privilege of connecting (directly or indirectly) to the LACSD's sewerage system for increasing the strength or quantity of wastewater discharged from connected facilities. This connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the sewerage system to accommodate the proposed Project. Furthermore, the Project would incorporate water conservation measures to reduce the amount of wastewater generated by the Project. Therefore, Project impacts would be **less than significant.** No mitigation is required.

Threshold D: Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Construction

Construction of the proposed Project would result in the generation of solid waste such as scrap lumber, concrete, residual wastes, packing materials, plastics, and soils. Per CalGreen, 65% of construction and demolition waste

must be diverted from landfills. As such, at least 65% of all construction and demolition debris from the site would be diverted. The County also has construction and demolition debris diversion requirements; however, the CALGreen standards require an equivalent level of diversion (65% diversion). Any hazardous wastes that are generated during demolition and construction activities would be managed and disposed of in compliance with all applicable Federal, State, and local laws. The remaining 35% of construction and demolition material that is not required to be recycled would either be disposed of in a regional landfill or voluntarily recycled at a solid waste facility with available capacity. As described in Section 3.17.1, Existing Conditions, the inert landfill in the County (Azusa Land Reclamation landfill) has a remaining capacity of 55,705,480 tons and is expected to remain open for approximately 28 years, as of 2017.

There are other facilities that process inert waste and other construction and demolition waste in the County, which collectively have a maximum daily capacity of 32,496 tons per day and process an average of 8,535 tons per day. There are also numerous processing facilities for construction and demolition wastes throughout the County, the nearest of which is Construction and Demolition Recycling, located at 9309 Rayo Avenue, in South Gate. This facility is 4 miles southwest of the Project site and has a permitted capacity of 3,000 tons of waste per day. This facility has a recycling rate of 80%. As such, any construction and demolition debris requiring disposal at an inert waste landfill would be sufficiently accommodated by existing landfills.

For the reasons stated above, Project demolition and construction would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals (e.g., CALGreen standards). Impacts would be **less than significant.** No mitigation is required.

Operation

Once operational, the proposed Project would produce solid waste on a regular basis, in association with operation and maintenance activities. Anticipated solid waste generation attributable to the proposed Project is shown in Table 3.17-10. The solid waste generation rates assume compliance with AB 341.

As described in Section 3.17.1, Environmental Setting, the City's commercial uses are currently served by Calmet for solid waste collection and disposal. Calmet would dispose of waste at the nearest landfills, such as the Calabasas or Scholl Canyon Landfill. Calabasas landfill has a remaining capacity of 5,559,480 tons and is expected to remain open for another 10 years. Scholl Canyon landfill has a remaining capacity of 4,697,842 tons and is expected to remain open for another 10 years. As previously discussed, estimated solid waste generation for the Project site is currently 367.83 tons per year. The proposed Project is expected to generate approximately 1,955 tons per year or an increase in waste generation of approximately 1,627.17 tons per year. Collectively, the Calabasas Landfill and the Scholl Canyon Landfill have approximately 61,264,960 tons of available space remaining. As such, the net solid waste that is anticipated to be produced by the proposed Project would equate to approximately 0.003% of the available capacity of the combined landfills through their estimated closure dates.

Once the Calabasas Landfill and the Scholl Canyon Landfill reach capacity, additional landfills and strategies would be identified so that disposal needs continue to be met. Furthermore, according to the latest annual report for the Countywide Integrated Waste Management Plan, there are landfills used by the County with up to 100 years of remaining life. For example, the Prima Deshecha Sanitary Landfill in Orange County is expected to remain open for another 85 years, the Mesquite Regional Landfill in Imperial County is expected to remain open for another 100 years, and the Simi Valley Landfill in Ventura County is expected to remain open for another 67 years. As such, in the event of closure of the Calabasas Landfill or the Scholl Canyon Landfill, other landfills in the

region would be able to accommodate solid waste from the proposed Project, and regional planning efforts would ensure continued landfill capacity into the foreseeable future.

For the reasons described above, Project operations would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Impacts would be **less than significant.** No mitigation is required.

Table 3.17-10 Estimated Solid Waste Generation

Land Use	Waste Disposed (tons/year)
City Park	0.41
Condo/Townhouse High Rise	391
Enclosed Parking with Elevator	0
General Office Building	81.84
Health Club	125.4
High Turnover (Sit Down Restaurant)	190.4
Movie Theater (No Matinee)	313.5
Parking Lot	0
Racquet Club	632.99
Recreational Swimming Pool	230.05
Strip Mall	29.4
Super Market	174.85
Estimated Project Demand	*1,995*
Existing Solid Waste Generation	*367.83*
Net Increase	*1,627.17*

Source: CalEEMod Existing Calculations (Appendix B)

Threshold E: Would the project comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?

As described above, solid waste from commercial uses in the City is sorted at a regional transfer station and then transported to either the Calabasas Landfill or the Scholl Landfill. These facilities are regulated under Federal, State, and local laws. Additionally, the City is required to comply with the solid waste reduction and diversion requirements set for in AB 939, AB 341, AB 1327, and AB 1826. Per AB 1826, businesses that generate 4 cubic yards or more of commercial solid waste per week are required to arrange for organic waste recycling services. The threshold for recycling requirements may be decreased by 2 cubic yards per week as of January 2020.

In addition, as previously described, waste diversion and reduction during Project construction and operations would be completed in accordance with CALGreen standards and City diversion standards. As a result, the proposed Project would comply with Federal, State, and local management and reduction statutes and regulations related to solid waste. Impacts are considered **less than significant.** No mitigation is required.

3.16.6 Cumulative Impacts

Water Supply

Development of the proposed Project, in combination with related projects, would increase land-use intensities in the area, resulting in increased water usage. The proposed Project and related projects would be served by the Cal Water East Los Angeles District. As such, development of the proposed Project and related projects would increase the amount of water used in the Cal Water East Los Angeles District's service area. Based on the 2015 Cal Water East Los Angeles District UWMP, the total annual water demand in the District's service area in 2015 was over 14,268 AF, which equates to approximately 12.7 mgd. Based on the UWMP, Cal Water and other water agencies in Southern California have planned for provision of regional water for the growing population, including drought scenarios for its service area. The plan includes a new water demand forecast prepared for the major categories of demand and uses regional population, demographic projections, the dry climate, and historical water use to develop these forecasts.

As such, to the extent that related projects are generally consistent with regional growth patterns and projections, the projects would not be expected to result in increased water usage causing the need for new entitlements, resources, and/or treatment facilities that are not already being planned to accommodate regional growth forecasts.

Lastly, compliance with the California Green Building Code would be required for new development. California Green Building Code standards require a mandatory reduction in outdoor water use, in accordance with the California DWR's Model Water Efficient Landscape Ordinance. This would ensure that many of the related projects, as well as the proposed Project, do not result in wasteful or inefficient use of limited water resources and may, in fact, result in an overall decrease in water use per person.

Due to water planning efforts, water conservation standards, and the urban infill/redevelopment nature of the proposed Project and many of the related projects, **impacts to water suppy would not be cumulatively considerable.** No mitigation is required.

Wastewater

The Project area and each related project would incrementally increase the amount of wastewater that is being generated in the area. However, as previously described, the existing sewer lines that serve the Project site have the capacity to convey the estimated peak flow generated from the Project (less than 50% inclusive of the Project area). Similar to the Project, the capacity of receiving sewer lines associated with cumulative project development would be determined on a project-specific basis. In the event that sewer upgrades are required, all construction work within the City public right-of-ways would be subject to local municipal code requirements. Other than the lateral connections from the related project sites to existing sewer mains, these related projects are not expected to require or result in construction or expansion of off-site infrastructure. As a result, indirect cumulative impacts associated with upgrades of sewer lateral connections to related project sites would not be cumulatively considerable.

Similarly, the Project would generate a net increase of 0.186 mgd to 0.187 mgd of wastewater, which would represent an increase of approximately of 7.4% of the remaining sewer's peak flow capacity and approximately 0.13% of the collective capacity of the LACSD JWPCP. As cumulative increases in wastewater treatment demand within the service area require facility upgrades, the LACSD would include service connection fees in their capital improvement plans. Such fees would ensure that capital improvements are completed sufficiently to accommodate increased wastewater inflows associated with the Project area. As such, impacts to wastewater services would not be cumulatively considerable. No mitigation is required.

Solid Waste

Development of the Project in combination with related projects would increase land-use intensities in the area, resulting in increased solid waste generation in the service area for the Calabasas Landfill or the Scholl Landfill. However, the Project and related projects are urban infill and/or redevelopment projects. As such, solid waste is already being generated at the Project site and the majority, if not all, of the related project sites. Further, Assembly Bill 939, or the Integrated Waste Management Act of 1989, mandates that cities divert from landfills 50% of the total solid waste generated to recycling facilities. In order to maintain state requirements of diverting 50% of solid waste and to offset impacts associated with solid waste, the proposed Project and all related projects would be required to implement waste reduction, diversion, and recycling during both demolition/ construction and operation.

Through compliance with City and State solid waste diversion requirements, and due to the recycling collection process that would be part of the proposed Project design and the design of many typical urban infill projects, **impacts to solid waste services would not be cumulatively considerable.** No mitigation is required.

Electric Power, Natural Gas, and Telecommunication

The City of Commerce is built-out and upgrades in electrical power, natural gas, and telecommunication capabilities are anticipated primarily due to development in the form of the revitalization of outdated or underserved areas, and redevelopment of specific properties that will increase density and require more sophisticated technology, such as the proposed Project. However, such upgrades would generally be confined to the lateral connections to the individual project sites and not any centralized facilities. Upgrades to centralized power, natural gas, and telecommunication facilities would be determined by each of the power, gas, and telecommunications providers, as build-out continues within the region. Individual projects would be required to provide for specific project needs. As a result, cumulative impacts associated with upgrades of electric, natural gas, and telecommunication facilities would not be significant. As such, **impacts to electric power, natural gas, and telecommunication services would not be cumulatively considerable.** No mitigation is required.

3.16.7 Mitigation Measures

To reduce potential impacts to water supply infrastructure, the following mitigation measure shall be implemented:

MM UTL-1 Prior to the issuance of a grading permit, the Applicant shall demonstrate that off-site water infrastructure is sufficient to provide the anticipated water demand for the Project (i.e., net increase in water demand of approximately 211,668 gpd [237.26 AFY)].

3.15.8 Level of Significance After Mitigation

With implementation of mitigation measure **MM UTL-1**, impacts would be **less than significant**.

3.17.9 References

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4 Alternatives

The California Environmental Quality Act (CEQA) requires that environmental impact reports (EIRs) "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives" (14 CCR 15126(a)). The State CEQA Guidelines direct that the selection of alternatives be governed by "a rule of reason." The alternatives selected for detailed review in the EIR may be limited to those that "would avoid or substantially lessen one or more of the significant effects of the project" and would "feasibly attain most of the basic objectives of the project." The selection of alternatives and their discussion must "foster informed decision making and public participation" (14 CCR 15126(a)). This chapter identifies potential alternatives to the proposed Project and evaluates them, as required by CEQA.

4.1 Project Objectives

The primary objectives of the proposed Project include the following:

- Create a welcoming pedestrian-friendly contemporary village that will complement and enhance the City and the surrounding community.
- Provide an attractive lifestyle for residents, as well as draw visitors from all over Southern California to utilize the public spaces, youth sports complex, all-inclusive playground, and entertainment options.
- Provide a revitalized Veterans Memorial Park with new structures, an all-inclusive playground, a contemporary soccer and baseball youth sports complex, a contemporary library, and ample outdoor green space to maximize opportunities for community events and services.
- Create open and green public spaces that will integrate the Project's community space with the mixed-use entertainment/retail and residential structures.
- Enhance transit connections between the City of Commerce and surrounding municipalities by creating a transit oriented Project that takes advantage of both the existing Metro bus service and the future Metro Gold Line extension planned for Washington Boulevard in Pico Rivera.
- Create a progressive, forward-looking and vibrant community that is a desirable place for people to live, work, and play, all while offering robust community services for all.
- Provide connections to the Rio Hondo River and Path, as well as the surrounding neighborhood.
- Transform a deteriorating public park and vacant industrial lot into a 21st-Century mixed-use development that integrates vitally important public community uses with robust private development.
- Remediate the former on-site landfill to provide a safer environment for future park visitors, as well as residents living in the City.
- Provide new residential units comprised of a mixture of townhomes for sale and for-rent apartment and townhouse style units.
- Provide leading-edge environmentally friendly features in an effort to reduce the use of non-sustainable energy, reduce the Project's overall carbon footprint, encourage an outdoor and pedestrian lifestyle, and limit the visitors' and residents' exposure to harmful pollution.

4.2 Description of Alternatives Selected for Further Analysis

Two reduced project alternatives, in addition to the No Project/Existing Land Use Plan Alternative and the No Project/No Development Alternative, were selected to represent a reasonable range of alternatives that have the potential to feasibly attain most of the basic objectives of the Project but may avoid or substantially lessen significant effects of the Project.

An EIR must identify an "environmentally superior" alternative, and where the No Project Alternative is identified as environmentally superior, the EIR is then required to identify an alternative from among the others evaluated as environmentally superior. Each alternative's environmental impacts are compared to the proposed Project and determined to be environmentally superior, neutral, or inferior. However, only those impacts found significant and unavoidable are used in making the final determination of whether an alternative is environmentally superior or inferior to the Project. Section 4.5 of this chapter identifies the Environmentally Superior Alternative.

The following significant and unavoidable impacts were determined in the EIR:

- Air quality: conflict with or obstruct implementation of the applicable air quality plan
- Noise: result in the 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
- Noise: cumulative impacts associated with resulting in the 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
- Traffic: conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities
- Traffic: cumulative impacts associated with a conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities

4.2.1 Alternative A - No Project/Existing Land Use Plan Alternative

Section 15126.6(e) of the State CEQA Guidelines requires that an EIR evaluate and analyze the impacts of a No Project Alternative. When the 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, the No Project/Existing Land Use Plan Alternative, as required by the State CEQA Guidelines, analyzes the effects of continued implementation of the City of Commerce 2020 General Plan (General Plan). The City is currently in the process of updating its General Plan; however since the new General Plan has not yet been adopted, this discussion will only refer to the General Plan adopted in 2008. As shown in Figure 2-2, Zoning Map, the City's General Plan Land Use Map designates the Veterans Memorial Park as Public Facilities and the vacant lot as Commercial Manufacturing (City of Commerce 2009).

School sites, government offices, utility and transportation easements, and libraries all fall within the General Plan's Public Facilities land use designation. This designation corresponds with the City's Public Facility (PF) zone designation. The PF zone is intended to provide adequate space for public and quasi-public community facilities. Permitted uses within the PF zone include municipal and other government buildings, public educational facilities, religious facilities, and recreational areas (City of Commerce 2018). The Commercial Manufacturing designation

is designed to encourage a balanced mix of commercial, office professional, and light manufacturing uses along a number of high visibility traffic corridors. This land use designation corresponds to the Commercial/Manufacturing (C/M1) zone district (City of Commerce 2008). The C/M1 zone is intended to concentrate commercial and light industrial uses along major arterials and in other areas that are easily accessible. The industrial uses considered appropriate in the C/M1 zone are limited to support services, such as machine shops and some light manufacturing. Commercial or industrial uses that might create offensive levels of noise, air pollution, glare, radioactivity or other nuisances are prohibited from this zone (City of Commerce 2018).

Under this Alternative, the existing Veterans Memorial Park would continue to operate as it currently does, because that use is consistent with the zoning and General Plan designation (PF zone). The vacant lot would be developed as a commercial and light industrial use. As described in the Municipal Code, the C/M-1 zone has a development standard of 2.0 Floor Area Ratio (FAR) to 1.0 FAR and a maximum lot coverage of 50 percent. Therefore, the 7.92-acre vacant site could be built to two stories, with a footprint of 172,497.6 square feet, totaling 344,995.2 square feet.

Table 4-1. Alternative A Land Uses

Land Use	Stories	Total Area (Square Feet)
Veterans Memorial Park	NA	409,464.0
Commercial Manufacturing	2	344,995.2

Notes: NA = not applicable

4.2.2 Alternative B - No Project/No Development Alternative

CEQA requires the alternatives analysis to include a No Project Alternative where the Project does not proceed. The purpose of analyzing a No Project Alternative is to allow decision makers to compare the impacts of approving the project with the impacts of not approving the project (State CEQA Guidelines Section 15126.6[e][1]). Pursuant to State CEQA Guidelines Section 15126.6(e)(2), requirements of the analysis of the No Project alternative are as follows:

> The No Project analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time the environmental analysis is commenced, as well as what would reasonably be expected to occur in the foreseeable future if the proposed project were not approved, based on current plans, and consistent with available infrastructure and community services.

Alternative B - No Project/No Development Alternative assumes that the Project site would remain in its current condition as described in Section 2.3, Project Description, Existing Setting. No discretionary actions would be required by local, state, or federal agencies for this alternative. Therefore, under this Alternative, the Project site would continue to operate as the Veterans Memorial Park and an undeveloped vacant lot.

4.2.3 Alternative C - Reduced Development Alternative 1

CEQA requires that EIRs “describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives” (14 CCR 15126(a)).

Alternative C - Reduced Development Alternative 1 assumes the Project would operate as described in Section 2, Project Description, with the following reductions:

- 750 apartment units
- 64,000-squre-foot community center
- 1,100-seat movie theater

Table 4-2. Alternative C Land Uses

Proposed Land Use	Number	Approximate Size (Square Feet)	Total Area (Square Feet)
Residential Land Uses			
Studios	750	500[1]	_
1 Bedrooms		675[1]	_
2 Bedrooms		980[1]	_
3 Bedrooms		1,150[1]	_
Total	750	_	_
Ancillary Residential Uses			
Lobby	–	5,500	5,500
Leasing Office	–	2,500	2,500
Mail Center	–	6,500	6,500
Clubroom	–	9,000	9,000
Game/TV Room	–	5,000	5,000
Fitness Center	–	7,000	7,000
Conference Room	–	3,500	3,500
		Total	761,900
Commercial Land Uses			
Movie Theater	–	27,500	27,500
Arcade (entertainment/bowling)	–	20,000	20,000
Fitness Center	–	15,000	15,000
Restaurant	–	16,000	16,000
General Retail	–	28,000	28,000
Grocery and Food Hall	–	25,000	25,000
Pharmacy	–	6,000	6,000
		Total	137,500
Tower			
Residential/Commercial	–	65,000	65,000
		Total	65,000
Community Center			
Community Center	–	64,000	64,000
		Total	64,000
Park and Green Space			
Open Green Space	–	100,000	100,000
Children's Playground	–	20,000	20,000
Youth Sports Field	–	50,000	50,000
Grass Amphitheater	–	3,600	3,600

Table 4-2. Alternative C Land Uses

Proposed Land Use	Number	Approximate Size (Square Feet)	Total Area (Square Feet)
Benches/Stands	–	5,000	5,000
		Total	196,020[2]
Museum			
		Total	5,000

Source: Comstock Realty 2020
Notes:
1 size/unit
2 Totals approximately 4.75 acres

4.2.4 Alternative D - Reduced Development Alternative 2

CEQA requires that EIRs "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives" (14 CCR 15126(a)).

Alternative D - Reduced Development Alternative 2 assumes the Project would operate as described in Section 2, Project Description, with the following reductions:

- 750 apartment units
- 64,000-square-foot community center
- 1,100-seat movie theater
- 12,000-square-foot grocery store
- No museum space

Table 4-3. Alternative D Land Uses

Proposed Land Use	Number	Approximate Size (Square Feet)	Total Area (Square Feet)
Residential Land Uses			
Studios	750	500[1]	_
1 Bedrooms		675[1]	_
2 Bedrooms		980[1]	_
3 Bedrooms		1,150[1]	_
Total	750	_	_
Ancillary Residential Uses			
Lobby	–	5,500	5,500
Leasing Office	–	2,500	2,500
Mail Center	–	6,500	6,500
Clubroom	–	9,000	9,000
Game/TV Room	–	5,000	5,000
Fitness Center	–	7,000	7,000
Conference Room	–	3,500	3,500
		Total	761,900

Table 4-3. Alternative D Land Uses

Proposed Land Use	Number	Approximate Size (Square Feet)	Total Area (Square Feet)
Commercial Land Uses			
Movie Theater	–	27,500	27,500
Arcade (entertainment/bowling)	–	20,000	20,000
Fitness Center	–	15,000	15,000
Restaurant	–	16,000	16,000
General Retail	–	28,000	28,000
Grocery and Food Hall	–	12,000	12,000
Pharmacy	–	6,000	6,000
		Total	124,500
Tower			
Residential/Commercial	–	65,000	65,000
		Total	65,000
Community Center			
Community Center	–	64,000	64,000
		Total	64,000
Park and Green Space			
Open Green Space	–	100,000	100,000
Children's Playground	–	20,000	20,000
Youth Sports Field	–	50,000	50,000
Grass Amphitheater	–	3,600	3,600
Benches/Stands	–	5,000	5,000
		Total	196,020[2]

Source: Comstock Realty 2020
Notes:
1 size/unit
2 Totals approximately 4.75 acres

4.3 Alternatives Analysis

4.3.1 Alternative A - No Project/Existing Land Use Plan Alternative

Aesthetics

The No Project/Existing Land Use Plan Alternative analyzes the effects of continued implementation of the General Plan. The existing Veterans Memorial Park would continue to operate as it currently does, because that use is consistent with the zoning and General Plan designation. The vacant lot would be developed as 344,995.2 square feet of commercial and light industrial uses. The land uses surrounding the Project site consist of a mix of residential, commercial, industrial, and open space properties. Therefore, the commercial and light industrial development proposed as part of Alternative A would be consistent with the surrounding visual character. However, due to the age of Veterans Memorial Park, the utility of the improvements made are deteriorating and the outdoor recreational spaces are aging. In addition, the existing community center has been shuttered due to structural and safety issues, and temporary trailers are used in lieu of the community center. Over time, much of

the ground surface at the Veterans Memorial Park, which is sitting atop landfill material from 1954, has settled over the weight of different types of debris. Alternative A would not change this portion of the Project site; therefore, the appearance of Veterans Memorial Park would not be improved.

Alternative A would introduce new sources of glare and light with the construction of commercial/industrial development. However, the City's Zoning Ordinance and the General Plan policies require new development to avoid glare impacts and be considerate of light trespass on adjacent residential neighborhoods. Therefore, similar to the Project, impacts would be less than significant. Although light and glare impacts would be neutral to the Project, Alternative A would not improve the appearance of the Veterans Memorial Park. Therefore, Alternative A is environmentally inferior to the proposed Project.

Air Quality

Under Alternative A, the existing Veterans Memorial Park would continue to operate as it currently does, and the vacant lot would be developed as 344,995.2 square feet of commercial and light industrial uses. Buildout under the existing General Plan would include less construction of new facilities. Less construction would result in less criteria air pollutants emitted during construction as compared to the Project. Additionally, Alternative A would result in less building space during operation, which would result in fewer criteria air pollutant emissions associated with building energy. Although Alternative A would generate mobile criteria air pollutant emissions associated with employees of the proposed commercial/industrial and visitors to the Park, vehicle trips would be less than the Project, which proposes commercial, residential, and recreational uses. The Project would result in residential and employee growth in exceedance of the Southern California Association of Government's (SCAG) 2016 RTP/SCS. Alternative A would not include the construction and operation of residential uses, and commercial development would be less than the Project; therefore, impacts associated with the consistency of applicable air quality plans would be less than the Project. Alternative A would result in less construction when compared to the Project and would result in less toxic air contaminant emissions. Because this alternative would not introduce new sensitive receptors to the area, roadway health risk impacts would be less than the Project. From an environmental standpoint, Alternative A is environmentally superior to the Project in terms of air quality impacts.

Biological Resources

The proposed Project site is devoid of native habitat and is located within an urban setting dominated by dense residential and commercial development and ornamental landscaping, which substantially limits its potential to support sensitive natural communities or riparian habitat. However, one special-status plant, southern tarplant (Centromadia pungens ssp. laevis), has a moderate potential to occur within the Project site because it is known to occur in highly disturbed areas and there are recent records of the species occurring six miles to the north-northeast, adjacent to the Rio Hondo. However, with the implementation of similar mitigation to the Project, Alternative A impacts would be less than significant.

The trees and shrubs within the Project site provide nesting habitat for bird species protected under the Migratory Bird Treaty Act (MBTA; 16 USC 703-712) and California Fish and Game Code Sections 3503.5, 3503, and 3513. Trimming, pruning, and/or removal of trees and shrubs may occur as a result of construction of Alternative A, similar to the Project, and could disrupt breeding activity. However, with the implementation of mitigation measures similar to the Project, impacts would be less than significant with mitigation incorporated. Therefore, Alternative A is environmentally neutral to the Project.

Cultural Resources

No historical resources were identified within the Project site as a result of the CHRIS records search, SLF search, Native American outreach, extensive archival research, field survey, and property significance evaluation. Therefore, similar to the Project, Alternative A would not result in impacts to historic resources. No previously recorded prehistoric or historic-era archaeological resources were identified within the Project site or within a 0.5-mile records search radius of the Project site.

The potential for encountering and impacting unknown archaeological resources during Project implementation is low given the level of disturbance from the mid-twentieth century; however, it is always possible that unanticipated discoveries could be encountered during ground-disturbing activities associated with the proposed Project. If such unanticipated discoveries were encountered, impacts to encountered resources could be potentially significant. However, similar to the Project, with the implementation of mitigation which would require that all construction work occurring within 100 feet of the find immediately stop until a qualified archaeologist (meeting the Secretary of the Interior's Professional Qualification Standards for Archaeology) can evaluate the significance of the find, potentially significant impacts to archaeological resources would be reduced to less-than-significant levels.

No prehistoric or historic burials were identified within the Project site as a result of the records searches. Additionally, the Project site is located within an urbanized area that has been subject to disturbance in the past as a result of former landfill operations. However Alternative A would comply with Section 7050.5 of the California Health and Safety Code, if human remains are found. As such, similar to the Project, impacts would be less than significant. Therefore, Alternative A is environmentally neutral to the Project.

Energy

Similar to the Project, natural gas and electricity usage would increase due to the implementation of Alternative A when compared to the existing condition. However, the Project's energy efficiency would go beyond code compliance and would be increased through the Leadership in Energy and Environmental Design (LEED) certification program or equivalent standards. It is uncertain whether Alternative A would go beyond code compliance, but Alternative A would consume less energy when compared to the Project, as discussed above under Air Quality. Similar to the Project, Alternative A would see an increase in petroleum use during construction and operation, but vehicles would use less petroleum due to advances in fuel economy and potential reduction in VMT over time. Therefore, Alternative A would be environmentally superior to the Project.

Geology and Soils

The Project site is not located within an Alquist-Priolo Earthquake Fault Zone. The closest such zone is located along the Whittier section of the Elsinore Fault Zone, located approximately six miles to the east-northeast of the Project site (CGS 1998). In addition, no known faults traverse the Project site. With the incorporation of California Building Code (CBC) procedures aimed at mitigating and minimizing geologic hazards, development under Alternative A would not directly or indirectly cause substantial adverse effects involving strong seismic ground shaking. Although Alternative A could be subject to liquefaction, the Project site would not increase or exacerbate the potential for liquefaction to occur, and therefore, would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismically-related ground failure, including liquefaction.

Alternative A construction would entail excavation and grading of the vacant portion of the Project site, followed by construction of proposed structures. Similar to the Project, prior to development under Alternative A, a

Remedial Action Plan, approved by the Los Angeles Regional Water Quality Control Board (LARWQCB), would require the excavation and removal of all former landfill debris and contaminated soils to an approximate 20-foot depth. Construction activities could result in temporary, short-term impacts related to soil erosion and possible off-site sedimentation of nearby drainages, including the adjacent Rio Hondo. As such, there is a potential for erosion during the development of the Project site. State and federal National Pollutant Discharge Elimination System (NPDES) requirements include the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) for projects with cumulative ground disturbance in excess of one acre. In compliance with Construction General Permit requirements, the SWPPP would establish erosion and sediment control Best Management Practices (BMPs) for construction activities. In addition, development activities would comply with City grading and erosion control standards to minimize soil erosion. Similar to the Project, no exposed areas subject to erosion would be created or affected by Alternative A. In addition, the majority of the area surrounding the Project site is completely developed and would not be susceptible to indirect erosional processes (e.g., uncontrolled runoff) caused by development under Alternative A. With the implementation of applicable construction BMPs, impacts would be less than significant related to erosion or loss of topsoil.

Expansive soils are clay-rich soils that shrink when dry and swell when wet. This change in volume can exert substantial pressure on foundations, resulting in structural distress and/or damage. Laboratory testing of on-site soils within the vacant lot portion of the Project site indicates that the soils have a medium expansion potential. In compliance with the CBC and Los Angeles Building Code, risk of structural damage caused by volumetric changes in the subgrade soil would be considered during final design. Slabs on-grade would be designed based on post-grading test results. Because Alternative A buildings and structures would be designed in compliance with the CBC and Los Angeles Building Code, impacts would be less than significant.

Excavations to a depth of 25 feet in the eastern portion of the Project site are anticipated to encounter artificial fill; therefore, construction of the commercial/industrial development associated with Alternative A would not encounter paleontological resources.

Because geology and soils impacts are dependent on the conditions of the Project site, impacts would be similar, and therefore neutral to the Project.

Greenhouse Gas Emissions

Under Alternative A, the existing Veterans Memorial Park would continue to operate as it currently does, and the vacant lot would be developed as 344,995.2 square feet of commercial and light industrial uses. Buildout under the existing General Plan would include less construction of new facilities. Less construction would result in less greenhouse gas (GHG) emissions emitted during construction as compared to the Project. Additionally, Alternative A would result in less building space during operation, which would result in fewer GHG emissions associated with building energy. Although Alternative A would generate GHG emissions associated with employees of the proposed commercial/industrial and visitors to the Park, vehicle trips would be less than the Project, which proposes commercial, residential, and recreational uses. Therefore, Alternative A is environmentally superior to the Project.

Hazards and Hazardous Materials

Due to previous landfill activities on the Project site and levels of contamination found within the soil, prior to construction, remediation activities would be required in order to remove soil and refuse containing chemicals of potential concern. The goal of the remediation activities would be to demonstrate that chemicals of concern do not remain within the base or sidewalls of the excavation area at concentrations that could pose a potential threat to

human health, groundwater, or ecological receptors. Chemicals of concern include those which were detected in samples of soil and/or landfill material during previous site investigations at levels above EPA regional screening levels. Remediation of the Project site would be required and would involve the excavation and removal of all former landfill debris and contaminated soils to an approximately 20-foot depth. Similar to the Project, once the LARWQCB has deemed remediation to be complete, construction of Alternative A would proceed. Once remediated, construction activities on the Project site would involve the use and storage of commonly used hazardous materials such as gasoline, diesel fuel, lubricating oil, grease, solvents, and other vehicle and equipment maintenance fluids. Compliance with all applicable codes and regulations concerning the handling, storage and disposal of hazardous waste, would reduce the potential to release contaminants. Alternative A would likely result in the increase in routine transport, use, and disposal of hazardous materials and/or wastes generated during remediation, construction, and operation, all hazardous materials would be transported and handled in accordance with all federal, state, and local laws regulating the management and use of hazardous materials. Alternative A may have the potential to result in a significant hazard to the public or the environment. However, with the implementation of mitigation similar to the Project, potential impacts would be reduced to less than significant level.

Similar to the Project, soil remediation would be required in order to remove all contaminated soil and landfill/waste material, which currently underlies the site. While removing, transporting, and disposing of the sites contaminated soils has the potential to result in accidental conditions, a Remedial Action Plan would be required and would outline specific methodologies for material sorting and stockpiling, required regulatory compliance, waste material profiling and disposal, as well as a site-specific Health & Safety Plan (HASP) to protect workers and the environment. Similar to the Project, compliance with the site-specific HASP and Remedial Action Plan, including the contingency plan, would ensure the safety of the public and the environment in the event of an accidental release of hazardous materials.

The nearest school to the Project site is Ellen Ochoa Prep School (9th through 12th grade), located approximately 0.6 mile east of the Project site. Similar to the Project, while remediation, construction, and operation would increase the amount of hazardous materials transported and used on-site, there is no school located within 0.25 mile, and the quantities and type of hazardous materials handled would be minimal and would not present substantial potential for adverse effects.

The Project site is located on several lists of hazardous material sites. The site is listed as a facility that generated asbestos-containing waste, unspecified aqueous solution, and other inorganic solids. This site is also listed for a leaking underground storage tank case, which was opened in August 1997 and closed in March 1998. Based on the regulatory status, the leaking underground storage tank is not anticipated to affect the environmental condition of the Project site. However, the past presence of landfill operations at the Project site constitutes a recognized environmental condition (REC). However, with the implementation of a Remedial Action Plan, potential impacts would be reduced to a less than significant level. Therefore, because a similar plan would be required for the Project, impacts are neutral when compared to the Project.

Hydrology and Water Quality

Similar to the Project, Alternative A would include excavation and construction activities which have the potential to adversely affect the quality of stormwater runoff through increases in turbidity, sedimentation, and construction-related pollutants. Implementation of an approved construction SWPPP would reduce impacts associated with erosion-induced siltation of downstream drainages and incidental spills of petroleum products, by providing preventative and management BMPs, such that impacts would be less than significant. Land uses on-site that could contribute pollutants to stormwater runoff in the long term include uncovered parking areas (through small fuel

and/or fluid leaks), uncovered refuse storage/management areas, landscape/open space areas (if pesticides/herbicides and fertilizers are improperly applied), and general litter/debris (e.g., generated during facility loading/unloading activities). There is the potential for wastes to be generated, stored and/or handled on-site. To the extent these wastes are stored in areas exposed to stormwater runoff, there could be water quality impacts as a result. Implementation of a Remedial Action Plan, besides ensuring proper characterization and disposal, would also ensure such wastes are not exposed to stormwater runoff. However, as a permittee subject to the Municipal Separate Storm Sewer System (MS4) permit, the City of Commerce is responsible for ensuring that all new development and redevelopment projects, including Alternative A, comply with the City of Commerce Low Impact Development (LID) Guidelines. Therefore, development under Alternative A would be subject to the implementation of BMPs, and in combination with the implementation of water quality-related features such as zoned irrigation, water-efficient landscaping, and stormwater reuse, would reduce potential operational water quality impacts by filtering out pollutants prior to discharge from the Project site, such that Alternative A operations and maintenance would not violate any water quality standards or waste discharge requirements.

Eleven groundwater monitoring wells located at the intersection of Slauson Avenue and Telegraph Road contained groundwater at depths between 72 and 110 feet below ground surface, as measured between 2002 and 2010. Since the Project site currently and upon buildout of Alternative A will continue to discharge stormwater runoff to permeable flood control basins located between the Project site and Rio Hondo Channel, groundwater recharge will continue to occur mainly off-site. The Project does not propose to directly extract groundwater during the construction or operation of the proposed Project, and no direct adverse impacts to groundwater are expected to occur.

The 2015 Cal Water East Los Angeles District Urban Water Management Plan (UWMP) has planned for growth within the East Los Angeles service area over the next 20 years. Cal Water has made an allowance for future demand estimates. As long-term water supply is a significant concern in California, Cal Water East Los Angeles District can increase supply to meet future demands increasing production of groundwater based of safe yield allocation and utilization of water in storage, increasing imported water purchases, if available and there is sufficient storage capacity, and by purchasing additional recycled water, if available. Collectively, these additional options would enable water supply to meet or exceed water demand for Cal Water East Los Angeles for now and into the future. Therefore, Alternative A is not anticipated to result in impacts to groundwater, similar to the Project.

Similar to the Project, Alternative A is not located within an area identified for flood risk in the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map. To the south of the Project site lies an area of 0.2 percent flood risk between the Project site and the Rio Hondo Channel. As the Project site lies adjacent and parallel to the direction of flood flow, but outside the zone of flood risk, the impact of Alternative A to impede or redirect flood flows would be less than significant.

As noted above, Alternative A is not expected to violate any water quality standards and measures would be taken both during construction and throughout operation to prevent potential contaminants from being discharged from the site by runoff. Through compliance with LARWQCB requirements and a NPDES permit, and implementation of a SWPPP (construction phase) and LID Plan (operational phase), Alternative A would not conflict with or obstruct implementation of the LARWQCB Basin Plan. Therefore, impacts would be neutral to the Project.

Land Use Planning

The City's Zoning Code (Title 19) regulates land use development in the City. In each zone, the City identifies the intent and purpose, use regulations, development standards, and other applicable regulations. Alternative A

would develop the site consistent with the established zoning (PF and C/M1). Because Alternative A would be consistent with existing zoning and land use designations, impacts would be less than significant. Impacts are superior to the Project.

Noise

The existing Veterans Memorial Park would continue to operate as it currently does, because that use is consistent with the current zoning and General Plan designation. The vacant lot would be developed as 344,995.2 square feet of commercial and light industrial uses. The land uses surrounding the Project site consist of a mix of residential, commercial, industrial, and open space properties. No construction would occur within the area occupied by Veterans Memorial Park, which is adjacent to residential uses. Construction of commercial uses would occur on the eastern portion of the Project site, which would be adjacent to an existing hotel. However, the intensity of the maximum permitted development for Alternative A (344,995.2 square feet) would be larger than the Project (247,050 square feet) on the eastern side of the Project site. However, impacts could be minimized with similar mitigation to the Project. In addition, the City of Commerce exempts construction activity noise from standard exterior noise exposure limits, if conducted during specific limited daytime hours. The Ordinance requires noise generating construction activities (including demolition, excavation, and building construction), be restricted to the hours between 7 a.m. and 10 p.m. (City of Commerce, Chapter 19.19.160).

Alternative A would also result in changes to existing noise levels on the Project site by developing new stationary sources of noise, which would involve additional off-site and on-site traffic and could include the introduction of heating, ventilation, and air conditioning (HVAC) equipment and loading docks. Alternative A would result in less traffic when compared to the Project, because Alternative A would result in less development and the Project would result in more traffic intensive land uses; and therefore, Alternative A would be less impactful than the Project.

Alternative A would result in the use of heavy equipment for construction. Construction would be limited to the eastern portion of the Project site, and therefore, would not be adjacent to residential uses. The hotel, located 135 feet north of the Project site, would not be significantly impacted by construction vibration. Therefore, Alternative A would be environmentally superior to the Project.

Population and Housing

Similar to the Project, Alternative A would generate part-time and full-time jobs associated with the construction of the Project between the start and end of construction. Given the relatively temporary nature of the construction period, the demand for construction employment would likely be met within the existing and future labor market in the City and in Los Angeles County. If construction workers live outside of the City, these workers would likely commute during the temporary construction period. The construction employment generated by the Project is not expected to increase the residential population of the City and would not induce population growth or require permanent housing.

Alternative A does not propose the construction of housing or residential units, and therefore, would not result in direct growth. Alternative A would involve the construction of commercial and industrial uses which could result in employment growth. Because Alternative A would result in less development when compared to the Project, Alternative A would generate less growth, and environmental impacts would be superior to the Project.

Public Services

There are three fire stations in the City available to serve the Project within a 4-mile radius, the closest being Los Angeles County Fire Department (LACFD) Station 27, located approximately 1.8 miles northwest of the Project site at 6031 Rickenbacker Road. Although the increase in employment and population would increase the demands on LACFD to provide fire protection and emergency services, existing City and County policies and regulations are intended to reduce impacts associated with fire protection facilities. Specifically, Chapter 3.20 of the City of Commerce Municipal Code, and the County of Los Angeles Developer Fee Program, which produce revenue to maintain sufficient fire service levels. Although increased intensities are proposed, the Project site is in an existing urban area with a low fire hazard. As such, similar to the Project, implementation of Alternative A is not likely to expose proposed structures or people to substantial fire risk. Prior to construction, LACFD will review the development plans to ascertain the nature and extent of any additional requirements. Compliance with Fire Code requirements and the approval of the installation plan by the LACFD would mitigate any potential impacts to fire services. Additionally, the Alternative A applicant would be required to pay a development impact fee, which includes funding of additional resources for fire services, to off-set any potential impacts to response times as a result of development. Once operational, Alternative A would be periodically inspected by LACFD. As such, redevelopment of the Project site would not necessitate the construction of new fire facilities or expansion of existing facilities to serve Alternative A.

The Los Angeles County Sheriff's Department (LASD) contracts with the City to provide police protection. The nearest first response station to the Project site is the East Los Angeles County Sheriff's Station, located approximately 4.8 miles northwest of the Project site at 5019 East 3rd Street within the City of Los Angeles. Implementation of Alternative A would result in an increase in the number of employees on-site, which could increase the demand of police protection in the area. LASD staff has indicated that an officer-to-population ratio of one officer to every 1,000 residents provides the desired level of service for its service area. Implementation of Alternative A would result in construction of commercial and industrial uses. LASD would continue to provide general law enforcement for the Project site. The number of people at the Project site would substantially increase as a result of development compared to existing conditions. Operational funding for LASD is derived from various types of tax revenue which are deposited in the County's General Fund. The County Board of Supervisors then allocates the revenue for various County-provided public services, including to LASD to maintain staffing and equipment levels to adequately serve Project-related increases in service-call demands (County of Los Angeles 2014). Provided that East Los Angeles County Sheriff's Station is able to maintain a sufficient staff level through the County's General Fund, to service Alternative A and the City's current level of service, significant impacts to law enforcement are not anticipated. Because Alternative A would result in less development when compared to the Project, it is not anticipated to result in the construction of new police facilities or expansion of existing facilities.

The City is served by the Montebello Unified School District. The need for new school facilities is typically associated with a population increase that generates an increase in enrollment large enough to cause schools to be constructed or existing schools to be expanded. Because Alternative A would result in commercial and industrial development, it would not result in direct population growth; however, could result in growth that may increase demand on K-12 schools. Per state law, development projects are required to pay established school impact fees in accordance with Senate Bill (SB) 50 at the time of building permit issuance. 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 acct… on the provision of adequate school facilities" (Government Code Section 68998[h]). The fees authorized for collection under SB 50 are conclusively deemed full and adequate mitigation of impacts on school district facilities. The demand on K-12 schools associated with Alternative A would be less when compared to the Project.

The Veterans Memorial Park was constructed between 1965 and 1970, and consists of a baseball diamond, two basketball courts, a community center, a parking lot, and miscellaneous outdoor recreational spaces. Due to the age of Veterans Memorial Park, the utility of the improvements made are deteriorating and the outdoor recreational spaces are aging. In addition, the existing community center has been shuttered due to structural and safety issues, and temporary trailers are used in lieu of the community center. Over time, much of the ground surface at the Veterans Memorial Park, which is sitting atop the landfill material from 1954, has settled over the weight of different types of debris. The introduction of commercial and industrial uses could result in indirect growth, which may place a demand on the existing recreational uses at the Project site. Due to the City's largely industrial character, as well as the City being built out, there is a lack of parkland and recreational facilities to provide amenities for those living and working in the City. Veterans Memorial Park is one of four neighborhood parks in the City. Part of the proposed Project is to provide a revitalized Veterans Memorial Park with new structures, an all-inclusive playground, a contemporary soccer and baseball youth sports complex, a contemporary library, and ample outdoor green space to maximize opportunities for community events and services. Additionally, the Project would remediate the former on-site landfill to provide a safer environment for future park visitors, as well as residents living in the City. As such, since the Project is redeveloping a deteriorating park space with improved park and open space area of sufficient acreage to meet the City's parkland development objective, the Project would not require additional expansion of existing facilities or construction or new facilities. However, Alternative A would not result in the improvement of the existing park. Therefore, Alternative A would be environmentally inferior to the Project.

Other public facilities and services provided within the City include library services and City administrative services. An increase in demand for both library services and the City administrative services is generally associated with additional development. Libraries within the City include Bandini Library located approximately 3.1 miles northwest of the Project site at 269 S. Atlantic Boulevard; Bristow Library located approximately 3.7 miles northwest of the Project site at 1466 McDonnell Avenue; Rosewood Library located 2.6 miles northwest of the Project site at 5655 Jillson Street; and Veterans Library located 0.25 mile northwest of the Project site at 6134 Greenwood Avenue. All four of these libraries within the City are Americans with Disabilities Act (ADA) Accessible, offer homework help, and have public computers with internet access. These libraries could experience a slight increase in use due to the anticipated increase of commercial development; however, due to the availability of libraries in the City, surrounding communities, schools, and the County's library system made up of 86 libraries available to the public, the increase in use on any one library is not anticipated to be substantial. Additionally, the County has devised library facilities mitigation fee programs, in which residential projects are required to remit payment pursuant to the County-wide program to account for library-related construction and acquisition costs. Alternative A would be subject to applicable library facilities fees. Therefore, Alternative A would not require the expansion of existing facilities or construction of new facilities.

Although Alternative A would result in less development when compared to the Project and would be less impactful to public services, Alternative A would not redevelop the park. Therefore, impacts are considered environmentally neutral to the Project.

Recreation

The existing Veterans Memorial Park was constructed between 1965 and 1970, and consists of a baseball diamond, two basketball courts, a community center, a parking lot, and miscellaneous outdoor recreational spaces. Due to the age of Veterans Memorial Park, the utility of the improvements made are deteriorating and the outdoor recreational spaces are aging. In addition, the existing community center has been shuttered due to structural and safety issues, and temporary trailers are used in lieu of the community center. Over time, much of

the ground surface at the Veterans Memorial Park, which is sitting atop the landfill material from 1954, has settled over the weight of different types of debris. The Project proposes to remediate the entire Project site, and redevelop a deteriorating park space with improved park and open space area of sufficient acreage to meet the City's parkland development objective. However, Alternative A would not result in the redevelopment of the Park; therefore, impacts would be environmentally inferior to the Project.

Transportation

As described in Section 3.15, implementation of mitigation measures **MM-TRA-1** through **MM-TRAF-9** (with the exception of mitigation measure **MM-TRAF-3**, which is warranted under Future Year 2023 with Project conditions) would reduce the Project's impact to less than significant based on the City's methodology. However, some of these intersections are within the jurisdiction of another public agency. Physical improvements requiring implementation by another public agency will be monitored by the City and implemented to the extent feasible. If the physical improvements are deemed infeasible by the other public agency, cannot be implemented during the design or review process, or implementation is delayed, a significant impact would remain until the improvement is implemented. As the City is not assured of timely implementation of the physical improvement, it is conservatively concluded that impacts at Intersection # 4, 6, 13, 17, 18, 22, and 26 would remain significant and unavoidable. Because of the existing condition of several of these intersections, implementation of Alternative A could also result in the generation of trips that would require mitigation, although less trips would be generated by Alternative A. Because Alternative A would result in development that could likely result in significant and unavoidable impacts, impacts under Alternative A are considered neutral to the Project.

The City of Commerce has not yet adopted local VMT criteria. The Project characteristics (e.g., mixed land uses, infill development, its proximity of nearby destinations, pedestrian and bicycle connections, etc.) would encourage localized trips and trips made by walking, biking, carpool, or transit. The Project would, therefore, reduce vehicle trips and trip lengths which results in corresponding reductions in VMT, air quality emissions and transportation-related GHG emissions. However, Alterative A would not result in mixed-use land uses and would be more impactful when compared to the Project.

Because the Project would not result in access, parking and internal circulation, or freeway ramp queuing hazards, and Alternative A would result in less development when compared to the Project, it is anticipated that Alternative A, by comparison, would also avoid these roadway hazards and impacts would be neutral to the Project.

Alternative A would be required to comply with emergency access requirements and is anticipated to be accessible to emergency responders. All internal roadways on the Project site would be designed and constructed in accordance with all applicable provisions of the fire code, which includes requirements for width of emergency access routes and turning radii along emergency access routes. Therefore, impacts would be neutral to the Project.

Overall, Alternative A is considered neutral when compared to the Project with regards to transportation impacts.

Tribal Cultural Resources

There are no resources on the proposed Project site that have been determined by the City to be significant pursuant to the criteria set forth in PRC Section 5024.1. Further, no tribal cultural resources (TCR) were identified at the proposed Project site by California Native American tribes as part of the City's Assembly Bill (AB) 52 and SB 18 notification and consultation process. As no information regarding TCRs has been received by the City, the City has determined that no TCRs are present at the proposed Project site. However, similar to the Project, there is still

a low potential for unknown subsurface TCRs to be impacted by Alternative A, which could result in a significant impact. Therefore, protocols for the inadvertent discovery of TCRs would be included as mitigation, which would reduce the potential impact to a less-than-significant level with mitigation incorporated. Therefore, impacts would be neutral to the Project.

Utilities and Service Systems

Alternative A would require the construction of water distribution infrastructure (i.e., pipes, valves, meters, etc.) to provide domestic water, firewater, and irrigation water to the Project site. The on-site facilities would be connected to off-site water lines in the adjacent rights-of-way. Similar to the Project, installation of new water laterals would consist of either trenching to the depth of pipe placement or using a variety of different trenchless technology, which causes substantially less ground disturbance. Trenching results in a temporary stockpiling of soil along the length of the trench, pending backfilling, which could result in potential short-term erosion induced siltation of nearby waterways. Trenchless technology only requires temporary stockpiling of soil adjacent to excavations on both ends of long sections of pipe. In addition, Standard Best Management Practices, installed as part of an NPDES-mandated SWPPP, would reduce potential water quality impacts to less than significant levels. As such, Alternative A would not result in the expansion or construction, expansion, or relocation of water infrastructure, and it is unlikely that there would be any significant environmental effects related to the construction of water infrastructure.

With the exception of Project-related sewer tie-ins/lateral connections, the proposed Project is not expected to require or result in the construction, relocation, or expansion of off-site water/wastewater treatment facilities. Therefore, because Alternative A would result in less development, Alternative A is also not anticipated to require the expansion of off-site water/wastewater treatment facilities. All construction work of sewer tie-ins/lateral connections within the City public right-of-way would be subject to City municipal code requirements. Alternative A construction would occur in accordance with the requirements of the City of Commerce Municipal NPDES Permit. In accordance with this permit, BMPs and pollutant control measures would be employed during construction to minimize pollutants and reduce runoff to levels that comply with applicable water quality standards.

Alternative A has the potential to increase the rate and amount stormwater runoff. However, per City Ordinance No. 676, the City of Commerce adopted the Los Angeles County MS4 permit, which requires implementation of LID strategies to limit increases in stormwater runoff. Specifically, as indicated in the City of Commerce LID Guidelines, Alternative A would be required to retain the design storm event through appropriately sized LID BMPs. Construction of LID BMPs would result in a decrease in stormwater runoff volumes and rates, such that Alternative A would not substantially increase the rate or amount of surface runoff. As a result, Alternative A would not result in the construction of new stormwater drainage facilities.

Similar to the Project, upgrades would likely be required with respect to electric power and telecommunication facilities, based on the change in land use (i.e., higher density and increase in onsite technology). Natural gas line upgrades may also be similarly required. However, similar to the Project, such upgrades would be confined to the lateral connections to the Project site and not any centralized facilities. Upgrades would be coordinated with appropriate service providers (such as Southern California Edison, SoCal Gas, etc.) to minimize disruptions on service and would likely be completed by either trenchless technology or completion of open trenching, to the depth of the underground utilities. Alternative A construction would occur in accordance with the requirements of the NPDES General Construction Permit (Order No. 99-08-DWQ) and the City of Commerce Stormwater and Runoff Pollution Control Ordinance (Chapter 6.17 of the City of Commerce Municipal Code). In accordance with the ordinance, BMPs and pollutant control measures would be employed during construction to minimize

pollutants and reduce runoff to levels that comply with applicable water quality standards. As a result, impacts associated with upgrades of electric, natural gas, and telecommunication lateral connections to the Project site would be less than significant.

The Project is estimated to generate a potable water demand of 225,322 gallons per day (gpd), which is equivalent to 252.56 acre-feet per year (AFY). The existing water demand for the Project site is estimated to be 13,654 gpd (15.3 AFY), resulting in a net increase in water demand of approximately 211,668 gpd (237.26 AFY). The 2015 Cal Water East Los Angeles District's UWMP has planned for growth within the East Los Angeles service area over the next 20 years. Cal Water has made an allowance for future demand estimates. Future demand services are based on historical growth rates in the service area. Based on these projections, it would appear that Cal Water has adequately made allowance for water supply demand increases for both domestic and commercial water supply over the next 20 years. As long-term water supply is a significant concern in California, Cal Water East Los Angeles District can increase supply to meet future demands increasing production of groundwater based of safe yield allocation and utilization of water in storage, increasing imported water purchases, if available and there is sufficient storage capacity, and by purchasing additional recycled water, if available. Collectively, these additional options would enable water supply to meet or exceed water demand for Cal Water East Los Angeles for now and into the future. Collectively, the UWMP identities a sufficient and reliable water supply for Cal Water East Los Angeles District's service area, now and into the future, including a sufficient water supply for the proposed Project. Because Alternative A would result in less development, Alternative A would also result in a less than significant impact to potable water demand.

The Project's wastewater generation would represent a very small fraction of the available treatment capacity of the Joint Water Pollution Control Plant (JWPCP), as well as can be served by current wastewater lines, construction of additional wastewater treatment infrastructure would not be required. Because Alternative A would result in less development when compared to the Project, impacts are also anticipated to be less than significant.

Construction of the Alternative A would result in the generation of solid waste such as scrap lumber, concrete, residual wastes, packing materials, plastics, and soils. Per CalGreen, 65 percent of construction and demolition waste must be diverted from landfills. As such, at least 65 percent of all construction and demolition debris from the Project site would be diverted. The County also has construction and demolition debris diversion requirements; however, the CALGreen standards require an equivalent level of diversion (65 percent diversion). Any hazardous wastes that are generated during demolition and construction activities would be managed and disposed of in compliance with all applicable Federal, State, and local laws. The remaining 35 percent of construction and demolition material that is not required to be recycled would either be disposed of in a regional landfill or voluntarily recycled at a solid waste facility with available capacity. As described in Section 3.17.1, Existing Conditions, the inert landfill in the County (Azusa Land Reclamation landfill) has a remaining capacity of 55,705,480 tons and is expected to remain open for approximately 28 years, as of 2017. There are other facilities that process inert waste and other construction and demolition waste in the County, which collectively have a maximum daily capacity of 32,496 tons per day and process an average of 8,535 tons per day. There are also numerous processing facilities for construction and demolition wastes throughout the County, the nearest of which is Construction and Demolition Recycling, located at 9309 Rayo Avenue, in South Gate. This facility is 4 miles southwest of the Project site and has a permitted capacity of 3,000 tons of waste per day. This facility has a recycling rate of 80 percent. As such, any construction and demolition debris requiring disposal at an inert waste landfill would be sufficiently accommodated by existing landfills. For the reasons stated above, Alternative A demolition and construction would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals (e.g., CALGreen standards). Impacts would be less than significant.

Once operational, similar to the Project, Alternative A would produce solid waste on a regular basis, in association with operation and maintenance activities. As described in Section 3.17.1, Environmental Setting, the City's commercial uses are currently served by Calmet for solid waste collection and disposal. Calmet would dispose of waste at the nearest landfills, such as the Calabasas or Scholl Canyon Landfill. Calabasas landfill has a remaining capacity of 5,559,480 tons and is expected to remain open for another 10 years. Scholl Canyon landfill has a remaining capacity of 4,697,842 tons and is expected to remain open for another 10 years. Once the Calabasas Landfill and the Scholl Canyon Landfill reach capacity, additional landfills and strategies would be identified so that disposal needs continue to be met. Furthermore, according to the latest annual report for the Countywide Integrated Waste Management Plan, there are landfills used by the County with up to 100 years of remaining life. Because Alternative A would result in less development when compared to the Project, Alternative A is also not anticipated to 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 to utilities and service systems would be neutral when compared to the Project.

4.3.2 Alternative B - No Project/No Development Alternative

Aesthetics

The No Project/No Development Alternative analyzes the effects of no development within the Project site. The existing Veterans Memorial Park and vacant lot would continue to operate as they currently do. Due to the age of Veterans Memorial Park, the utility of the improvements made are deteriorating and the outdoor recreational spaces are aging. In addition, the existing community center has been shuttered due to structural and safety issues, and temporary trailers are used in lieu of the community center. Over time, much of the ground surface at the Veterans Memorial Park, which is sitting atop the landfill material from 1954, has settled over the weight of different types of debris. Alternative B would not change this portion of the Project site; therefore, the appearance of Veterans Memorial Park would not be improved.

Alternative B would not introduce new sources of glare and light. Therefore, no impacts would occur. Although light and glare impacts would be less than the Project, Alternative B would not improve the appearance of Veterans Memorial Park. Therefore, Alternative B is environmentally inferior to the Project.

Air Quality

Under Alternative B, the existing Veterans Memorial Park would continue to operate as it currently does, and the vacant lot would not be developed; therefore criteria air pollutants resulting from construction would not occur. Additionally, Alternative B would not result in operational changes as compared to the existing condition. Alternative B would not result in residential and employee growth in exceedance of SCAG's 2016 RTP/SCS. Alternative B would not result in toxic air contaminant emissions. Because this alternative would not introduce new sensitive receptors to the area, roadway health risk impacts would be less than the Project. From an environmental standpoint, Alternative B is environmentally superior to the Project in terms of air quality impacts.

Biological Resources

The proposed Project is devoid of native habitat and it is located within an urban setting dominated by dense residential and commercial development and ornamental landscaping, which substantially limits its potential to support sensitive natural communities or riparian habitat. However, one special-status plant, southern tarplant

(Centromadia pungens ssp. laevis), has a moderate potential to occur within the Project site because it is known to occur in highly disturbed areas and there are recent records of the species occurring six miles to the north-northeast, adjacent to the Rio Hondo. However, no development would occur as part of Alternative B, and no impacts would result.

The trees and shrubs within the Project site provide nesting habitat for bird species protected under the Migratory Bird Treaty Act (MBTA; 16 USC 703-712) and California Fish and Game Code Sections 3503.5, 3503, and 3513. Trimming, pruning, and/or removal of trees and shrubs would not occur as part of Alternative B. Therefore, Alternative B is environmentally superior to the Project.

Cultural Resources

No historical resources were identified within the Project site as a result of the CHRIS records search, SLF search, Native American outreach, extensive archival research, field survey, and property significance evaluation. Therefore, similar to the Project, Alternative A would not result in impacts to historic resources. No previously recorded prehistoric or historic-era archaeological resources were identified within the Project site or within a 0.5-mile records search radius of the Project site.

The potential of encountering and impacting unknown archaeological resources during Project implementation is low given the level of disturbance from the mid-twentieth century; however, it is always possible that unanticipated discoveries could be encountered during ground-disturbing activities associated with the proposed Project. If such unanticipated discoveries were encountered, impacts to encountered resources could be potentially significant. No construction would occur as part of Alternative B, and therefore, no mitigation would be required.

No prehistoric or historic burials were identified within the Project site as a result of the records searches. Additionally, the Project site is located within an urbanized area that has been subject to disturbance in the past as a result of former landfill operations. However, Alternative B would not result in construction and impacts would not occur. Therefore, Alternative B is environmentally superior to the Project.

Energy

Natural gas and electricity usage would remain the same as existing conditions due to the implementation of Alternative B. Alterative B would not see an increase in petroleum use during construction and operation. Therefore, Alternative B would be environmentally superior to the Project.

Geology and Soils

The Project site is not located within an Alquist-Priolo Earthquake Fault Zone. The closest such zone is located along the Whittier section of the Elsinore Fault Zone, located approximately six miles to the east-northeast of the Project site (CGS 1998). In addition, no known faults traverse the Project site. With the incorporation of CBC procedures aimed at mitigating and minimizing geologic hazards, development under Alternative B would not directly or indirectly cause substantial adverse effects involving strong seismic ground shaking. Although Alternative B could be subject to liquefaction, the Project site would not increase or exacerbate the potential for liquefaction to occur, and therefore, would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismically-related ground failure, including liquefaction.

Alternative B would not require construction, and erosion is unlikely; therefore, impacts would be less than significant related to erosion or loss of topsoil.

Expansive soils are clay-rich soils that shrink when dry and swell when wet. This change in volume can exert substantial pressure on foundations, resulting in structural distress and/or damage. Laboratory testing of on-site soils within the vacant lot portion of the Project site indicates that the soils have a medium expansion potential. Because Alternative B would not result in additional development on the Project site, no new impacts would occur.

Excavations to a depth of 25 feet in the eastern portion of the Project site are anticipated to encounter artificial fill; therefore, Alternative B would not encounter paleontological resources.

Because no construction would occur as part of Alternative B, impacts would be superior to the Project.

Greenhouse Gas Emissions

Under Alternative B, the existing Veterans Memorial Park and vacant lot would continue to operate as they currently do, therefore, construction GHG emissions would not result as part of implementing this Alternative. Additionally, Alternative B would not result in additional operational GHG emissions as compared to the existing condition. Therefore, Alternative B is environmentally superior to the Project.

Hazards and Hazardous Materials

Due to previous landfill activities on the Project site and levels of contamination found within the soil, prior to construction, remediation activities would be required in order to remove soil and refuse containing chemicals of potential concern. The goal of the remediation activities would be to demonstrate that chemicals of concern do not remain within the base or sidewalls of the excavation area at concentrations that could pose a potential threat to human health, groundwater, or ecological receptors. Chemicals of concern include those which were detected in samples of soil and/or landfill material during previous site investigations at levels above EPA regional screening levels. Remediation of the Project site would be required and would involve the excavation and removal of all former landfill debris and contaminated soils to an approximately 20-foot depth. Alternative B would not result in construction; therefore remediation would not occur and impacts are potentially significant.

The Project site is located on several lists of hazardous material sites. The site is listed as a facility that generated asbestos-containing waste, unspecified aqueous solution, and other inorganic solids. This site is also listed for a leaking underground storage tank case, which was opened in August 1997 and closed in March 1998. Based on the regulatory status, the leaking underground storage tank is not anticipated to affect the environmental condition of the Project site. However, the past presence of landfill operations at the Project site constitutes a REC. Because Alternative B would not result in construction or remediation, impacts are inferior when compared to the Project.

Hydrology and Water Quality

Alternative B would not require construction or excavation, and therefore, would not have the potential to adversely affect the quality of stormwater runoff through increases in turbidity, sedimentation, and construction-related pollutants.

Eleven groundwater monitoring wells located at the intersection of Slauson Avenue and Telegraph Road contained groundwater at depths between 72 and 110 feet below ground surface, as measured between 2002 and 2010. Since the Project site currently and will continue to discharge stormwater runoff to permeable flood control basins located between the Project site and Rio Hondo Channel, groundwater recharge will continue to occur mainly off-site. Alternative B does not propose to directly extract groundwater during the construction or operation of the proposed Project, and no direct adverse impacts to groundwater are expected to occur.

Similar to the Project, Alternative B is not located within an area identified for flood risk in the FEMA Flood Insurance Rate Map. To the south of the Project site lies an area of 0.2 percent flood risk between the Project site and the Rio Hondo Channel. As the Project site lies adjacent and parallel to the direction of flood flow, but outside the zone of flood risk, the impact of Alternative B to impede or redirect flood flows would be less than significant.

As noted above, Alternative B is not expected to violate any water quality standards, and therefore, would not conflict with or obstruct implementation of the LARWQCB Basin Plan. Therefore, impacts would be superior to the Project.

Land Use Planning

The City's Zoning Code (Title 19) regulates land use development in the City. In each zone, the City identifies the intent and purpose, use regulations, development standards, and other applicable regulations. Alternative B would develop the Project site consistent with the established zoning (PF and C/M1). Because Alternative B would be consistent with existing zoning and land use designations, impacts would be less than significant. Impacts are superior to the Project.

Noise

The existing Veterans Memorial Park and vacant lot would continue to operate as they currently do under Alternative B. No construction would occur as part of this alternative, and therefore, no new temporary sources of noise would occur. Alternative B would not result in changes to existing noise levels on the Project site, and therefore, Alternative B would be less impactful than the Project. Alternative B would be environmentally superior to the Project.

Population and Housing

Alternative B would not generate part-time and full-time jobs associated with construction, because no construction would occur. In addition, no change from the existing conditions would occur, and therefore, no growth would result as part of implementing Alternative B. Therefore, environmental impacts would be superior to the Project.

Public Services

There are three fire stations in the City available to serve the Project within a 4-mile radius, the closest being LACFD Station 27, located approximately 1.8 miles northwest of the Project site at 6031 Rickenbacker Road. Although the increase in employment and population would increase the demands on LACFD to provide fire protection and emergency services, existing City and County policies and regulations are intended to reduce impacts associated with fire protection facilities. Specifically, Chapter 3.20 of the City of Commerce Municipal Code, and the County of Los Angeles Developer Fee Program, which produce revenue to maintain sufficient fire service levels. Because redevelopment of the Project site would not occur under this Alternative, it would not necessitate the construction of new fire facilities or expansion of existing facilities.

Because Alternative B would not result in development, it is not anticipated to result in the construction of new police facilities or the expansion of existing facilities, K-12 schools, or other public facilities.

The Veterans Memorial Park was constructed between 1965 and 1970, and consists of a baseball diamond, two basketball courts, a community center, a parking lot, and miscellaneous outdoor recreational spaces. Due to the age of Veterans Memorial Park, the utility of the improvements made are deteriorating and the outdoor recreational spaces are aging. In addition, the existing community center has been shuttered due to structural and safety issues, and temporary trailers are used in lieu of the community center. Over time, much of the ground

surface at the Veterans Memorial Park, which is sitting atop the landfill material from 1954, has settled over the weight of different types of debris. Due to the City's largely industrial character, as well as the City being built out, there is a lack of parkland and recreational facilities to provide amenities for those living and working in the City. Veterans Memorial Park is one of four neighborhood parks in the City. Part of the proposed Project is to provide a revitalized Veterans Memorial Park with new structures, an all-inclusive playground, a contemporary soccer and baseball youth sports complex, a contemporary library, and ample outdoor green space to maximize opportunities for community events and services. Additionally, the Project would remediate the former on-site landfill to provide a safer environment for future park visitors, as well as residents living in the City. As such, since the Project is redeveloping a deteriorating park space with improved park and open space area of sufficient acreage to meet the City's parkland development objective, the Project would not require additional expansion of existing facilities or construction or new facilities. However, Alternative B would not result in the improvement of the existing park. Therefore, Alternative B would be environmentally inferior to the Project.

Although Alternative B would result in less development when compared to the Project and would be less impactful to public services, Alternative B would not redevelop the park. Therefore, impacts are considered environmentally neutral to the Project.

Recreation

The existing Veterans Memorial Park was constructed between 1965 and 1970, and consists of a baseball diamond, two basketball courts, a community center, a parking lot, and miscellaneous outdoor recreational spaces. Due to the age of Veterans Memorial Park, the utility of the improvements made are deteriorating and the outdoor recreational spaces are aging. In addition, the existing community center has been shuttered due to structural and safety issues, and temporary trailers are used in lieu of the community center. Over time, much of the ground surface at the Veterans Memorial Park, which is sitting atop the landfill material from 1954, has settled over the weight of different types of debris. The Project proposes to remediate the entire Project site, and redevelop a deteriorating park space with improved park and open space area of sufficient acreage to meet the City's parkland development objective. However, Alternative B would not result in the redevelopment of the Park; therefore impacts would be environmentally inferior to the Project.

Transportation

As described in Section 3.15, implementation of mitigation measures **MM-TRA-1** through **MM-TRAF-9** (with the exception of mitigation measure **MM-TRAF-3**, which is warranted under Future Year 2023 with Project conditions) would reduce the Project's impact to less than significant based on the City's methodology. However, some of these intersections are within the jurisdiction of another public agency. Physical improvements requiring implementation by another public agency will be monitored by the City and implemented to the extent feasible. If the physical improvements are deemed infeasible by the other public agency, cannot be implemented during the design or review process, or implementation is delayed, a significant impact would remain until the improvement is implemented. As the City is not assured of timely implementation of the physical improvement, it is conservatively concluded that impacts at Intersection # 4, 6, 13, 17, 18, 22, and 26 would remain significant and unavoidable. Because Alternative B would not result in a change in existing conditions, significant and unavoidable traffic impacts would be avoided.

The City of Commerce has not yet adopted local VMT criteria. The Project characteristics (e.g., mixed land uses, infill development, its proximity of nearby destinations, pedestrian and bicycle connections, etc.) would encourage

localized trips and trips made by walking, biking, carpool, or transit. However, Alternative B would not result in any changes to the existing condition, and would not result in additional VMT.

Alternative B would not result development and would not introduce new roadway hazards, and as such, impacts would be neutral to the Project.

Overall, Alternative B is considered superior when compared to the Project with regards to transportation impacts.

Tribal Cultural Resources

There are no resources on the proposed Project site that have been determined by the City to be significant pursuant to the criteria set forth in PRC Section 5024.1. Further, no TCRs were identified in the proposed Project site by California Native American tribes as part of the City's AB 52 and SB 18 notification and consultation process. As no information regarding TCRs has been received by the City, the City has determined that no TCRs are present in the proposed Project site. However, Alternative B would not involve development or ground disturbance; therefore, protocols for the inadvertent discovery of TCRs would not be required. Therefore, impacts would be superior to the Project.

Utilities and Service Systems

Alternative B would not require the construction of water distribution infrastructure (i.e., pipes, valves, meters, etc.) and as such, would not result in the expansion or construction, expansion, or relocation of water, wastewater, stormwater, or electrical and telecommunication infrastructure.

Similar to the Project, upgrades would likely be required with respect to electric power and telecommunication

Alternative B would not result in changes to the existing condition, and therefore, would not result in an additional demand for potable water, generation of wastewater, or generation of solid waste. Impacts to utilities and service systems would be superior when compared to the Project.

4.3.3 Alternative C - Reduced Development Alternative 1

Aesthetics

Alternative C would involve similar levels of development as the Project, with the exception of less residential development, a smaller community center and a smaller movie theater. The land uses surrounding the Project site consists of a mix of residential, commercial, industrial, and open space. Therefore, similar to the Project, the development proposed as part of Alternative C would be consistent with the surrounding visual character.

Alternative C would introduce new sources of glare and light similar to the Project. However, the City's Zoning Ordinance and the General Plan policies require new development to avoid glare impacts and be considerate of light trespass on adjacent residential neighborhoods. Therefore, similar to the Project, impacts would be less than significant. Therefore, Alternative A is environmentally neutral to the Project.

Air Quality

Alternative C would involve similar levels of development as the Project, with the exception of less residential development, a smaller community center and a smaller movie theater. Less construction would result in less

criteria air pollutants emitted during construction as compared to the Project. Additionally, Alternative C would result in less building space in operation, which would result in fewer criteria air pollutant emissions associated with building energy. Although Alternative C would generate mobile criteria air pollutant emissions associated with residents and employees vehicle trips would be less than the Project. The Project would result in residential and employee growth in exceedance of SCAG's 2016 RTP/SCS. Alternative C would also introduce new residential and employee growth; therefore, impacts associated with the consistency of applicable air quality plans would be similar to the Project. Alternative C would result in less construction when compared to the Project and would result in slightly less toxic air contaminant emissions. Because this alternative would introduce new sensitive receptors to the area, roadway health risk impacts would be similar to the Project. From an environmental standpoint, Alternative C is environmentally neutral to the Project in terms of air quality impacts.

Biological Resources

The proposed Project site is devoid of native habitat and is located within an urban setting dominated by dense residential and commercial development and ornamental landscaping, which substantially limits its potential to support sensitive natural communities or riparian habitat. However, one special-status plant, southern tarplant (Centromadia pungens ssp. laevis), has a moderate potential to occur within the Project site because it is known to occur in highly disturbed areas and there are recent records of the species occurring six miles to the north-northeast, adjacent to the Rio Hondo. However, with the implementation of similar mitigation to the Project, Alternative C impacts would be less than significant.

The trees and shrubs in the Project site provide nesting habitat for bird species protected under the Migratory Bird Treaty Act (MBTA; 16 USC 703-712) and California Fish and Game Code Sections 3503.5, 3503, and 3513. Trimming, pruning, and/or removal of trees and shrubs may occur as a result of construction of Alternative C, similar to the Project, and could disrupt breeding activity. However, with the implementation of mitigation measures similar to the Project, impacts would be less than significant with mitigation incorporated. Therefore, Alternative C is environmentally neutral to the Project.

Cultural Resources

No historical resources were identified within the Project site as a result of the CHRIS records search, SLF search, Native American outreach, extensive archival research, field survey, and property significance evaluation. Therefore, similar to the Project, Alternative C would not result in impacts to historic resources. No previously recorded prehistoric or historic-era archaeological resources were identified within the Project site or within a 0.5-mile records search radius of the Project site.

The potential of encountering and impacting unknown archaeological resources during Project implementation is low given the level of disturbance from the mid-twentieth century; however, it is always possible that unanticipated discoveries could be encountered during ground-disturbing activities associated with the proposed Project. If such unanticipated discoveries were encountered, impacts to encountered resources could be potentially significant. However, similar to the Project, with the implementation of mitigation, which would require that all construction work occurring within 100 feet of the find immediately stop until a qualified archaeologist (meeting the Secretary of the Interior's Professional Qualification Standards for Archaeology) can evaluate the significance of the find, potentially significant impacts to archaeological resources would be reduced to less-than-significant levels.

No prehistoric or historic burials were identified within the Project site as a result of the records searches. Additionally, the Project site is located within an urbanized area that has been subject to disturbance in the past

as a result of former landfill operations. However, Alternative C would comply with Section 7050.5 of the California Health and Safety Code, if human remains are found. Similar to the Project, impacts would be less than significant. Therefore, Alternative C is environmentally neutral to the Project.

Energy

Similar to the Project, natural gas and electricity usage would increase due to the implementation of Alternative C when compared to the existing condition. However, the Project's energy efficiency would go beyond code compliance and would be increased through the LEED certification program or equivalent standards. It is uncertain whether Alternative C would go beyond code compliance, but Alternative C would consume slightly less energy when compared to the Project, as discussed above under Air Quality. Similar to the Project, Alterative C would see an increase in petroleum use during construction and operation, but vehicles would use less petroleum due to advances in fuel economy and potential reduction in VMT over time. Therefore, Alternative C would be environmentally superior to the Project.

Geology and Soils

The Project site is not located within an Alquist-Priolo Earthquake Fault Zone. The closest such zone is located along the Whittier section of the Elsinore Fault Zone, located approximately six miles to the east-northeast of the Project site (CGS 1998). In addition, no known faults traverse the Project site. With the incorporation of CBC procedures aimed at mitigating and minimizing geologic hazards, development under Alternative C would not directly or indirectly cause substantial adverse effects involving strong seismic ground shaking. Although Alternative C could be subject to liquefaction, the Project site would not increase or exacerbate the potential for liquefaction to occur, and therefore, would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismically-related ground failure, including liquefaction.

Alternative C construction would entail excavation and grading of the vacant portion of the Project site, followed by construction of the proposed structures. Prior to development, a Remedial Action Plan, approved by the LARWQCB, would require the excavation and removal of all former landfill debris and contaminated soils to an approximate 20-foot depth. Construction activities could result in temporary, short-term impacts related to soil erosion and possible off-site sedimentation of nearby drainages, including the adjacent Rio Hondo. As such, there is a potential for erosion during the development of the Project site. State and federal NPDES requirements include the preparation and implementation of a SWPPP for projects with cumulative ground disturbance in excess of one acre. In compliance with Construction General Permit requirements, the SWPPP would establish erosion and sediment control BMPs for construction activities. In addition, development activities would comply with City grading and erosion control standards to minimize soil erosion. Similar to the Project, no exposed areas subject to erosion would be created or affected by Alternative C. In addition, the majority of the area surrounding the Project site is completely developed and would not be susceptible to indirect erosional processes (e.g., uncontrolled runoff) caused by Alternative C. With the implementation of applicable construction BMPs, impacts would be less than significant related to erosion or loss of topsoil.

Expansive soils are clay-rich soils that shrink when dry and swell when wet. This change in volume can exert substantial pressure on foundations, resulting in structural distress and/or damage. Laboratory testing of on-site soils within the vacant lot portion of the Project site indicates that the soils have a medium expansion potential. In compliance with the CBC and Los Angeles Building Code, risk of structural damage caused by volumetric changes in the subgrade soil would be considered during final design. Slabs on-grade would be designed based on post-

grading test results. Because Alternative C buildings and structures would be designed in compliance with the CBC and Los Angeles Building Code, impacts would be less than significant.

Excavations to a depth of 25 feet in the eastern portion of the Project site are anticipated to encounter artificial fill. However, if excavations in the western portion of the Project site encounter previously undisturbed older Quaternary alluvial deposits, Pleistcoene age vertebrate fossils may be impacted. Thus, deep excavations within the western portion of the Project site for subterranean parking could result in a potentially significant paleontological resource impact. However, with the implementation of mitigation measures similar to the Project, impacts would be less than significant with mitigation incorporated.

Because geology and soils impacts are dependent on the conditions of the site, impacts would be similar, and therefore neutral to the Project.

Greenhouse Gas Emissions

Alternative C would involve similar levels of development as the Project, with the exception of less residential development, a smaller community center, and a smaller movie theater. Less construction would result in less GHG emissions during construction as compared to the Project. Additionally, Alternative C would result in less building space under operation, which would result in fewer GHG emissions associated with building energy. Although Alternative C would generate GHG emissions associated with residents and employees, vehicle trips would be less than the Project. Therefore, Alternative C is environmentally superior to the Project.

Hazards and Hazardous Materials

Due to previous landfill activities on the Project site and levels of contamination found within the soil, prior to construction, remediation activities would be required in order to remove soil and refuse containing chemicals of potential concern. The goal of the remediation activities would be to demonstrate that chemicals of concern do not remain within the base or sidewalls of the excavation area at concentrations that could pose a potential threat to human health, groundwater, or ecological receptors. Chemicals of concern include those which were detected in samples of soil and/or landfill material during previous site investigations at levels above EPA regional screening levels. Remediation of the Project site would be required and would involve the excavation and removal of all former landfill debris and contaminated soils to an approximately 20-foot depth. Similar to the Project, once the LARWQCB has deemed remediation to be complete, construction of Alternative C would proceed. Once remediated, construction activities on the Project site would involve the use and storage of commonly used hazardous materials such as gasoline, diesel fuel, lubricating oil, grease, solvents, and other vehicle and equipment maintenance fluids. Compliance with all applicable codes and regulations concerning the handling, storage and disposal of hazardous waste, would reduce the potential to release contaminants. Alternative C would likely result in the increase in routine transport, use, and disposal of hazardous materials and/or wastes generated during remediation, construction, and operation, all hazardous materials would be transported and handled in accordance with all federal, state, and local laws regulating the management and use of hazardous materials. Alternative C may have the potential to result in a significant hazard to the public or the environment. However, with the implementation of mitigation similar to the Project, potential impacts would be reduced to less than significant level.

Soil remediation would be required in order to remove all contaminated soil and landfill/waste material, which currently underlies the site. While removing, transporting, and disposing of the sites contaminated soils has the potential to result in accidental conditions, a Remedial Action Plan would be required and would outline specific methodologies for material sorting and stockpiling, required regulatory compliance, waste material profiling and

disposal, as well as a site-specific HASP to protect workers and the environment. Similar to the Project, compliance with the site-specific HASP and Remedial Action Plan, including the contingency plan, would ensure the safety of the public and the environment in the event of an accidental release of hazardous materials.

The nearest school to the Project site is Ellen Ochoa Prep School (9th through 12th grade), located approximately 0.6 mile east of the Project site. Similar to the Project, while remediation, construction, and operation would increase the amount of hazardous materials transported and used on-site, there is no school located within 0.25 mile, and the quantities and type of hazardous materials handled would be minimal and would not present substantial potential for adverse effects.

The Project site is located on several lists of hazardous material sites. The site is listed as a facility that generated asbestos-containing waste, unspecified aqueous solution, and other inorganic solids. The site is also listed for a leaking underground storage tank case, which was opened in August 1997 and closed in March 1998. Based on the regulatory status, the leaking underground storage tank is not anticipated to affect the environmental condition of the Project site. However, the past presence of landfill operations at the Project site constitutes a REC. However, with the implementation of a Remedial Action Plan, potential impacts would be reduced to less than significant level. Therefore, because a similar plan would be required for the Project, impacts are neutral when compared to the Project.

Hydrology and Water Quality

Similar to the Project, Alternative C would include excavation and construction activities, which have the potential to adversely affect the quality of stormwater runoff through increases in turbidity, sedimentation, and construction-related pollutants. Implementation of an approved construction SWPPP would reduce impacts associated with erosion-induced siltation of downstream drainages and incidental spills of petroleum products, by providing preventative and management BMPs, such that impacts would be less than significant. Land uses on-site that could contribute pollutants to stormwater runoff in the long term include uncovered parking areas (through small fuel and/or fluid leaks), uncovered refuse storage/management areas, landscape/open space areas (if pesticides/herbicides and fertilizers are improperly applied), and general litter/debris (e.g., generated during facility loading/unloading activities). There is the potential for wastes to be generated, stored and/or handled on-site. To the extent these wastes are stored in areas exposed to stormwater runoff, there could be water quality impacts as a result. Implementation of a Remedial Action Plan, besides ensuring proper characterization and disposal, would also ensure such wastes are not exposed to stormwater runoff. However, as a permittee subject to the MS4 permit, the City of Commerce is responsible for ensuring that all new development and redevelopment projects, including Alternative C, comply with the City of Commerce LID Guidelines. Therefore, Alternative C would be subject to the implementation of BMPs, and in combination with the implementation of water quality-related features such as zoned irrigation, water-efficient landscaping, and stormwater reuse, would reduce potential operational water quality impacts by filtering out pollutants prior to discharge from the Project site, such that Alternative C operations and maintenance would not violate any water quality standards or waste discharge requirements.

Eleven groundwater monitoring wells located at the intersection of Slauson Avenue and Telegraph Road contained groundwater at depths between 72 and 110 feet below ground surface, as measured between 2002 and 2010. Since the Project site currently and upon buildout of Alternative C will continue to discharge stormwater runoff to permeable flood control basins located between the Project site and Rio Hondo Channel, groundwater recharge will continue to occur mainly off-site. The Project does not propose to directly extract groundwater during the construction or operation of the proposed Project, and no direct adverse impacts to groundwater are expected to occur.

The 2015 Cal Water East Los Angeles District Urban UWMP has planned for growth within the East Los Angeles service area over the next 20 years. Cal Water has made an allowance for future demand estimates. As long-term water supply is a significant concern in California, Cal Water East Los Angeles District can increase supply to meet future demands increasing production of groundwater based of safe yield allocation and utilization of water in storage, increasing imported water purchases, if available and there is sufficient storage capacity, and by purchasing additional recycled water, if available. Collectively, these additional options would enable water supply to meet or exceed water demand for Cal Water East Los Angeles for now and into the future. Therefore, Alternative C is not anticipated to result in impacts to groundwater, similar to the Project.

Similar to the Project, Alternative C is not located within an area identified for flood risk in the FEMA Flood Insurance Rate Map. To the south of the Project site lies an area of 0.2 percent flood risk between the Project site and the Rio Hondo Channel. As the Project site lies adjacent and parallel to the direction of flood flow, but outside the zone of flood risk, the impact of Alternative C to impede or redirect flood flows would be less than significant.

As noted above, Alternative C is not expected to violate any water quality standards and measures would be taken both during construction and throughout operation to prevent potential contaminants from being discharged from the site by runoff. Through compliance with LARWQCB requirements and a NPDES permit, and implementation of a SWPPP (construction phase) and LID Plan (operational phase), Alternative C would not conflict with or obstruct implementation of the LARWQCB Basin Plan. Therefore, impacts would be neutral to the Project.

Land Use Planning

The City's Zoning Code (Title 19) regulates land use development in the City. In each zone, the City identifies the intent and purpose, use regulations, development standards, and other applicable regulations. Alternative C would develop the site consistent with the Project's zoning and inconsistent with the established zoning for the site (PF and C/M1). Because Alternative C would be inconsistent with existing zoning and land use designations, impacts would be neutral to the Project.

Noise

The land uses surrounding the Project site consists of a mix of residential, commercial, industrial, and open space properties. Similar to the Project, construction would occur within the area occupied by the Veterans Memorial Park, which is adjacent to residential uses. Construction of commercial and recreational uses would occur on the eastern portion of the Project site, which would be adjacent to an existing hotel. However, the intensity of the development for Alternative C would be similar to the Project. As such, impacts could be minimized with similar mitigation to the Project. In addition, the City of Commerce exempts construction activity noise from standard exterior noise exposure limits, if conducted during specific limited daytime hours. The Ordinance requires noise generating construction activities (including demolition, excavation, and building construction), be restricted to the hours between 7 a.m. and 10 p.m. (City of Commerce, Chapter 19.19.160).

Alternative C would also result in changes to existing noise levels on the Project site by developing new stationary sources of noise, which would involve additional off-site and on-site traffic and could include the introduction of HVAC equipment and loading docks. Alternative C would result in slightly less traffic when compared to the Project, but would still result in impacts. Therefore, even with implementation of mitigation similar to the Project, operational impacts due to Project traffic noise would remain significant and unavoidable.

Alternative C would result in the use of heavy equipment for construction. Adjacent residents to the western portion of the Project site would be significantly impacted by construction vibration; however, mitigation similar to the Project would minimize noise impacts during construction. Therefore, Alternative C would be environmentally neutral to the Project.

Population and Housing

Similar to the Project, Alternative C would generate part-time and full-time jobs associated with the construction of the Project between the start and end of construction. Given the relatively temporary nature of the construction period, the demand for construction employment would likely be met within the existing and future labor market in the City and in Los Angeles County. If construction workers live outside of the City, these workers would likely commute during the temporary construction period. The construction employment generated by the Project is not expected to increase the residential population of the City, and would not induce population growth or require permanent housing.

Alternative C would result in the construction of residential uses and would result in direct growth. Alternative C would involve the construction of commercial uses which could result in employment growth. Because Alternative C would result in slightly less development when compared to the Project, Alternative C would generate less growth, and environmental impacts would be superior to the Project.

Public Services

There are three fire stations in the City available to serve the Project within a 4-mile radius, the closest being LACFD Station 27, located approximately 1.8 miles northwest of the Project site at 6031 Rickenbacker Road. Although the increase in employment and population would increase the demands on LACFD to provide fire protection and emergency services, existing City and County policies and regulations are intended to reduce impacts associated with fire protection facilities. Specifically, Chapter 3.20 of the City of Commerce Municipal Code, and the County of Los Angeles Developer Fee Program, which produce revenue to maintain sufficient fire service levels. Although increased intensities are proposed, the Project site is in an existing urban area with a low fire hazard. As such, similar to the Project, implementation of Alternative C is not likely to expose proposed structures or people to substantial fire risk. Prior to construction, LACFD will review the development plans to ascertain the nature and extent of any additional requirements. Compliance with Fire Code requirements and the approval of the installation plan by the LACFD would mitigate any potential impacts to fire services. Additionally, the Alternative C applicant would be required to pay a development impact fee, which includes funding of additional resources for fire services, to off-set any potential impacts to response times as a result of development. Once operational, Alternative C would be periodically inspected by LACFD. As such, redevelopment of the Project site would not necessitate the construction of new fire facilities or expansion of existing facilities to serve Alternative C.

The LASD contracts with the City to provide police protection. The nearest first response station to the Project site is the East Los Angeles County Sheriff's Station, located approximately 4.8 miles northwest of the Project site at 5019 East 3rd Street within the City of Los Angeles. Implementation of Alternative C would result in an increase in the number of residents and employees on-site, which could increase the demand of police protection in the area. LASD staff has indicated that an officer-to-population ratio of one officer to every 1,000 residents provides the desired level of service for its service area. Implementation of Alternative C would result in construction of residential, commercial and recreational uses. LASD would continue to provide general law enforcement for the Project site. The number of people at the Project site would substantially increase as a result of development compared to existing conditions. Operational funding for LASD is derived from various types of tax revenue which

are deposited in the County's General Fund. The County Board of Supervisors then allocates the revenue for various County-provided public services, including to LASD to maintain staffing and equipment levels to adequately serve Project-related increases in service-call demands (County of Los Angeles 2014). Provided that East Los Angeles County Sheriff's Station is able to maintain a sufficient staff level through the County's General Fund, to service Alternative C and the City's current level of service, significant impacts to law enforcement are not anticipated. Because Alternative C would result in slightly less development when compared to the Project, it is not anticipated to result in the construction of new police facilities or expansion of existing facilities.

The City is served by the Montebello Unified School District. The need for new school facilities is typically associated with a population increase that generates an increase in enrollment large enough to cause schools to be constructed or existing schools to be expanded. Alternative C would result in direct population growth; and would result in growth that may increase demand on K-12 schools. Per state law, development projects are required to pay established school impact fees in accordance with SB 50 at the time of building permit issuance. 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 acct… on the provision of adequate school facilities" (Government Code Section 68998[h]). The fees authorized for collection under SB 50 are conclusively deemed full and adequate mitigation of impacts on school district facilities. The demand on K-12 schools associated with Alternative C would be neutral when compared to the Project.

The Veterans Memorial Park was constructed between 1965 and 1970, and consists of a baseball diamond, two basketball courts, a community center, a parking lot, and miscellaneous outdoor recreational spaces. Due to the age of Veterans Memorial Park, the utility of the improvements made are deteriorating and the outdoor recreational spaces are aging. In addition, the existing community center has been shuttered due to structural and safety issues, and temporary trailers are used in lieu of the community center. Over time, much of the ground surface at the Veterans Memorial Park, which is sitting atop the landfill material from 1954, has settled over the weight of different types of debris. The introduction of residential and commercial uses could result in direct growth, which may place a demand on the existing recreational uses on the site. Due to the City's largely industrial character, as well as the City being built out, there is a lack of parkland and recreational facilities to provide amenities for those living and working in the City. Veterans Memorial Park is one of four neighborhood parks in the City. Part of the proposed Project is to provide a revitalized Veterans Memorial Park with new structures, an all-inclusive playground, a contemporary soccer and baseball youth sports complex, a contemporary library, and ample outdoor green space to maximize opportunities for community events and services. Additionally, the Project would remediate the former on-site landfill to provide a safer environment for future park visitors, as well as residents living in the City. As such, since the Project is redeveloping a deteriorating park space with improved park and open space area of sufficient acreage to meet the City's parkland development objective, the Project would not require additional expansion of existing facilities or construction or new facilities. Because Alternative C would result in similar improvements to the existing park, Alternative C would be environmentally neutral to the Project.

Other public facilities and services provided within the City include library services and City administrative services. An increase in demand for both library services and the City administrative services is generally associated with additional development. Libraries within the City include Bandini Library located approximately 3.1 miles northwest of the Project site at 269 S. Atlantic Boulevard; Bristow Library located approximately 3.7 miles northwest of the Project site at 1466 McDonnell Avenue; Rosewood Library located 2.6 miles northwest of the Project site at 5655 Jillson Street; and Veterans Library located 0.25 mile northwest of the Project site at 6134 Greenwood Avenue. All four of these libraries within the City are ADA Accessible, offer homework help, and have public computers with internet access. These libraries could experience a slight increase in use due to the anticipated increase of commercial development; however, due to the availability of libraries in the City,

surrounding communities, schools, and the County's library system made up of 86 libraries available to the public, the increase in use on any one library is not anticipated to be substantial. Additionally, the County has devised library facilities mitigation fee programs, in which residential projects are required to remit payment pursuant to the County-wide program to account for library-related construction and acquisition costs. Alternative C would be subject to applicable library facilities fees. Therefore, Alternative C would not require the expansion of existing facilities or construction of new facilities.

Although Alternative C would result in slightly less development when compared to the Project, the demand on public services would not be significantly different. Therefore, impacts are considered environmentally neutral to the Project.

Recreation

The existing Veterans Memorial Park was constructed between 1965 and 1970, and consists of a baseball diamond, two basketball courts, a community center, a parking lot, and miscellaneous outdoor recreational spaces. Due to the age of Veterans Memorial Park, the utility of the improvements made are deteriorating and the outdoor recreational spaces are aging. In addition, the existing community center has been shuttered due to structural and safety issues, and temporary trailers are used in lieu of the community center. Over time, much of the ground surface at the Veterans Memorial Park, which is sitting atop the landfill material from 1954, has settled over the weight of different types of debris. The Project proposes to remediate the entire Project site, and redevelop a deteriorating park space with improved park and open space area of sufficient acreage to meet the City's parkland development objective. Because Alternative C would result in similar redevelopment of the Park; impacts would be environmentally neutral to the Project.

Transportation

As described in Section 3.15, implementation of mitigation measures **MM-TRA-1** through **MM-TRAF-9** (with the exception of mitigation measure **MM-TRAF-3**, which is warranted under Future Year 2023 with Project conditions) would reduce the Project's impact to less than significant based on the City's methodology. However, some of these intersections are within the jurisdiction of another public agency. Physical improvements requiring implementation by another public agency will be monitored by the City and implemented to the extent feasible. If the physical improvements are deemed infeasible by the other public agency, cannot be implemented during the design or review process, or implementation is delayed, a significant impact would remain until the improvement is implemented. As the City is not assured of timely implementation of the physical improvement, it is conservatively concluded that impacts at Intersection # 4, 6, 13, 17, 18, 22, and 26 would remain significant and unavoidable. Because of the existing condition of several of these intersections, implementation of Alternative C would also result in the generation of trips that would require mitigation, although slightly less trips would be generated by Alternative C. Because Alternative C would result in development that could likely result in significant and unavoidable impacts, this Alternative is considered neutral to the Project.

The City of Commerce has not yet adopted local VMT criteria. The Project characteristics (e.g., mixed land uses, infill development, its proximity of nearby destinations, pedestrian and bicycle connections, etc.) would encourage localized trips and trips made by walking, biking, carpool, or transit. The Project would, therefore, reduce vehicle trips and trip lengths which results in corresponding reductions in VMT, air quality emissions and transportation-related GHG emissions. Alterative C would result in similar mixed use land uses and would be neutral when compared to the Project.

Because the Project would not result in access, parking and internal circulation, or freeway ramp queuing hazards, and Alternative C would result in similar development to the Project, it is anticipated that Alternative C, by comparison, would also avoid these roadway hazards and impacts would be neutral to the Project.

Alternative C would be required to comply with emergency access requirements and is anticipated to be accessible to emergency responders. All internal roadways on the site would be designed and constructed in accordance with all applicable provisions of the fire code, which includes requirements for width of emergency access routes and turning radii along emergency access routes. Therefore, impacts would be neutral to the Project.

Overall, Alternative C is considered neutral when compared to the Project with regards to Transportation impacts.

Tribal Cultural Resources

There are no resources on the proposed Project site that have been determined by the City to be significant pursuant to the criteria set forth in PRC Section 5024.1. Further, no TCRs were identified in the proposed Project site by California Native American tribes as part of the City's AB 52 and SB 18 notification and consultation process. As no information regarding TCRs has been received by the City, the City has determined that no TCRs are present in the proposed Project site. However, similar to the Project there is still a low potential for unknown subsurface TCRs to be impacted by Alternative C, which could result in a significant impact. Therefore, protocols for the inadvertent discovery of TCRs would be included as mitigation, which would reduce the potential impact to a less-than-significant level with mitigation incorporated. Therefore, impacts would be neutral to the Project.

Utilities and Service Systems

Alternative C would require the construction of water distribution infrastructure (i.e., pipes, valves, meters, etc.) to provide domestic water, firewater, and irrigation water to the Project site. The on-site facilities would be connected to off-site water lines in the adjacent right-of-ways. Similar to the Project, installation of new water laterals would consist of either trenching to the depth of pipe placement or using a variety of different trenchless technology, which causes substantially less ground disturbance. Trenching results in a temporary stockpiling of soil along the length of the trench, pending backfilling, which could result in potential short-term erosion induced siltation of nearby waterways. Trenchless technology only requires temporary stockpiling of soil adjacent to excavations on both ends of long sections of pipe. In addition, Standard Best Management Practices, installed as part of an NPDES-mandated SWPPP, would reduce potential water quality impacts to less than significant levels. As such, Alternative C would not result in the expansion or construction, expansion, or relocation of water infrastructure, and it is unlikely that there would be any significant environmental effects related to the construction of water infrastructure.

With the exception of Project-related sewer tie-ins/lateral connections, the proposed Project is not expected to require or result in the construction, relocation, or expansion of off-site water/wastewater treatment facilities. Therefore, because Alternative C would result in slightly less development, Alternative C is also not anticipated to require the expansion of off-site water/wastewater treatment facilities. All construction work of sewer tie-ins/lateral connections within the City public right-of-way would be subject to City municipal code requirements. Alternative C construction would occur in accordance with the requirements of the City of Commerce Municipal NPDES Permit. In accordance with this permit, BMPs and pollutant control measures would be employed during construction to minimize pollutants and reduce runoff to levels that comply with applicable water quality standards.

Alternative C has the potential to increase the rate and amount stormwater runoff. However, per City Ordinance No. 676, the City of Commerce adopted the Los Angeles County MS4 permit, which requires implementation of LID strategies to limit increases in stormwater runoff. Specifically, as indicated in the City of Commerce LID Guidelines, Alternative C would be required to retain the design storm event through appropriately sized LID BMPs. Construction of LID BMPs would result in a decrease in stormwater runoff volumes and rates, such that Alterative C would not substantially increase the rate or amount of surface runoff. As a result, Alternative C would not result in the construction of new stormwater drainage facilities.

Similar to the Project, upgrades would likely be required with respect to electric power and telecommunication facilities, based on the change in land use (i.e., higher density and increase in onsite technology). Natural gas line upgrades may also be similarly required. However, similar to the Project, such upgrades would be confined to the lateral connections to the Project site and not any centralized facilities. Upgrades would be coordinated with appropriate service providers (such as Southern California Edison, SoCal Gas, etc.) to minimize disruptions on service and would likely be completed by either trenchless technology or completion of open trenching, to the depth of the underground utilities. Alternative C construction would occur in accordance with the requirements of the NPDES General Construction Permit (Order No. 99-08-DWQ) and the City of Commerce Stormwater and Runoff Pollution Control Ordinance (Chapter 6.17 of the City of Commerce Municipal Code). In accordance with the ordinance, BMPs and pollutant control measures would be employed during construction to minimize pollutants and reduce runoff to levels that comply with applicable water quality standards. As a result, impacts associated with upgrades of electric, natural gas, and telecommunication lateral connections to the Project site would be less than significant.

The Project is estimated to generate a potable water demand of 225,322 gpd, which is equivalent to 252.56 AFY. The existing water demand for the Project site is estimated to be 13,654 gpd (15.3 AFY), resulting in a net increase in water demand of approximately 211,668 gpd (237.26 AFY). The 2015 Cal Water East Los Angeles District's UWMP has planned for growth within the East Los Angeles service area over the next 20 years. Cal Water has made an allowance for future demand estimates. Future demand services are based on historical growth rates in the service area. Based on these projections, it would appear that Cal Water has adequately made allowance for water supply demand increases for both domestic and commercial water supply over the next 20 years. As long-term water supply is a significant concern in California, Cal Water East Los Angeles District can increase supply to meet future demands increasing production of groundwater based of safe yield allocation and utilization of water in storage, increasing imported water purchases, if available and there is sufficient storage capacity, and by purchasing additional recycled water, if available. Collectively, these additional options would enable water supply to meet or exceed water demand for Cal Water East Los Angeles for now and into the future. Collectively, the UWMP identities a sufficient and reliable water supply for Cal Water East Los Angeles District's service area, now and into the future, including a sufficient water supply for the proposed Project. Because Alternative C would result in slightly less development, Alternative C would also result in a less than significant impact to potable water demand.

The Project's wastewater generation would represent a very small fraction of the available treatment capacity of the JWPCP, as well as can be served by current wastewater lines, construction of additional wastewater treatment infrastructure would not be required. Because Alternative C would result in slightly less development when compared to the Project, impacts are also anticipated to be less than significant.

Construction of the Alternative C would result in the generation of solid waste such as scrap lumber, concrete, residual wastes, packing materials, plastics, and soils. Per CalGreen, 65 percent of construction and demolition waste must be diverted from landfills. As such, at least 65 percent of all construction and demolition debris from the site would be

diverted. The County also has construction and demolition debris diversion requirements; however, the CALGreen standards require an equivalent level of diversion (65 percent diversion). Any hazardous wastes that are generated during demolition and construction activities would be managed and disposed of in compliance with all applicable Federal, State, and local laws. The remaining 35 percent of construction and demolition material that is not required to be recycled would either be disposed of in a regional landfill or voluntarily recycled at a solid waste facility with available capacity. As described in Section 3.17.1, Existing Conditions, the inert landfill in the County (Azusa Land Reclamation landfill) has a remaining capacity of 55,705,480 tons and is expected to remain open for approximately 28 years, as of 2017. There are other facilities that process inert waste and other construction and demolition waste in the County, which collectively have a maximum daily capacity of 32,496 tons per day and process an average of 8,535 tons per day. There are also numerous processing facilities for construction and demolition wastes throughout the County, the nearest of which is Construction and Demolition Recycling, located at 9309 Rayo Avenue, in South Gate. This facility is 4 miles southwest of the Project site and has a permitted capacity of 3,000 tons of waste per day. This facility has a recycling rate of 80 percent. As such, any construction and demolition debris requiring disposal at an inert waste landfill would be sufficiently accommodated by existing landfills. For the reasons stated above, Alternative C demolition and construction would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals (e.g., CALGreen standards). Impacts would be less than significant.

Once operational, similar to the Project, Alternative C would produce solid waste on a regular basis, in association with operation and maintenance activities. As described in Section 3.17.1, Environmental Setting, the City's commercial uses are currently served by Calmet for solid waste collection and disposal. Calmet would dispose of waste at the nearest landfills, such as the Calabasas or Scholl Canyon Landfill. Calabasas landfill has a remaining capacity of 5,559,480 tons and is expected to remain open for another 10 years. Scholl Canyon landfill has a remaining capacity of 4,697,842 tons and is expected to remain open for another 10 years. Once the Calabasas Landfill and the Scholl Canyon Landfill reach capacity, additional landfills and strategies would be identified so that disposal needs continue to be met. Furthermore, according to the latest annual report for the Countywide Integrated Waste Management Plan, there are landfills used by the County with up to 100 years of remaining life. Because Alternative C would result in slightly less development when compared to the Project, Alternative C is also not anticipated to 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 to utilities and service systems would be neutral when compared to the Project.

4.3.4 Alternative D - Reduced Development Alternative 2

Aesthetics

Alternative D would involve similar levels of development as the Project, with the exception of less residential development, a smaller community center, a smaller movie theater, a smaller grocery store, and no museum space. The land uses surrounding the Project site consists of a mix of residential, commercial, industrial, and open space properties. Therefore, similar to the Project, the development proposed as part of Alternative D would be consistent with the surrounding visual character.

Alternative D would introduce new sources of glare and light similar to the Project. However, the City's Zoning Ordinance and the General Plan policies require new development to avoid glare impacts and be considerate of light trespass on adjacent residential neighborhoods. Therefore, similar to the Project, impacts would be less than significant. Therefore, Alternative D is environmentally neutral to the Project.

Air Quality

Alternative D would involve similar levels of development as the Project, with the exception of less residential development, a smaller community center, a smaller movie theater, a smaller grocery store, and no museum space. Less construction would result in less criteria air pollutants emitted during construction, as compared to the Project. Additionally, Alternative D would result in less building space in operation, which would result in fewer criteria air pollutant emissions associated with building energy. Although Alternative D would generate mobile criteria air pollutant emissions associated with residents and employees, vehicle trips would be less than the Project. The Project would result in residential and employee growth in exceedance of SCAG's 2016 RTP/SCS. Alternative D would also introduce new residential and employee growth; therefore, impacts associated with the consistency of applicable air quality plans would be similar to the Project. Alternative D would result in less construction when compared to the Project and would result in slightly less toxic air contaminant emissions. Because this alternative would introduce new sensitive receptors to the area, roadway health risk impacts would be similar to the Project. From an environmental standpoint, Alternative D is environmentally neutral to the Project in terms of air quality impacts.

Biological Resources

The proposed Project site is devoid of native habitat and is located within an urban setting dominated by dense residential and commercial development and ornamental landscaping, which substantially limits its potential to support sensitive natural communities or riparian habitat. However, one special-status plant, southern tarplant (Centromadia pungens ssp. laevis), has a moderate potential to occur within the Project site because it is known to occur in highly disturbed areas and there are recent records of the species occurring six miles to the north-northeast, adjacent to the Rio Hondo. However, with the implementation of similar mitigation to the Project, Alternative D impacts would be less than significant.

The trees and shrubs in the Project site provide nesting habitat for bird species protected under the Migratory Bird Treaty Act (MBTA; 16 USC 703-712) and California Fish and Game Code Sections 3503.5, 3503, and 3513. Trimming, pruning, and/or removal of trees and shrubs may occur as a result of construction of Alternative C, similar to the Project, and could disrupt breeding activity. However, with the implementation of mitigation measures similar to the Project, impacts would be less than significant with mitigation incorporated. Therefore, Alternative D is environmentally neutral to the Project.

Cultural Resources

No historical resources were identified within the Project site as a result of the CHRIS records search, SLF search, Native American outreach, extensive archival research, field survey, and property significance evaluation. Therefore, similar to the Project, Alternative D would not result in impacts to historic resources. No previously recorded prehistoric or historic-era archaeological resources were identified within the Project site or within a 0.5-mile records search radius of the Project site.

The potential of encountering and impacting unknown archaeological resources during Project implementation is low given the level of disturbance from the mid-twentieth century; however, it is always possible that unanticipated discoveries could be encountered during ground-disturbing activities associated with the proposed Project. If such unanticipated discoveries were encountered, impacts to encountered resources could be potentially significant. However, similar to the Project, with implementation of mitigation which would require that all construction work occurring within 100 feet of the find immediately stop until a qualified archaeologist

(meeting the Secretary of the Interior's Professional Qualification Standards for Archaeology) can evaluate the significance of the find, potentially significant impacts to archaeological resources would be reduced to less-than-significant levels.

No prehistoric or historic burials were identified within the Project site as a result of the records searches. Additionally, the Project site is located within an urbanized area that has been subject to disturbance in the past as a result of former landfill operations. However, Alternative D would comply with Section 7050.5 of the California Health and Safety Code, if human remains are found. Similar to the Project, impacts would be less than significant. Therefore, Alternative D is environmentally neutral to the Project.

Energy

Similar to the Project, natural gas and electricity usage would increase due to the implementation of Alternative D when compared to the existing condition. However, the Project's energy efficiency would go beyond code compliance and would be increased through the LEED certification program or equivalent standards. It is uncertain whether Alternative C would go beyond code compliance, but Alternative D would consume slightly less energy when compared to the Project, as discussed above under Air Quality. Similar to the Project, Alterative D would see an increase in petroleum use during construction and operation, but vehicles would use less petroleum due to advances in fuel economy and potential reduction in VMT over time. Therefore, Alternative D would be environmentally superior to the Project.

Geology and Soils

The Project site is not located within an Alquist-Priolo Earthquake Fault Zone. The closest such zone is located along the Whittier section of the Elsinore Fault Zone, located approximately six miles to the east-northeast of the Project site (CGS 1998). In addition, no known faults traverse the Project site. With the incorporation of CBC procedures aimed at mitigating and minimizing geologic hazards, the Project site would not directly or indirectly cause substantial adverse effects involving strong seismic ground shaking. Although Alternative D could be subject to liquefaction, the Project site would not increase or exacerbate the potential for liquefaction to occur, and therefore, would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismically-related ground failure, including liquefaction.

Alternative D construction would entail excavation and grading of the vacant portion of the Project site, followed by construction of the proposed structures. Prior to development, a Remedial Action Plan, approved by the LARWQCB, would require the excavation and removal of all former landfill debris and contaminated soils to an approximate 20-foot depth. Construction activities could result in temporary, short-term impacts related to soil erosion and possible off-site sedimentation of nearby drainages, including the adjacent Rio Hondo. As such, there is a potential for erosion during the development of the Project site. State and federal NPDES requirements include the preparation and implementation of a SWPPP for projects with cumulative ground disturbance in excess of 1 acre. In compliance with Construction General Permit requirements, the SWPPP would establish erosion and sediment control BMPs for construction activities. In addition, development activities would comply with City grading and erosion control standards to minimize soil erosion. Similar to the Project, no exposed areas subject to erosion would be created or affected by Alternative D. In addition, the majority of the area surrounding the Project site is completely developed and would not be susceptible to indirect erosional processes (e.g., uncontrolled runoff) caused by Alternative D. With the implementation of applicable construction BMPs, impacts would be less than significant related to erosion or loss of topsoil.

Expansive soils are clay-rich soils that shrink when dry and swell when wet. This change in volume can exert substantial pressure on foundations, resulting in structural distress and/or damage. Laboratory testing of on-site soils within the vacant lot portion of the Project site indicates that the soils have a medium expansion potential. In compliance with the CBC and Los Angeles Building Code, risk of structural damage caused by volumetric changes in the subgrade soil would be considered during final design. Slabs on-grade would be designed based on post-grading test results. Because Alternative D buildings and structures would be designed in compliance with the CBC and Los Angeles Building Code, impacts would be less than significant.

Excavations to a depth of 25 feet in the eastern portion of the Project site are anticipated to encounter artificial fill. However, if excavations in the western portion of the Project site encounter previously undisturbed older Quaternary alluvial deposits, Pleistcoene age vertebrate fossils may be impacted. Thus, deep excavations within the western portion of the Project site for subterranean parking could result in a potentially significant paleontological resource impact. However, with the implementation of mitigation measures similar to the Project, impacts would be less than significant with mitigation incorporated.

Because geology and soils impacts are dependent on the conditions of the Project site, impacts would be similar, and therefore neutral, as compared to the Project.

Greenhouse Gas Emissions

Alternative D would involve similar levels of development as the Project, with the exception of less residential development, a smaller community center, and a smaller movie theater. Less construction would result in less GHG emissions during construction as compared to the Project. Additionally, Alternative D would result in less building space in operation, which would result in fewer GHG emissions associated with building energy. Although Alternative D would generate GHG emissions associated with residents and employees, vehicle trips would be less than the Project. Therefore, Alternative D is environmentally superior to the Project.

Hazards and Hazardous Materials

Due to previous landfill activities on the Project site and levels of contamination found within the soil, prior to construction, remediation activities would be required in order to remove soil and refuse containing chemicals of potential concern. The goal of the remediation activities would be to demonstrate that chemicals of concern do not remain within the base or sidewalls of the excavation area at concentrations that could pose a potential threat to human health, groundwater, or ecological receptors. Chemicals of concern include those which were detected in samples of soil and/or landfill material during previous site investigations at levels above EPA regional screening levels. Remediation of the Project site would be required and would involve the excavation and removal of all former landfill debris and contaminated soils to an approximately 20-foot depth. Similar to the Project, once the LARWQCB has deemed remediation to be complete, construction of Alternative D would proceed. Once remediated, construction activities on the Project site would involve the use and storage of commonly used hazardous materials such as gasoline, diesel fuel, lubricating oil, grease, solvents, and other vehicle and equipment maintenance fluids. Compliance with all applicable codes and regulations concerning the handling, storage and disposal of hazardous waste, would reduce the potential to release contaminants. Alternative D would likely result in the increase in routine transport, use, and disposal of hazardous materials and/or wastes generated during remediation, construction, and operation, all hazardous materials would be transported and handled in accordance with all federal, state, and local laws regulating the management and use of hazardous materials. Alternative D may have the potential to result in a significant hazard to the public or the environment. However, with the implementation of mitigation similar to the Project, potential impacts would be reduced to less than significant level.

Soil remediation would be required in order to remove all contaminated soil and landfill/waste material, which currently underlies the site. While removing, transporting, and disposing of the sites contaminated soils has the potential to result in accidental conditions, a Remedial Action Plan would be required and would outline specific methodologies for material sorting and stockpiling, required regulatory compliance, waste material profiling and disposal, as well as a site-specific HASP to protect workers and the environment. Similar to the Project, compliance with the site specific HASP and Remedial Action Plan, including the contingency plan, would ensure the safety of the public and the environment in the event of an accidental release of hazardous materials.

The nearest school to the Project site is Ellen Ochoa Prep School (9th through 12th grade), located approximately 0.6 mile east of the Project site. Similar to the Project, while remediation, construction, and operation would increase the amount of hazardous materials transported and used on-site, there is no school located within 0.25 mile, and the quantities and type of hazardous materials handled would be minimal and would not present substantial potential for adverse effects.

The Project site is located on several lists of hazardous material sites. The site is listed as a facility that generated asbestos-containing waste, unspecified aqueous solution, and other inorganic solids. This site is also listed for a leaking underground storage tank case, which was opened in August 1997 and closed in March 1998. Based on the regulatory status, the leaking underground storage tank is not anticipated to affect the environmental condition of the property. However, the past presence of landfill operations at the Project site constitutes a REC. However, with the implementation of a Remedial Action Plan, potential impacts would be reduced to less than significant level. Therefore, because a similar plan would be required for the Project, impacts are neutral when compared to the Project.

Hydrology and Water Quality

Similar to the Project, Alternative D would include excavation and construction activities which have the potential to adversely affect the quality of stormwater runoff through increases in turbidity, sedimentation, and construction-related pollutants. Implementation of an approved construction SWPPP would reduce impacts associated with erosion-induced siltation of downstream drainages and incidental spills of petroleum products, by providing preventative and management BMPs, such that impacts would be less than significant. Land uses on-site that could contribute pollutants to stormwater runoff in the long term include uncovered parking areas (through small fuel and/or fluid leaks), uncovered refuse storage/management areas, landscape/open space areas (if pesticides/herbicides and fertilizers are improperly applied), and general litter/debris (e.g., generated during facility loading/unloading activities). There is the potential for wastes to be generated, stored and/or handled on-site. To the extent these wastes are stored in areas exposed to stormwater runoff, there could be water quality impacts as a result. Implementation of a Remedial Action Plan, besides ensuring proper characterization and disposal, would also ensure such wastes are not exposed to stormwater runoff. However, as a permittee subject to the MS4 permit, the City of Commerce is responsible for ensuring that all new development and redevelopment projects, including Alternative D, comply with the City of Commerce LID Guidelines. Therefore, Alternative D would be subject to the implementation of BMPs, and in combination with the implementation of water quality-related features such as zoned irrigation, water-efficient landscaping, and stormwater reuse, would reduce potential operational water quality impacts by filtering out pollutants prior to discharge from the Project site, such that Alternative D operations and maintenance would not violate any water quality standards or waste discharge requirements.

Eleven groundwater monitoring wells located at the intersection of Slauson Avenue and Telegraph Road contained groundwater at depths between 72 and 110 feet below ground surface, as measured between 2002

and 2010. Since the Project site currently and upon buildout of Alternative D will continue to discharge stormwater runoff to permeable flood control basins located between the Project site and Rio Hondo Channel, groundwater recharge will continue to occur mainly off-site. The Project does not propose to directly extract groundwater during the construction or operation of the proposed Project, and no direct adverse impacts to groundwater are expected to occur.

The 2015 Cal Water East Los Angeles District UWMP has planned for growth within the East Los Angeles service area over the next 20 years. Cal Water has made an allowance for future demand estimates. As long-term water supply is a significant concern in California, Cal Water East Los Angeles District can increase supply to meet future demands increasing production of groundwater based of safe yield allocation and utilization of water in storage, increasing imported water purchases, if available and there is sufficient storage capacity, and by purchasing additional recycled water, if available. Collectively, these additional options would enable water supply to meet or exceed water demand for Cal Water East Los Angeles for now and into the future. Therefore, Alternative D is not anticipated to result in impacts to groundwater, similar to the Project.

Similar to the Project, Alternative D is not located within an area identified for flood risk in the FEMA Flood Insurance Rate Map. To the south of the Project site lies an area of 0.2 percent flood risk between the Project site and the Rio Hondo Channel. As the Project site lies adjacent and parallel to the direction of flood flow, but outside the zone of flood risk, the impact of Alternative D to impede or redirect flood flows would be less than significant.

As noted above, Alternative D is not expected to violate any water quality standards and measures would be taken both during construction and throughout operation to prevent potential contaminants from being discharged from the site by runoff. Through compliance with LARWQCB requirements and a NPDES permit, and implementation of a SWPPP (construction phase) and LID Plan (operational phase), Alternative D would not conflict with or obstruct implementation of the LARWQCB Basin Plan. Therefore, impacts would be neutral to the Project.

Land Use Planning

The City's Zoning Code (Title 19) regulates land use development in the City. In each zone, the City identifies the intent and purpose, use regulations, development standards, and other applicable regulations. Alternative D would develop the site consistent with the Project's zoning and inconsistent with the established zoning for the site (PF and C/M1). Because Alternative D would be inconsistent with existing zoning and land use designations, impacts would be neutral to the Project.

Noise

The land uses surrounding the Project site consists of a mix of residential, commercial, industrial, and open space properties. Similar to the Project, construction would occur within the area occupied by the Veterans Memorial Park, which is adjacent to residential uses. Construction of commercial and recreational uses would occur on the eastern portion of the Project site, which would be adjacent to an existing hotel. However, the intensity of the development for Alternative D would be similar to the Project. As such, impacts could be minimized with similar mitigation to the Project. In addition, the City of Commerce exempts construction activity noise from standard exterior noise exposure limits, if conducted during specific limited daytime hours. The Ordinance requires noise generating construction activities (including demolition, excavation, and building construction), be restricted to the hours between 7 a.m. and 10 p.m. (City of Commerce, Chapter 19.19.160).

Alternative D would also result in changes to existing noise levels on the Project site by developing new stationary sources of noise, which would involve additional off-site and on-site traffic and could include the introduction of HVAC equipment and loading docks. Alternative D would result in slightly less traffic when compared to the Project, but would still result in impacts. Therefore, even with implementation of mitigation similar to the Project, operational impacts due to Project traffic noise would remain significant and unavoidable..

Alternative D would result in the use of heavy equipment for construction. Adjacent residents to the western portion of the Project site would be significantly impacted by construction vibration; however, mitigation similar to the Project would minimize noise impacts during construction. Therefore, Alternative D would be environmentally neutral to the Project.

Population and Housing

Similar to the Project, Alternative D would generate part-time and full-time jobs associated with the construction of the Project between the start and end of construction. Given the relatively temporary nature of the construction period, the demand for construction employment would likely be met within the existing and future labor market in the City and in Los Angeles County. If construction workers live outside of the City, these workers would likely commute during the temporary construction period. The construction employment generated by the Project is not expected to increase the residential population of the City and would not induce population growth or require permanent housing.

Alternative D would result in the construction of residential uses and would result in direct growth. Alternative D would involve the construction of commercial uses which could result in employment growth. Because Alternative D would result in slightly less development when compared to the Project, Alternative D would generate less growth, and environmental impacts would be superior to the Project.

Public Services

There are three fire stations in the City available to serve the Project within a 4-mile radius, the closest being LACFD Station 27, located approximately 1.8 miles northwest of the Project site at 6031 Rickenbacker Road. Although the increase in employment and population would increase the demands on LACFD to provide fire protection and emergency services, existing City and County policies and regulations are intended to reduce impacts associated with fire protection facilities. Specifically, Chapter 3.20 of the City of Commerce Municipal Code, and the County of Los Angeles Developer Fee Program, which produce revenue to maintain sufficient fire service levels. Although increased intensities are proposed, the Project site is in an existing urban area with a low fire hazard. As such, similar to the Project, implementation of Alternative D is not likely to expose proposed structures or people to substantial fire risk. Prior to construction, LACFD will review the development plans to ascertain the nature and extent of any additional requirements. Compliance with Fire Code requirements and the approval of the installation plan by the LACFD would mitigate any potential impacts to fire services. Additionally, the Alternative D applicant would be required to pay a development impact fee, which includes funding of additional resources for fire services, to off-set any potential impacts to response times as a result of development. Once operational, Alternative D would be periodically inspected by LACFD. As such, redevelopment of the Project site would not necessitate the construction of new fire facilities or expansion of existing facilities to serve Alternative D.

The LASD contracts with the City to provide police protection. The nearest first response station to the Project site is the East Los Angeles County Sheriff's Station, located approximately 4.8 miles northwest of the Project site at 5019 East 3rd Street within the City of Los Angeles. Implementation of Alternative D would result in an increase in

the number of residents and employees on-site, which could increase the demand of police protection in the area. LASD staff has indicated that an officer-to-population ratio of one officer to every 1,000 residents provides the desired level of service for its service area. Implementation of Alternative D would result in construction of residential, commercial and recreational uses. LASD would continue to provide general law enforcement for the Project site. The number of people at the Project site would substantially increase as a result of development compared to existing conditions. Operational funding for LASD is derived from various types of tax revenue which are deposited in the County's General Fund. The County Board of Supervisors then allocates the revenue for various County-provided public services, including to LASD to maintain staffing and equipment levels to adequately serve Project-related increases in service-call demands (County of Los Angeles 2014). Provided that East Los Angeles County Sheriff's Station is able to maintain a sufficient staff level through the County's General Fund, to service Alternative D and the City's current level of service, significant impacts to law enforcement are not anticipated. Because Alternative D would result in slightly less development when compared to the Project, it is not anticipated to result in the construction of new police facilities or expansion of existing facilities.

The City is served by the Montebello Unified School District. The need for new school facilities is typically associated with a population increase that generates an increase in enrollment large enough to cause schools to be constructed or existing schools to be expanded. Alternative D would result in direct population growth; and would result in growth that may increase demand on K-12 schools. Per state law, development projects are required to pay established school impact fees in accordance with SB 50 at the time of building permit issuance. 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 acct… on the provision of adequate school facilities" (Government Code Section 68998[h]). The fees authorized for collection under SB 50 are conclusively deemed full and adequate mitigation of impacts on school district facilities. The demand on K-12 schools associated with Alternative D would be neutral when compared to the Project.

The Veterans Memorial Park was constructed between 1965 and 1970, and consists of a baseball diamond, two basketball courts, a community center, a parking lot, and miscellaneous outdoor recreational spaces. Due to the age of Veterans Memorial Park, the utility of the improvements made are deteriorating and the outdoor recreational spaces are aging. In addition, the existing community center has been shuttered due to structural and safety issues, and temporary trailers are used in lieu of the community center. Over time, much of the ground surface at the Veterans Memorial Park, which is sitting atop the landfill material from 1954, has settled over the weight of different types of debris. The introduction of residential and commercial uses could result in direct growth, which may place a demand on the existing recreational uses on the site. Due to the City's largely industrial character, as well as the City being built out, there is a lack of parkland and recreational facilities to provide amenities for those living and working in the City. Veterans Memorial Park is one of four neighborhood parks in the City. Part of the proposed Project is to provide a revitalized Veterans Memorial Park with new structures, an all-inclusive playground, a contemporary soccer and baseball youth sports complex, a contemporary library, and ample outdoor green space to maximize opportunities for community events and services. Additionally, the Project would remediate the former on-site landfill to provide a safer environment for future park visitors, as well as residents living in the City. As such, since the Project is redeveloping a deteriorating park space with improved park and open space area of sufficient acreage to meet the City's parkland development objective, the Project would not require additional expansion of existing facilities or construction or new facilities. Because Alternative D would result in similar improvements to the existing park, Alternative C would be environmentally neutral to the Project.

Other public facilities and services provided within the City include library services and City administrative services. An increase in demand for both library services and the City administrative services is generally

associated with additional development. Libraries within the City include Bandini Library located approximately 3.1 miles northwest of the Project site at 269 S. Atlantic Boulevard; Bristow Library located approximately 3.7 miles northwest of the Project site at 1466 McDonnell Avenue; Rosewood Library located 2.6 miles northwest of the Project site at 5655 Jillson Street; and Veterans Library located 0.25 mile northwest of the Project site at 6134 Greenwood Avenue. All four of these libraries within the City are ADA Accessible, offer homework help, and have public computers with internet access. These libraries could experience a slight increase in use due to the anticipated increase of commercial development; however, due to the availability of libraries in the City, surrounding communities, schools, and the County's library system made up of 86 libraries available to the public, the increase in use on any one library is not anticipated to be substantial. Additionally, the County has devised library facilities mitigation fee programs, in which residential projects are required to remit payment pursuant to the County-wide program to account for library-related construction and acquisition costs. Alternative D would be subject to applicable library facilities fees. Therefore, Alternative D would not require the expansion of existing facilities or construction of new facilities.

Although Alternative D would result in slightly less development when compared to the Project the demand on public services would not be significantly different. Therefore, impacts are considered environmentally neutral to the Project.

Recreation

The existing Veterans Memorial Park was constructed between 1965 and 1970, and consists of a baseball diamond, two basketball courts, a community center, a parking lot, and miscellaneous outdoor recreational spaces. Due to the age of Veterans Memorial Park, the utility of the improvements made are deteriorating and the outdoor recreational spaces are aging. In addition, the existing community center has been shuttered due to structural and safety issues, and temporary trailers are used in lieu of the community center. Over time, much of the ground surface at the Veterans Memorial Park, which is sitting atop the landfill material from 1954, has settled over the weight of different types of debris. The Project proposes to remediate the entire Project site, and redevelop a deteriorating park space with improved park and open space area of sufficient acreage to meet the City's parkland development objective. Because Alternative D would result in similar redevelopment of the Park, impacts would be environmentally neutral to the Project.

Transportation

As described in Section 3.15, implementation of mitigation measures **MM-TRA-1** through **MM-TRAF-9** (with the exception of mitigation measure **MM-TRAF-3**, which is warranted under Future Year 2023 with Project conditions) would reduce the Project's impact to less than significant based on the City's methodology. However, some of these intersections are within the jurisdiction of another public agency. Physical improvements requiring implementation by another public agency will be monitored by the City and implemented to the extent feasible. If the physical improvements are deemed infeasible by the other public agency, cannot be implemented during the design or review process, or implementation is delayed, a significant impact would remain until the improvement is implemented. As the City is not assured of timely implementation of the physical improvement, it is conservatively concluded that impacts at Intersection # 4, 6, 13, 17, 18, 22, and 26 would remain significant and unavoidable. Because of the existing condition of several of these intersections, implementation of Alternative D would also result in the generation of trips that would require mitigation, although slightly less trips would be generated by Alternative D. Because Alternative D would result in development that could likely result in significant and unavoidable impacts, this Alternative is considered neutral to the Project.

The City of Commerce has not yet adopted local VMT criteria. The Project characteristics (e.g., mixed land uses, infill development, its proximity of nearby destinations, pedestrian and bicycle connections, etc.) would encourage localized trips and trips made by walking, biking, carpool, or transit. The Project would, therefore, reduce vehicle trips and trip lengths which results in corresponding reductions in VMT, air quality emissions and transportation-related GHG emissions. Alterative D would result in similar mixed-use land uses and would be neutral when compared to the Project.

Because the Project would not result in access, parking and internal circulation, or freeway ramp queuing hazards, and Alternative C would result in similar development to the Project, it is anticipated that Alternative D, by comparison, would also avoid these roadway hazards and impacts would be neutral to the Project.

Alternative D would be required to comply with emergency access requirements and is anticipated to be accessible to emergency responders. All internal roadways on the Project site would be designed and constructed in accordance with all applicable provisions of the fire code, which includes requirements for width of emergency access routes and turning radii along emergency access routes. Therefore, impacts would be neutral to the Project.

Overall, Alternative D is considered neutral when compared to the Project with regards to Transportation.

Tribal Cultural Resources

There are no resources on the proposed Project site that have been determined by the City to be significant pursuant to the criteria set forth in PRC Section 5024.1. Further, no TCRs were identified in the proposed Project site by California Native American tribes as part of the City's AB 52 and SB 18 notification and consultation process. As no information regarding TCRs has been received by the City, the City has determined that no TCRs are present in the proposed Project site. However, similar to the Project there is still a low potential for unknown subsurface TCRs to be impacted by Alternative D, which could result in a significant impact. Therefore, protocols for the inadvertent discovery of TCRs would be included as mitigation, which would reduce the potential impact to a less-than-significant level with mitigation incorporated. Therefore, impacts would be neutral to the Project.

Utilities and Service Systems

Alternative D would require the construction of water distribution infrastructure (i.e., pipes, valves, meters, etc.) to provide domestic water, firewater, and irrigation water to the Project site. The on-site facilities would be connected to off-site water lines in the adjacent rights-of-way. Similar to the Project, installation of new water laterals would consist of either trenching to the depth of pipe placement or using a variety of different trenchless technology, which causes substantially less ground disturbance. Trenching results in a temporary stockpiling of soil along the length of the trench, pending backfilling, which could result in potential short-term erosion induced siltation of nearby waterways. Trenchless technology only requires temporary stockpiling of soil adjacent to excavations on both ends of long sections of pipe. In addition, Standard Best Management Practices, installed as part of an NPDES-mandated SWPPP, would reduce potential water quality impacts to less than significant levels. As such, Alternative D would not result in the expansion or construction, expansion, or relocation of water infrastructure, and it is unlikely that there would be any significant environmental effects related to the construction of water infrastructure.

With the exception of Project-related sewer tie-ins/lateral connections, the proposed Project is not expected to require or result in the construction, relocation, or expansion of off-site water/wastewater treatment facilities. Therefore, because Alternative D would result in slightly less development, Alternative D is also not anticipated to require the

expansion of off-site water/wastewater treatment facilities. All construction work of sewer tie-ins/lateral connections within the City public right-of-way would be subject to City municipal code requirements. Alternative C construction would occur in accordance with the requirements of the City of Commerce Municipal NPDES Permit. In accordance with this permit, BMPs and pollutant control measures would be employed during construction to minimize pollutants and reduce runoff to levels that comply with applicable water quality standards.

Alternative D has the potential to increase the rate and amount stormwater runoff. However, per City Ordinance No. 676, the City of Commerce adopted the Los Angeles County MS4 permit, which requires implementation of LID strategies to limit increases in stormwater runoff. Specifically, as indicated in the City of Commerce LID Guidelines, Alternative D would be required to retain the design storm event through appropriately sized LID BMPs. Construction of LID BMPs would result in a decrease in stormwater runoff volumes and rates, such that Alterative D would not substantially increase the rate or amount of surface runoff. As a result, Alternative D would not result in the construction of new stormwater drainage facilities.

Similar to the Project, upgrades would likely be required with respect to electric power and telecommunication facilities, based on the change in land use (i.e., higher density and increase in onsite technology). Natural gas line upgrades may also be similarly required. However, similar to the Project, such upgrades would be confined to the lateral connections to the Project site and not any centralized facilities. Upgrades would be coordinated with appropriate service providers (such as SCE, SoCal Gas, etc.) to minimize disruptions on service and would likely be completed by either trenchless technology or completion of open trenching, to the depth of the underground utilities. Alternative D construction would occur in accordance with the requirements of the NPDES General Construction Permit (Order No. 99-08-DWQ) and the City of Commerce Stormwater and Runoff Pollution Control Ordinance (Chapter 6.17 of the City of Commerce Municipal Code). In accordance with the ordinance, BMPs and pollutant control measures would be employed during construction to minimize pollutants and reduce runoff to levels that comply with applicable water quality standards. As a result, impacts associated with upgrades of electric, natural gas, and telecommunication lateral connections to the Project site would be less than significant.

The Project is estimated to generate a potable water demand of 225,322 gpd, which is equivalent to 252.56 AFY. The existing water demand for the Project site is estimated to be 13,654 gpd (15.3 AFY), resulting in a net increase in water demand of approximately 211,668 gpd (237.26 AFY). The 2015 Cal Water East Los Angeles District's UWMP has planned for growth within the East Los Angeles service area over the next 20 years. Cal Water has made an allowance for future demand estimates. Future demand services are based on historical growth rates in the service area. Based on these projections, it would appear that Cal Water has adequately made allowance for water supply demand increases for both domestic and commercial water supply over the next 20 years. As long-term water supply is a significant concern in California, Cal Water East Los Angeles District can increase supply to meet future demands increasing production of groundwater based of safe yield allocation and utilization of water in storage, increasing imported water purchases, if available and there is sufficient storage capacity, and by purchasing additional recycled water, if available. Collectively, these additional options would enable water supply to meet or exceed water demand for Cal Water East Los Angeles for now and into the future. Collectively, the UWMP identities a sufficient and reliable water supply for Cal Water East Los Angeles District's service area, now and into the future, including a sufficient water supply for the proposed Project. Because Alternative D would result in slightly less development, Alternative D would also result in a less than significant impact to potable water demand.

The Project's wastewater generation would represent a very small fraction of the available treatment capacity of the JWPCP, as well as can be served by current wastewater lines, construction of additional wastewater treatment

infrastructure would not be required. Because Alternative D would result in slightly less development when compared to the Project, impacts are also anticipated to be less than significant.

Construction of the Alternative D would result in the generation of solid waste such as scrap lumber, concrete, residual wastes, packing materials, plastics, and soils. Per CalGreen, 65 percent of construction and demolition waste must be diverted from landfills. As such, at least 65 percent of all construction and demolition debris from the site would be diverted. The County also has construction and demolition debris diversion requirements; however, the CALGreen standards require an equivalent level of diversion (65 percent diversion). Any hazardous wastes that are generated during demolition and construction activities would be managed and disposed of in compliance with all applicable Federal, State, and local laws. The remaining 35 percent of construction and demolition material that is not required to be recycled would either be disposed of in a regional landfill or voluntarily recycled at a solid waste facility with available capacity. As described in Section 3.17.1, Existing Conditions, the inert landfill in the County (Azusa Land Reclamation landfill) has a remaining capacity of 55,705,480 tons and is expected to remain open for approximately 28 years, as of 2017. There are other facilities that process inert waste and other construction and demolition waste in the County, which collectively have a maximum daily capacity of 32,496 tons per day and process an average of 8,535 tons per day. There are also numerous processing facilities for construction and demolition wastes throughout the County, the nearest of which is Construction and Demolition Recycling, located at 9309 Rayo Avenue, in South Gate. This facility is 4 miles southwest of the Project site and has a permitted capacity of 3,000 tons of waste per day. This facility has a recycling rate of 80 percent. As such, any construction and demolition debris requiring disposal at an inert waste landfill would be sufficiently accommodated by existing landfills. For the reasons stated above, Alternative D demolition and construction would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals (e.g., CALGreen standards). Impacts would be less than significant.

Once operational, similar to the Project, Alternative D would produce solid waste on a regular basis, in association with operation and maintenance activities. As described in Section 3.17.1, Environmental Setting, the City's commercial uses are currently served by Calmet for solid waste collection and disposal. Calmet would dispose of waste at the nearest landfills, such as the Calabasas or Scholl Canyon Landfill. Calabasas landfill has a remaining capacity of 5,559,480 tons and is expected to remain open for another 10 years. Scholl Canyon landfill has a remaining capacity of 4,697,842 tons and is expected to remain open for another 10 years. Once the Calabasas Landfill and the Scholl Canyon Landfill reach capacity, additional landfills and strategies would be identified so that disposal needs continue to be met. Furthermore, according to the latest annual report for the Countywide Integrated Waste Management Plan, there are landfills used by the County with up to 100 years of remaining life. Because Alternative D would result in slightly less development when compared to the Project, Alternative D is also not anticipated to 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 to utilities and service systems would be neutral when compared to the Project.

4.4 Environmentally Superior Alternative

Table 4-4 shows that the environmentally superior alternative under CEQA is the No Project/No Development Alternative. However, when the No Project Alternative is environmentally superior, CEQA mandates another alternative be identified (14 CCR 15126.6(e)(2)). All of the Alternatives would lessen the overall environmental impacts when compared to the proposed Project; however, none would avoid the significant and unavoidable

impacts of the Project. While Alternative C and Alternative D would involve less development, and therefore, result in slightly less overall impacts to the environment, these Alternatives would not help achieve all of the Project objectives. Specifically, development of a smaller community center under these Alternatives would not fully allow for a revitalized Veterans Memorial Park with new structures, an all-inclusive playground, a contemporary soccer and baseball youth sports complex, a contemporary library, and ample outdoor green space to maximize opportunities for community events and services. As such, Alternative D would involve the least amount of development and would result in slightly less impacts when compared to the Project; and as such, is the environmentally superior alternative.

Table 4-4. Comparison of Alternatives

Resource Topic	Alternative A No Project/Existing Land Use Plan	Alternative B No Project/No Development	Alternative C Reduced Development Alternative 1	Alternative D Reduced Development Alternative 2
Aesthetics	−1	−1	0	0
Air Quality	+1	+1	0	0
Biological Resources	0	+1	0	0
Cultural Resources	0	+1	0	0
Energy	+1	+1	+1	+1
Geology and Soils	0	+1	0	0
Greenhouse Gas Emissions	+1	+1	+1	+1
Hazards and Hazardous Materials	0	−1	0	0
Hydrology and Water Quality	0	+1	0	0
Land Use Planning	+1	+1	0	0
Noise	+1	+1	0	0
Population and Housing	+1	+1	+1	+1
Public Services	0	0	0	0
Recreation	-1	−1	0	0
Transportation	0	+1	0	0
Tribal Cultural Resources	0	+1	0	0
Utilities and Service Systems	0	+1	0	0
Total[a]	4	10	3	3
Eliminates a significant impact of the proposed project?	Yes	Yes	No	No

Notes: 0 = environmentally neutral; −1 = environmentally inferior; +1 = environmentally superior.

[a] Sum of superior findings with inferior findings factored in.

4.5 References

Comstock. 2020. “Proposed Alternatives.” January 2, 2020.

5 Other CEQA Considerations

This chapter of the Environmental Impact Report (EIR) for the proposed Modelo Project (Project) has been prepared in furtherance of the content requirements set forth in State CEQA Guidelines Section 15126.2 and 15128. As such, this chapter discusses:

- Significant Unavoidable Environmental Impacts (Section 5.1)
- Significant Irreversible Environmental Effects (Section 5.2)
- Growth Inducing Impacts (Section 5.3)
- Effects Found Not to Be Significant (Section 5.4)

5.1 Significant Unavoidable Environmental Impacts

This section is prepared in accordance with Section 15126.2(c) of the State CEQA Guidelines, which requires the discussion of any significant environmental effects that cannot be avoided if a project is implemented. These include impacts that can be mitigated, but cannot be reduced to a less than significant level. An analysis of environmental impacts caused by the proposed Project has been conducted and is contained in this EIR. Seventeen issue areas were analyzed in detail in Chapter 3.0. According to the environmental impact analysis presented in Chapter 3.0, the proposed Project could result in significant and unavoidable adverse impacts, which cannot be avoided, related to conflict with an applicable air quality plan; resulting in the 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; and, conflict with a program, plan, ordinance, or policy addressing the circulation system.

5.1.1 Significant Environmental Effects Which Cannot be Avoided

Air Quality

As previously discussed in Section 3.2, Air Quality, the Project site is located within the South Coast Air Basin (SCAB) under the jurisdiction of the South Coast Air Quality Management District (SCAQMD), which is the local agency responsible for administration and enforcement of air quality regulations for the area. The SCAQMD has established criteria for determining consistency with the Air Quality Management Plan (AQMP), currently the 2016 AQMP. As the proposed Project would contribute to local population and employment growth and associated vehicle miles traveled (VMT) that is not anticipated for the Project site in the existing General Plan, the proposed Project is not accounted for in the state implementation plan (SIP) and the regional air quality strategy (RAQS), and the proposed Project potentially would not be consistent with local air quality plans. The impact would be eliminated once the SCAQMD completes a future update to the RAQS, which would be based on updated SCAG population and growth projections for the region. Mitigation measure **MM-AQ-1** is provided to ensure population growth and vehicle trips generated from the proposed Project are provided to SCAG for incorporation into the future RAQS update. This update will likely occur following Project approval; therefore, at this time the impact is considered significant and unavoidable.

Noise

As previously discussed in Section 3.11, Noise, the proposed Project would generate traffic along roadways in the community surrounding the Project site. Many of the roadways evaluated in the Transportation Impact Study (TIS) serve commercial and industrial areas, which are not considered noise-sensitive in relation to noise from roadway traffic. However, a total of 18 roadway segments evaluated in the TIS are aligned along existing residential areas. Potential noise effects from vehicular traffic were assessed. The City does not have a specific criterion for evaluating the significance of Project-related increases in off-site traffic noise levels at residences or noise-sensitive areas. As such, for the purposes of the noise impact analysis, traffic noise level increases are considered significant if they exceed ambient traffic noise levels by five dB or more, or cause noise levels to exceed the 65 dBA CNEL noise threshold. An increase or decrease in noise levels of three dBA is the minimum before any noticeable change in community response would be expected (Caltrans 1998). Along Zindell Avenue, the Project would result in an increase of 7 dBA CNEL, both in the existing plus project scenario and in the 2040 plus project scenario. While overall exterior noise exposure would remain within the City's maximum exterior limits, the increase in traffic noise would be clearly noticeable to residents along this block. Project-related traffic noise increases along Zindell Avenue, are therefore, considered potentially significant. The implementation of mitigation measure **MM-NOI-4** would help ensure that interior noise levels created by Project traffic are not increased inside residences located along Zindell Avenue. However, because the City is not able to ensure acceptance/compliance of a window upgrade offer by property owners, Project-related traffic noise exposure level increases for residences along Zindell Avenue would remain significant and unavoidable.

Transportation

As previously discussed in Section 3.15, Transportation, trip generation estimates for the Project were developed based on the rates documented in Trip Generation, 9th Edition, Trip Generation, 10th Edition and Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region. The Project trip generation estimates were then added to Existing (Year 2019) and Future (Year 2023) traffic conditions to determine the intersection impacts. As described in Section 3.15, eight of the 27 intersections would be significantly impacted under the Existing with Project Conditions, and nine of the 27 analyzed intersections would be significantly impacted under the Future with Project Conditions. For Caltrans intersections, the proposed Project would significantly impact two intersections under Existing with Project Conditions, three intersections under Future (Year 2023) with Project Conditions, and three intersections under Figure (Year 2040) with Project Conditions. Implementation of mitigations measures is proposed for each of the significantly impacted intersections. Although implementation of mitigation measures **MM-TRA-1** through **MM-TRA-9** at each of the intersections, described in Section 3.15.7, would sufficiently mitigate the impact of Project traffic, not all proposed mitigation measures are located within the City of Commerce. Physical improvements requiring implementation by another public agency will be monitored by the City and implemented to the extent feasible. If the physical improvements are deemed infeasible by the other public agency, cannot be implemented during the design or review process, or implementation is delayed, a significant impact would remain until the improvement is implemented. As the City is not assured of timely implementation of the physical improvement, it is conservatively concluded that impacts would be significant and unavoidable.

5.1.2 Reasons Why the Project is Being Proposed, Notwithstanding Their Effect

In addition to identification of a project's significant unavoidable impacts, Section 15126.2(c) of the State CEQA Guidelines states that where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described.

As discussed in Section 2, Project Description, the proposed project involves the demolition of the existing Veterans Memorial Park (which is currently in an advanced state of disrepair) and an adjacent vacant parcel and the redevelopment of the Project site to accommodate a mixed-use development. The proposed Project would include the construction of 850 residential units, 165,000 square feet of commercial uses, a 77,050-square-foot community center, a 5,000-square-foot museum, and approximately 4.75 acres of parks and open space. The proposed Project would redevelop the Veterans Memorial Park, which has been deteriorating, and a vacant parcel. The parcels comprising the Project site were previously part of a construction borrow-pit type of landfill created for, and during, the construction of the I-5 freeway. The Project is proposed to revitalize these parcels, create new open space and recreational opportunities, and provide a diversified housing stock in a jobs-rich area. Additionally, the proposed Project seeks to create a pedestrian-friendly contemporary village for people to live and recreate at. Due to its location near the existing Metro bus service and the future Metro Gold Line extension planned for Washington Boulevard in Pico Rivera, the proposed Project would promote transit use amongst residences and visitors. Further, the new development would use environmentally friendly features to reduce the Project's overall carbon footprint.

As discussed above, the proposed Project would result in significant and unavoidable impacts related to air quality, noise, and transportation. Four alternatives were considered in Section 4, Alternatives. Alternative A - No Project/Existing Land Use Plan Alternative and Alternative B - No Project/No Development Alternative would reduce significant and unavoidable impacts associated with air quality. Alternative C - Reduced Development Alternative 1 and Alternative D - Reduced Development Alternative 2 would not reduce any significant and unavoidable impacts associated with the proposed Project. As discussed in Section 4, Alternatives, the proposed Project, Alternative B – No Project/No Development is the environmentally superior alternative. However, when the No Project Alternative is environmentally superior, CEQA mandates another alternative be identified (14 CCR 15126.6(e)(2)). Although no other Alternatives avoid the significant and unavoidable impacts of the Project, Alternative D would involve the least amount of development and would result in slightly less impacts when compared to the Project. This Draft EIR includes mitigation measures that reduce the potential impacts associated with the proposed Project to the extent feasible. Overall, the proposed Project presents several benefits that override the limited adverse effects it may have on the environment.

5.2 Significant Irreversible Environmental Changes

Section 15126.2(d) of the State CEQA Guidelines requires that an EIR analyze the extent to which implementation of the proposed Project would impact the environment and commit nonrenewable resources. This evaluation is required for certain types of discretionary approvals (see Section 15127(a) of the State CEQA Guidelines), including the plan amendment. The proposed Project would require the Lead Agency's (City of Commerce) approval for a General Plan Amendment to reflect the new land uses permitted on the Project site. The Project site would be re-designated from Public Facility (PF) and Commercial Manufacturing (C/M1) to Public Open Space, Commercial Retail, and Residential.

The proposed Project involves the construction of a mixed-use development on an infill site and an adjacent vacant site previously utilized as a landfill for construction debris; both sites are located in an urbanized area. The Project

would not involve development of previously undeveloped or open space lands or the extension of roads or infrastructure to previously undeveloped areas. Rather, the proposed land uses (residential, commercial, and open space) are consistent with the surrounding urban development patterns. Given the above, significant irreversible environmental changes associates with the proposed Project would occur as a result of the irreversible commitment of nonrenewable resources during construction and operation of the Project. This irreversible environmental change is discussed below.

Commitment of Nonrenewable Resources

Examples of irretrievable commitments provided in the State CEQA Guidelines include the use of nonrenewable resources (e.g. natural gas and other fossil fuels, lumber, and steel) during initial and continued phases of Project construction and operation. The proposed Project's potential energy consumption is discussed in greater detail in Section 3.5 of this EIR.

As concluded in section 3.17, Utilities and Service Systems, water use during Project construction would be limited to minor amounts of water required for various uses, such as concrete mixing and dust suppression. Water use would be minor to negligible when compared to the operational demands of the Project, as well as the operational demands of the surrounding land uses. With regard to building materials, the Project would be constructed with durable materials with a significant 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 California Green Building Standards Code (CALGreen) 65% 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 proposed Project were to be demolished at a future time, this regulation would ensure that a majority of the materials are recycled.

Nonrenewable resources would also be consumed during Project operation. Resources used during operation would consist primarily of water, natural gas, and other fossil fuels required for off-site electrical generation and vehicles traveling to and from the Project site. While some building materials may be consumed for building maintenance purposes, such use would be limited and would be reduced by the Project's use of durable materials, as described above. While the existing site uses generate some demand for water, electricity, gasoline, diesel fuel, and natural gas, the proposed Project would increase this demand due to intensification of the land uses on the site. The Project's use of fossil fuels during operation is discussed in detail in Section 3.5 of this EIR. As concluded in that section, although natural gas and electricity usage would increase due to the implementation of the Project, the Project's energy efficiency would go beyond code compliance and would be increased through the Leadership in Energy and Environmental Design (LEED) certification program or equivalent standards. 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 VMT over time. Therefore, impacts to energy resources during operation would be less than significant.

The Project's water use is discussed in detail in Section 3.9 and Section 3.17. As concluded in those sections, the proposed Project would require approximately 225,322 gallons of water per day (gpd) upon operation. Moreover, due to the intensification of land uses at the Project site, this projected water demand would represent an approximately 211,668 gpd increase in water demand at the Project site when compared to existing conditions. However, as described in Section 3.17, this anticipated Project-related increase in water demand can be met by the Cal Water East Los Angeles District, specifically by increasing the production of groundwater based of safe yield allocation and utilization of water in storage, increasing imported water purchases, and by purchasing additional recycled water, if available. Collectively, these additional options would enable water supply to meet or exceed water demand for Cal

Water East Los Angeles for now and into the future. Collectively, the Urban Water Management Plan (UWMP) identities a sufficient and reliable water supply for Cal Water East Los Angeles District's service area, now and into the future, including a sufficient water supply for the proposed Project.

The proposed Project would also be designed to achieve LEED Gold or Platinum certification by implementing sustainable design features, including but not limited to, energy-saving and sustainability goals to optimize building performance and enhance interior environments to promote health and well-being. Some of these features include:

- UVA and UVB-resistant windows and glass/glazing throughout the Project
- Maximally-filtered mechanical ventilation systems in all structures
- Connection to City of Commerce's Community Choice Provider Energy Purchasing Program
- Solar-path driven design of pool and window locations to reduce need for cooling and heating
- Low-vapor flooring, wall-coating, and paint materials throughout the Project
- Light Emitting Diode (LED) and low-energy light fixtures and bulbs throughout the Project
- Low petroleum-content paving throughout the Project
- Energy provided by Photo-voltaic cells, where possible.
- Managed cooling systems provided by ventilation, where and when seasonally possible.
- Highly insulated roof membranes and structures
- Electric car chargers
- Maximum shade for residential windows and retail spaces, provided by trees, awnings, and louvers, to reduce energy usage (designed according to solar patterns)
- Reclaimed water usage in landscaping and outdoor space irrigation
- Low-water usage and native planting throughout the landscaping
- Turf versus living grass in high foot-traffic areas of youth sports complex and Veterans Park

In addition to the above considerations, state and local laws and regulations would further reduce the Project's use of nonrenewable resources over time. Specifically, electricity consumed at the Project site would be increasingly sourced from renewable energy, pursuant to Senate Bill 100. Senate Bill 100, which passed in 2018, states that 44% of the total electricity sold to retail customers in California per year must be secured from qualifying renewable energy sources by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030. SB 100 also sets forth a state policy that eligible renewable energy resources and zero-carbon resources supply 100% of the retail sales of electricity to California and requires that achieving 100% zero-carbon electricity does not increase carbon emissions elsewhere in the western grid or is not fulfilled through resource shuffling. As such, the Project's consumption of nonrenewable energy is anticipated to significantly decrease over time, as Senate Bill 100 is implemented statewide and overall nonrenewable energy consumption decreases.

Similarly, the vehicles that would travel to and from the Project would be subject to increasingly stringent emissions standards over time, which would reduce the amount of fossil fuel consumed per vehicle (see Section 3.5 for additional details). Furthermore, the City and state have policies in place to support decreased use of personal vehicles, to be replaced with alternative modes such as transit, walking, and biking- policies which are incentivized at the local level by the proposed Project's provision of alternative transportation amenities (e.g. pedestrian pathways and bicycle parking and lockers). As such policies are carried out, the number of vehicles traveling to and from the site may decrease over time.

The Project would be subject to compliance with the California Building Energy Efficiency Standards and the CALGreen. In conclusion, while the proposed Project would result in the use of nonrenewable resources, such use would be limited primarily to building materials, fossil fuels, and water. During operation, use of such resources is expected to decrease, as increasingly stringent efficiency requirements are implemented at the local and state level.

While the Project would result in increased resource consumption during construction and operation, the Project would also result in some benefits related to long-term resource consumption in the region. As demonstrated in Section 3.12 of this EIR, growth in population, housing, and employment is expected to occur in the City, in the County, and throughout the southern California region into the foreseeable future. The proposed Project falls well within regional growth projections for population and housing and would locate this growth on an infill site within walking distance of a wide range of services, employment opportunities, entertainment venues, and existing residential neighborhoods. Although the City has already exceed its projected employment for 2040 by 4,392 jobs, due to the mixed-use nature of the proposed Project, the proposed Project would not cause an imbalance among jobs, housing, and population. Rather, the Project would provide additional housing in an employment-rich urban center, thereby lowering the City's job-to-housing ratio to meet the projected value and provide greater housing opportunities for existing employees within the City.

The proposed Project would help accommodate growth within existing developed areas, as opposed to accommodating growth through development in previously undeveloped areas. The latter development pattern generally results in permanent loss of naturalized lands and open space, as well as increased fossil fuel consumption attributable to longer commuting distances and lack of transit options. While the Project would result in some irretrievable commitment of nonrenewable resources, it would also help accommodate growth in a manner that would reduce irreversible environmental changes in the region. Furthermore, the irretrievable commitment of resources attributable to the Project would not be considered unusual when compared to typical urban infill development of the same size and scope. For these reasons, the irretrievable commitment of resources attributable to the Project would not be considered significant.

5.3 Growth Inducing Impacts

As stated in Section 15126.2(e) of the State CEQA Guidelines, an EIR is required to include a discussion of a project's growth-inducing effects. The State CEQA Guidelines generally describes such effects as follows: (1) economic growth, population growth, or additional housing in the surrounding environment; (2) removal of obstacles to population growth (e.g., a major expansion of a wastewater treatment facility that allows for more construction in the service area); (3) increases in population that tax existing services requiring construction of new facilities that could cause significant environmental effects; and (4) characteristics of a project that would encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. These four factors are discussed below as they pertain to the proposed Project.

1. As explained throughout this EIR, the proposed Project would increase land use intensity on the project site and would result in an additional 850 housing units and 165,000 square feet of commercial space, the provision of which would directly increase the City's residents and employment opportunities. As such, the proposed Project would directly cause population growth, housing growth, and economic growth on the Project site and in the City in general. As explained in Section 3.12 (Population and Housing) of this EIR, the City's population was projected to increase from 13,000 persons in 2020 to 13,500 persons in 2040, an increase of 500 persons. The Southern California Association of Governments (SCAG) 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) estimates that the region's population is

anticipated to increase from 19,663,000 persons in 2020 to 22,138,000 persons in 2040, an increase in 2,475,000 persons (SCAG 2016).

Once operational, the proposed 850 units associated with the proposed Project would generate approximately 2,550 new residents to the City. The proposed Project would exceed the projected growth for the City between 2020 and 2040. However, the Proposed Project would represent 0.10% of the projected growth for the SCAG region between 2020 and 2040, and thus, is within the SCAG projections. In addition, the Project's 850 residential units would contribute to the City's Housing Element objectives and policies. The proposed Project would also add approximately 390 new employees. Although the City has exceeded its projected employment for 2040 by 4,392 jobs, due to the mixed-use nature of the proposed Project, the proposed Project would not cause an imbalance among jobs, housing, and population.

As such, while the proposed Project would result in some growth, this growth would be minor and is not expected to foster the construction of additional housing or other types of growth in the surrounding environment.

2. The proposed Project would not remove obstacles to population growth. The Project involves infill development on a site that is located in an urban, developed area and that is served by existing utilities and roads. The proposed Project would not involve the extension of infrastructure into areas that are not currently served and would not, therefore, remove obstacles to growth.
3. The residents and employees at the Project site would place increased demands on existing community services, such as fire protection, police protection, schools, libraries, and utilities. However, the Project would not increase such demands to the extent that it would require new or expanded facilities or infrastructure. Substantiation for this conclusion is provided in Section 3.13 (Public Services) and Section 3.17 (Utilities and Service Systems) of this EIR. The growth associated with the proposed Project falls within the population and housing growth identified for the region in the SCAG RTP/SCS. Although the City has already exceed its projected SCAG employment for 2040 by 4,392 jobs, due to the mixed-use nature of the proposed Project, the proposed Project would not cause an imbalance among jobs, housing, and population. Rather, the Project would provide additional housing in an employment-rich urban center, thereby lowering the City's job-to-housing ratio to meet the projected value and provide greater housing opportunities for existing employees within the City. Growth projections in the RTP/SCS are used in part for infrastructure planning and development, to ensure that regional infrastructure is properly sized and planned for expected development. As such, because the population and housing growth associated with the Project falls within growth projections, it is expected that existing and planned infrastructure would accommodate the proposed Project. As such, while the proposed Project would cause some population growth, it is not expected to result in the construction of new facilities or infrastructure that would cause environmental effects.
4. Approval of the proposed Project is not expected to encourage or facilitate other activities that could significantly affect the environment. The Project site is surrounded by existing urban development. The proposed Project would require approval of a General Plan Amendment and approval of a new Specific Plan, primarily to allow for the construction of residential land uses and increased density at the Project site. Furthermore, as with the proposed Project, any other new development projects in the City would be subject to environmental review under CEQA. For any significant environmental effects that are identified, mitigation measures, Project alternatives, or the identification of overriding considerations would be required pursuant to CEQA. Additionally, Projects would be subject to discretionary review and approval by City decision makers.

   Large development projects, particularly in undeveloped or sparsely developed areas, have the potential to induce or accelerate development in surrounding areas, as new businesses and/or residential developers seek to situate development in new opportunity areas where there is a shortage of services and/or housing. However, the proposed Project would be located within an urbanized metropolitan area that supports a wide variety of existing services, businesses, and housing options. While the proposed Project would introduce new

dwelling units and new commercial space to the City, the number of dwelling units and the amount of commercial space would be consistent with the SCAG projections for population and housing in the region through the planning horizon year of 2040. Although the City has already exceed its projected SCAG employment for 2040 by 4,392 jobs, due to the mixed-use nature of the proposed Project, the proposed Project would not cause an imbalance among jobs, housing, and population. Rather, the Project would provide additional housing in an employment-rich urban center, thereby lowering the City's job-to-housing ratio to meet the projected value and provide greater housing opportunities for existing employees within the City. Additionally, the Project is located within a highly developed area that is projected to continue growing and developing into the future, with or without the proposed Project. For these reasons, the new businesses and housing units associated with the Project are not expected to directly induce or accelerate growth in the surrounding areas.

In conclusion, the proposed Project would cause economic growth, population growth, and housing growth. However, the growth would be limited to the Project site itself and falls well within regional growth projections for population and housing. The Project would not remove obstacles to population growth and would not cause an increase in population such that new community facilities or infrastructure would be required outside of the proposed Project. Lastly, the proposed Project is not expected to encourage or facilitate other activities that could significantly affect the environment, as explained above. For these reasons, the proposed Project is not considered to be significantly growth inducing.

5.4 Effects Found Not to Be Significant

Section 15128 of the State CEQA guidelines requires that an EIR briefly describe potential environmental effects that were determined not to be significant and therefore were not discussed in detail in the EIR. The environmental issues listed below are not considered significant, and the reasons for the conclusion of non-significance are discussed in the Initial Study (Appendix A). As stated in the State CEQA Guidelines, such a statement may be contained in an attached copy of an Initial Study. As described and substantiated in the Initial Study (Appendix A), the following three issue areas were not found to be significant, and therefore, were not further analyzed in this EIR: agriculture and forestry, mineral resources, and wildfire. Additionally, while the remaining seventeen issue areas are analyzed in this EIR, the analysis in the IS found that the proposed Project would result in no impacts, less than significant impacts, or less than significant impacts after mitigation for certain thresholds within some of the remaining seventeen issue areas. These thresholds have not been further analyzed in this EIR and are listed below.

- Aesthetics
  - Have a substantial adverse effect on a scenic vista?
  - Substantially damage scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
- Biological Resources
  - Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?
- Geology and Soils
  - Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
    - Landslides

  - 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.
- Hazards and Hazardous Materials
  - 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, result in a safety hazard or excessive noise for people residing or working in the project area.
  - Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
  - Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.
- Land Use and Planning
  - Physically divide an established community?
- Noise
  - 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?
- Population and Housing
  - Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

5.5 References

SCAG. 2016. Growth Forecast by Jurisdiction. Draft 2016. Accessed, December 31, 2019. http://www.scag.ca.gov/Documents/2016DraftGrowthForecastByJurisdiction.pdf.

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