

Draft Environmental Impact Report  
SCH No. 2017111042

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# Brodiaea Commerce Center

City of Moreno Valley, California



**Lead Agency**  
City of Moreno Valley  
14177 Frederick Street  
PO Box 88005  
Moreno Valley, CA 92552

**May 2018**

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City of Moreno Valley, California

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14177 Frederick Street  
PO Box 88005  
Moreno Valley, CA 92552

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**Lead Agency Discretionary Permits**

Plot Plan PEN17-0143  
Change of Zone PEN17-0144

May 2018



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**EIR Technical Appendices (bound separately)**

- A: Initial Study, Notice of Preparation, and Written Comments on the NOP
- B1: Air Quality Impact Analysis
- B2: Mobile Source Health Risk Assessment
- C: Biological Resource Assessment
- D1: Phase 1 Cultural Resources Survey
- D2: Paleontological Resource and Monitoring Assessment
- E1: Geotechnical Investigation
- E2: Soil Infiltration Study
- F: Greenhouse Gas Analysis
- G: Phase I Environmental Site Assessment
- H1: Water Quality Management Plan
- H2: Hydrology Report
- I: Noise Impact Analysis
- J: Traffic Impact Analysis
- K: Energy Analysis



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## **ACRONYMS, ABBREVIATIONS, AND UNITS OF MEASURE**

<u><b>Acronym</b></u>	<u><b>Definition</b></u>
§	Section
µg/m <sup>3</sup>	microgram per meter cubed
a.m.	Ante Meridiem (between the hours of midnight and noon)
AB	Assembly Bill
AB 32	Assembly Bill 32
AB 52	Assembly Bill 52
AB 197	Assembly Bill 97
AB 341	Assembly Bill 341
AB 939	California Solid Waste Integrated Management Act
AB 1327	California Solid Waste Reuse and Recycling Act
AB 1493	Assembly Bill 1943
AB 1881	California Assembly Bill 1881, California Water Conservation Act of 2006
AB 1989	Assembly Bill 1989
ACMs	Asbestos Containing Materials
ACOE	Army Corps of Engineers
ADT	Average Daily Traffic
AEP	Association of Environmental Professionals
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
ALUCP	Airport Land Use Compatibility Plan
amsl	Above Mean Sea Level
A-P Act	Alquist-Priolo Earthquake Fault Zoning Act
APS	Alternative Planning Strategy
APN	Assessor Parcel Number
AQMP	Air Quality Management Plan
ARB	Air Reserve Base
ARB	Air Resources Board
ASTM	American Society of Testing and Materials
ASTs	Above ground storage tanks
BACM	Best Available Control Measure
BAU	Business as Usual
BMPs	Best Management Practices
BP	Business Park
BP/LI	Business Park/Light Industrial
BPX	Business Park-Mixed Use
C <sub>2</sub> H <sub>6</sub>	Ethane
CA	California
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod™	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency



<u>Acronym</u>	<u>Definition</u>
Cal Fire	California Department of Forestry and Fire Protection
CalGreen	California Green Building Standards Code
Caltech	California Institute of Technology
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CAPSSA	Criteria Area Plant Species Survey Area
CARB	California Air Resources Board
CAT	Climate Action Team
CBSC	California Building Standards Code
CCAA	California Clean Air Act
CCCC	California Climate Change Center
CCR	California Code of Regulations
CD	consistency determination
CDC	California Department of Conservation
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFCs	Chlorofluorocarbons
C <sub>2</sub> F <sub>6</sub>	Hexafluoroethane
CF <sub>4</sub>	Tetrafluoromethane
CF <sub>3</sub> CH <sub>2</sub> F	HFC-134a
CFGC	California Fish and Game Code
cfs	Cubic Feet per Second
C <sub>2</sub> H <sub>6</sub>	Ethane
CH <sub>4</sub>	Methane
CH <sub>3</sub> CHF <sub>2</sub>	HFC-152a
CHE	cargo handling equipment
CHF <sub>3</sub>	HFC-23
CIWMB	California Integrated Waste Management Board
CMP	Congestion Management Program
CNEL	Community Noise Equivalent Level
CNG	Compressed Natural Gas
CNPS	California Native Plant Society
CO	Carbon Monoxide
COG	Council of Governments
CO <sub>2</sub>	Carbon Dioxide
CO <sub>2e</sub>	Carbon Dioxide Equivalent
COHb	carboxyhemoglobin
COP	Conference of the Parties
CTR	California Toxics Rule
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
CWC	California Water Code
c.y.	Cubic Yards



<u>Acronym</u>	<u>Definition</u>
dB	Decibel
dBA	A-weighted Decibels
DBESP	Determination of Biologically Equivalent or Superior Preservation
DDT	Dichloro Diphenyl Trichloroethane
DEH	Department of Environmental Health
DIF	Development Impact Fee
DOE	Determination of Eligibility
DOSH	Division of Occupational Safety and Health
DOT	Department of Transportation
DPM	Diesel Particulate Matter
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
E+A+P	Existing plus Ambient Growth plus Project Conditions
E+A+P+C	Existing plus Ambient Growth plus Project Conditions plus Cumulative Conditions
E+P	Existing plus Project Conditions
EDR	Environmental Data Resources
e.g.	for example
EIC	Eastern Information Center
EIR	Environmental Impact Report
EMFAC	Emission Factor Model
EMWD	Eastern Municipal Water District
EO	Executive Order
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
EPS	Emission Performance Standard
ESA	Environmental Site Assessment
ESFR	Early Suppression Fast Response
et seq.	<i>et sequentia</i> , meaning "and the following"
EV	electric vehicle
FAR	floor area ratio
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FHWA	Federal Highway Administration
FYI	for your information
GCC	Global Climate Change
Gg	Gigagrams
GHG	Greenhouse Gas
GIS	Geographic Information System
GgCO <sub>2</sub> e	Gigagrams of carbon dioxide equivalent
GS-1	General Rate Schedule
GSA	Groundwater Sustainability Agencies
GSP	Groundwater Sustainability Plan
GVWR	Gross Vehicle Weight Rating



<u>Acronym</u>	<u>Definition</u>
GWP	Global Warming Potential
H <sub>2</sub> O	Water Vapor
HANS	Habitat Evaluation and Acquisition Negotiation Strategy
HCM	Highway Capacity Manual
HCP	Habitat Conservation Plan
HFCs	Hydrofluorocarbons
HHD	heavy-heavy duty trucks
HMBEP	Hazardous Materials Business Emergency Plan
HMTA	Hazardous Materials Transportation Act
HMTUSA	Hazardous Materials Transportation Uniform Safety Act
HPLV	High Pressure Low Volume
HSC	Health and Safety Code
HSWA	Hazardous and Solid Waste Amendments
HWCL	Hazardous Waste Control Law
I	Interstate
I-215	Interstate 215
i.e.	that is
IA	Implementing Agreement
in/yr	inches per year
IPCC	Intergovernmental Panel on Climate Change
IRWMP	Integrated Regional Water Management Plan
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
ITE	Institute of Transportation Engineers
ITP	incidental take permit
IWMA	Integrated Waste Management Act
JPA	Joint Powers Authority
JPR	Joint Project Review
kBTU/yr	thousand British thermal units per year
kWh	kilowatt-hour
L <sub>eq</sub>	equivalent continuous sound level
LCA	Life-cycle analysis
LCFS	low carbon fuel standard
LDA	light duty autos
LEA	Lead Enforcement Agency
LOS	Level of Service
LSA	Lake and Streambed Alteration Agreement
LSTs	Localized Significance Thresholds
MACT	maximum achievable control technology
MATES	Multiple Air Toxics Exposure Study
MBTA	Migratory Bird Treaty Act





<b><u>Acronym</u></b>	<b><u>Definition</u></b>
MDP	Master Drainage Plan
MEISC	maximally exposed individual school child
MEIR	maximally exposed individual receptor
MEIW	maximally exposed individual worker
mgpd	million gallons per day
MHD	medium-heavy duty trucks
MM	Mitigation Measure
MMRP	Mitigation Monitoring and Reporting Program
MMTs	million metric tons
MMTCO <sub>2e</sub>	million metric tons of carbon dioxide equivalent
mpg	miles per gallon
MPO	Metropolitan Planning Organization
MS4	Municipal Separate Storm Sewer System
MSHCP	Multiple Species Habitat Conservation Plan
MT	metric ton
MTCO <sub>2e</sub>	Metric Tons of Carbon Dioxide Equivalent
MUN	Mixed-Use Neighborhood
MUTCD	Manual on Uniform Traffic Control Devices
MVFD	Moreno Valley Fire Department
MW	megawatt
MWD	Metropolitan Water District
MWh	megawatt-hour
N <sub>2</sub>	Nitrogen
n.d.	no date
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Planning
NDCs	naturally determined contributions
NEPSSA	Narrow Endemic Plant Species Survey Area
NHPA	National Historic Preservation Act
NIOSH	National Institute for Occupational Safety and Health
NMFS	National Marine Fisheries Service
NO	Nitric Oxide
NO <sub>2</sub>	Nitrogen Dioxide
NO <sub>x</sub>	Nitrogen Oxides
N <sub>2</sub>	Nitrogen
N <sub>2</sub> O	Nitrous Oxide
NOP	Notice of Preparation
NPPA	Native Plant Protection Act
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NPS	Non-Point Source
NRHP	National Register of Historic Places
NTR	National Toxics Rule



<u>Acronym</u>	<u>Definition</u>
O <sub>2</sub>	Oxygen
O <sub>3</sub>	Ozone
OEHHA	Office of Environmental Health Hazards Assessment
OPR	Office of Planning and Research
OSHA	Occupational and Safety Health Act
Pb	Lead
PCBs	Polychlorinated biphenyls
PCEs	Passenger Car Equivalents
PFCs	Perfluorocarbons
p.m.	Post Meridiem (between the hours of noon and midnight)
PM	Particulate Matter
PM <sub>2.5</sub>	Fine Particulate Matter (2.5 microns or smaller)
PM <sub>10</sub>	Fine Particulate Matter (10 microns or smaller)
Porter-Cologne	Porter-Cologne Water Quality Control Act
ppb	parts per billion
ppm	parts per million
pp.	pages
ppt	parts per trillion
PRC	Public Resources Code
PUC	Public Utilities Commission
RCB	Reinforced Concrete Box
RCFCWCD	Riverside County Flood Control Water Conservation District
RCRA	Resource Conservation and Recovery Act
RCTC	Riverside County Transportation Commission
REC	Recognized Environmental Concerns
RHSA	Regional System of Highways and Arterials
RivTAM	Riverside County Transportation Analysis Model
ROGs	Reactive Organic Gasses
RPS	Renewable Portfolio Standards
RTA	Riverside Transit Authority
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SARA	Superfund Amendments and Reauthorization Act
SAWPA	Santa Ana Watershed Project Authority
SB	Senate Bill
SB 18	Senate Bill 18
SB 32	Senate Bill 32
SB 221	Senate Bill 221
SB 375	California Senate Bill 375, Sustainable Communities and Climate Protection Act of 2008
SB 610	Senate Bill 610
SB 901	Senate Bill 901



<u>Acronym</u>	<u>Definition</u>
SB 1078	Senate Bill 1078
SB 1368	Senate Bill 1368
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCH	California State Clearinghouse (Office of Planning and Research)
SCS	Sustainable Communities Strategy
SDWA	Safe Drinking Water Act
SF/s.f.	square foot or square feet
SF <sub>6</sub>	Sulfur Hexafluoride
SGMA	Sustainable Groundwater Management Act
SHA	Safe Harbor Agreement
SHMA	Seismic Hazards Mapping Act
SHPO	State Historic Preservation Officer
SHRC	State Historical Resources Commission
SIP	State Implementation Plan
SKR	Stephens' Kangaroo Rat
SLF	Sacred Lands File
SNURs	Significant New Use Rules
SO <sub>2</sub>	Sulfur Dioxide
SR	State Route
SR-60	State Route 60
SRA	Source Receptor Area
SRA 23	Source Receptor Area 23
SRA 24	Source Receptor Area 24
SRRE	Source Reduction and Recycling Element
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Regional Control Board
TAC	Toxic Air Contaminants
TDM	Transportation Demand Management
TEA-21	Transportation Equity Act for the 21 <sup>st</sup> Century
TIA	Traffic Impact Analysis
TUMF	Transportation Uniform Mitigation Fee
µg	microgram
UBC	Uniform Building Code
UCR	University of Riverside
UNFCCC	United Nations' Framework Convention on Climate Change
URBEMIS	URBan EMISions
U.S.	United States
USACE	United States Army Corps of Engineers
USCB	United States Census Bureau
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service



<b><u>Acronym</u></b>	<b><u>Definition</u></b>
USPS	United States Postal Service
USTs	Underground storage tanks
UWMP	Urban Water Management Plan
Vdb	Vibration Decibel
VMT	Vehicle Miles Traveled
VOCs	Volatile Organic Compounds
WDR	Waste Discharge Requirements
WMI	Watershed Management Initiative
WQMP	Water Quality Management Plan
WRCOG	Western Riverside Council of Governments
WRRRA	Waste Reuse and Recycling Act
ZORI	Zones of Required Investigation



## **S.0 EXECUTIVE SUMMARY**

### **S.1 INTRODUCTION**

The California Environmental Quality Act (CEQA), Public Resources Code § 21000, *et seq.* requires that before a public agency makes a decision to approve a project that could have one or more adverse effects on the physical environment, the agency must inform itself about the project’s potential environmental impacts, give the public an opportunity to comment on the environmental issues, and take feasible measures to avoid or reduce potential harm to the physical environment.

This Environmental Impact Report (EIR), having California State Clearinghouse (SCH) No. 2017111042 was prepared in accordance with CEQA Guidelines Article 9, § 15120 to § 15132, to evaluate the potential environmental impacts associated with planning, constructing, and operating the proposed Brewer Site Project (hereafter, the “Project” or “proposed Project”). This EIR does not recommend approval, approval with modification, or denial of the proposed Project; rather, this EIR is a source of factual information regarding potential impacts that the Project may cause to the physical environment. The Draft EIR will be available for public review for a minimum period of 45 days. After consideration of public comment, the City of Moreno Valley will consider certifying the Final EIR and adopting required findings.

This Executive Summary complies with CEQA Guidelines § 15123, “Summary.” This EIR document includes a description of the proposed Project and evaluates the physical environmental effects that could result from Project implementation. The City of Moreno Valley determined that the scope of this EIR should cover 12 subject areas. The scope was determined through the completion of an Initial Study accepted by the City of Moreno Valley’s independent judgment pursuant to CEQA Guidelines § 15063, and in consideration of public comment received by the City in response to this EIR’s Notice of Preparation (NOP). The Initial Study, NOP, and written comments received by the City in response to the NOP, are attached to this EIR as *Technical Appendix A*. As determined by the Initial Study and in consideration of public comment on the NOP, the 12 environmental subject areas that could be reasonably and significantly affected by planning, constructing, and/or operating the proposed Project are analyzed herein, including:

- |   |                                    |
|---|------------------------------------|
| 1. Aesthetics                                     | 7. Hazards and Hazardous Materials |
| 2. Air Quality                                    | 8. Hydrology and Water Quality     |
| 3. Biological Resources                           | 9. Land Use and Planning           |
| 4. Cultural Resources & Tribal Cultural Resources | 10. Noise                          |
| 5. Geology and Soils                              | 11. Transportation and Traffic     |
| 6. Greenhouse Gas Emissions                       | 12. Utilities and Service Systems  |

Refer to EIR Section 4.0, *Environmental Analysis*, for a full account and analysis of the subject matters listed above. Subject areas for which the Initial Study concluded that impacts would be clearly less than significant and that do not warrant detailed analysis in this EIR are addressed in EIR Section 5.0, *Other CEQA Considerations*.

For each of the 12 subject areas analyzed in detail in Section 4.0, this EIR describes: 1) the physical conditions that existed at the approximate time this EIR’s NOP was filed with the California State Clearinghouse (November 13, 2017, and December 5, 2017); 2) discloses the type and magnitude of potential environmental impacts resulting from Project planning, construction, and operation; and 3) if warranted, recommends feasible mitigation measures that would reduce or avoid significant adverse



environmental impacts that the proposed Project may cause. A summary of the proposed Project's significant environmental impacts and the mitigation measures imposed by the City of Moreno Valley on the Project to lessen or avoid those impacts is included in this Executive Summary as Table S-1, *Mitigation Monitoring and Reporting Program*. The City of Moreno Valley applies mitigation measures which it determines 1) are feasible and practical for project applicants to implement, 2) are feasible and practical for the City of Moreno Valley to monitor and enforce, 3) are legal for the City to impose, 4) have an essential nexus to the Project's impacts, and 4) would result in a benefit to the physical environment. CEQA does not require the Lead Agency to apply mitigation measures that are duplicative of mandatory regulatory requirements.

## **S.2 PROJECT OVERVIEW**

### **S.2.1 LOCATION AND SETTING**

As defined in EIR Section 1.0, *Introduction*, for purposes of analysis in this EIR, the "Project site" consists of approximately 12.0 acres in the central portion of the City of Moreno Valley, in western Riverside County, California – north of the City of Perris, northwest of the City of Hemet, west of the City of Beaumont, east/southeast of the City of Riverside, and east of the unincorporated communities of Mead Valley and Woodcrest. The Project site is approximately 2.2 miles northeast of Interstate 215 (I-215) and approximately 1.7 miles south of State Route 60 (SR-60). The Project site location is illustrated on Figure 3-1, *Regional Map*, in EIR Section 3.0, *Project Description*.

At the local scale, the Project site is located north of Brodiaea Avenue, west of Heacock Street, and approximately 325 feet south of Alessandro Boulevard as illustrated on Figure 3-2, *Vicinity Map*, and Figure 3-3, *USGS Topographical Map*, in Section 3.0 of this EIR.

The City's Zoning Map currently designates the Project site for "Business Park-Mixed Use (BPX)" with "Mixed-Use Neighborhood (MUN)" overlay and "Business Park (BP)" land uses. The primary purpose of the BPX district is to provide locations for limited convenience commercial and business support services within close proximity to industrial and business park uses. The MUN overlay district provides an area for low-rise, mixed-use development that serves the needs of residents, visitors, and employees from the surrounding immediate neighborhood. The purpose of the BP district is to provide for light industrial, research and development, office-based firms and limited supportive commercial land uses in an attractive and pleasant working environment and a prestigious location. (City of Moreno Valley, 2017)

### **S.2.2 PROJECT OBJECTIVES**

The underlying purpose of the Project and its primary goal is to develop a vacant or underutilized property with a warehouse building to provide an employment-generating use that helps to grow the economy and fulfill regional market demand for this land use type in Moreno Valley. The Project would achieve this goal through the following specific objectives.

- A: To make efficient use of undeveloped property in Moreno Valley by maximizing its buildout potential for employment-generating uses.
- B: To attract new businesses and jobs to the City of Moreno Valley, thereby providing economic growth.



- C: To create employment-generating business in the City of Moreno Valley thereby reducing the need for members of the local workforce to commute outside the area for employment.
- D: To develop a vacant or underutilized property with a high-cube industrial warehouse building to help meet the substantial and unmet regional demands for this type of building space.
- E: To develop a warehouse building that can attract building occupants seeking modern warehouse building space in Moreno Valley constructed to contemporary design standards.
- F: To develop a property that has access to available infrastructure, including roads and utilities.
- G: To develop a vacant or underutilized property with a building that has architectural design and operational characteristics that complement other existing and planned buildings in the immediate vicinity and minimize conflicts with other nearby land uses.
- H: To develop a project that is economically competitive with similarly-sized buildings in the local area and region.
- I: To develop light industrial uses in close proximity to designated truck routes and the state highway system to avoid or shorten truck-trip lengths on other roadways.

### **S.2.3 PROJECT SUMMARY DESCRIPTION**

The Project consists of a proposal to amend the City of Moreno Valley Zoning Map for an approximately 12.0-acre property (as defined in EIR Section 2.0, *Environmental Setting*) to accommodate the development of a high-cube warehouse. The principal discretionary actions requested by the Project Applicant to implement the proposed Project includes a Plot Plan (PEN17-0143) and Change of Zone (PEN17-0144). Additional, subsequent discretionary and administrative actions that would be necessary to implement the proposed Project are listed in Table 3-2, *Matrix of Approvals/Permits*.

Plot Plan (PEN17-0143) proposes to construct a high-cube warehouse building with 261,807 s.f. of floor space on the subject property. The proposed facility would contain 248,807 s.f. of warehouse space, 8,000 s.f. of office space, and 5,000 s.f. of mezzanine.

Change of Zone (PEN17-0144) proposes to amend the City of Moreno Valley's Zoning Map as it applies to the 12.0-acre property by changing the site's zoning designation from "BPX" with "MUN" overlay and "BP" to Light Industrial (LI).

Refer to EIR Section 3.0, *Project Description*, for a detailed description of the proposed Project.

### **S.3 EIR PROCESS**

As a first step in complying with the procedural requirements of CEQA for an EIR, an Initial Study was prepared by the City of Moreno Valley to determine whether any aspect of the proposed Project, either individually or cumulatively, may cause a significant adverse effect on the physical environment (refer to *Technical Appendix A* for a copy of the Initial Study). For this Project, the Initial Study indicated that this EIR should focus on 12 environmental subject areas listed above in Subsection S.1. After completion of the Initial Study, the City filed a NOP with the California Office of Planning and Research (State Clearinghouse)



to indicate that an EIR would be prepared. In turn, the Initial Study and NOP were distributed for a 30-day public review period, which began on November 13, 2017. On December 5, 2017, the NOP was re-distributed and its review period was extended for 30 days. The City of Moreno Valley received written comments on the scope of the EIR during those 30 days, which were considered by the City during the preparation of this EIR.

This EIR is being circulated for review and comment by the public and other interested parties, agencies, and organizations for a 45-day review period. During the 45-day public review period, public notices announcing availability of the Draft EIR will be mailed to interested parties, an advertisement will be published in the Press Enterprise (a newspaper of general circulation in the Project area), and copies of the Draft EIR and its Technical Appendices will be available for review at the locations indicated in the public notices.

After the close of the 45-day Draft EIR public comment period, the City will prepare and publish responses to written comments it received on the environmental effects of the proposed Project. The Final EIR will then be considered for certification by the Moreno Valley City Council. Certification of the Final EIR would be accompanied by the adoption of written findings and a statement of overriding considerations for any significant unavoidable environmental impacts identified in the Final EIR. In addition, the City must adopt a Mitigation, Monitoring, and Reporting Program (MMRP), which describes the process to ensure implementation of the mitigation measures identified in the Final EIR. The MMRP will ensure CEQA compliance during Project construction and operation, should the Measure M ballot initiative be approved by City voters.

#### **S.4 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED**

CEQA Guidelines § 15123(b)(2) requires that areas of controversy known to the Lead Agency (City of Moreno Valley) be identified in the Executive Summary. The Lead Agency has not identified any issues of controversy associated with the Project after consideration of all comments received in response to the NOP. Notwithstanding, the Lead Agency has identified several issues of local concern including, but not limited to, potential impacts to air quality, cultural resource, hazards and hazardous materials, and traffic.

Regarding issues to be resolved, this EIR addresses the environmental issues that are known by the City, that are identified in the Initial Study prepared for the Project, and that were identified in the comment letters that the City of Moreno Valley received on this EIR's NOP (refer to *Technical Appendix A*). Environmental topics raised in written comment to the NOP are summarized in Table 1-1, *Summary of NOP Comments*, in Section 1.0 of this EIR and include, but are not limited, to the topics of air quality, biological resources, cultural resources, greenhouse gas emissions, hazardous materials, hydrology and water quality, and transportation/traffic.

#### **S.5 ALTERNATIVES TO THE PROPOSED PROJECT**

In compliance with CEQA Guidelines § 15126.6, an EIR must describe a range of reasonable alternatives to the Project or to the location of the Project. Each alternative must be able to feasibly attain most of the Project's objectives and avoid or substantially lessen the Project's significant effects on the environment. A detailed description of each alternative evaluated in this EIR, as well as an analysis of the potential environmental impacts associated with each alternative, is provided in EIR Section 6.0, *Alternatives*. Also described in Section 6.0 is a list of alternatives that were considered but rejected from further analysis.





### **S.5.1 NO DEVELOPMENT ALTERNATIVE**

The No Development Alternative considers no additional development on the Project site beyond that which occurs under existing conditions. As such, the entire 12.0-acre site would remain vacant and undeveloped. Under this alternative, no improvements would be made to the Project site. This alternative was selected by the Lead Agency to compare the environmental effects of the proposed Project with an alternative that would leave the property in its existing condition.

Implementation of the No Development Alternative would result in no physical environmental impacts beyond those that have historically occurred on the property. All significant effects of the proposed Project would be avoided or lessened by the selection of this alternative. The No Development Alternative would fail to meet all of the Project's objectives.

### **S.5.2 NO PROJECT ALTERNATIVE – BUSINESS PARK OPTION**

The No Project Alternative – Business Park Option would develop the Project site in accordance with the site's existing zoning designation, which permits business park land uses. Accordingly, this alternative evaluates the potential environmental impacts under a scenario where the Project site is developed with a 125,000 s.f. business park building that would support administrative and professional offices. This alternative was selected by the Lead Agency to compare the environmental effects of the proposed Project against what could reasonably occur on the Project site if the site were developed in accordance with the specifications provided in the City of Moreno Valley Zoning Ordinance.

Selection of the No Project Alternative – Business Park Option would not avoid or lessen the Project's significant and unavoidable impact (i.e., long-term NO<sub>x</sub> emissions from mobile sources). This alternative would reduce the Project's less-than-significant impact to Land Use and Planning; but, also has the potential to result in a significant impact to Transportation and Traffic that would not occur under the Project. All other impacts would be similar or identical to the Project. The No Project Alternative – Business Park Option would fail to meet the Project's Objectives "A," "D," and "E," and would meet Objective "H" less effectively than the Project.

### **S.5.3 NO PROJECT ALTERNATIVE – WAREHOUSE OPTION**

The No Project Alternative – Warehouse Option would develop the Project site in accordance with the site's existing zoning designation, which permits smaller-scale warehouse land uses. Accordingly, this alternative evaluates the potential environmental impacts under a scenario where the Project site is developed with two (2) 50,000 s.f. warehouse buildings (for a combined total of 100,000 s.f. of warehouse uses on-site). This alternative was selected by the Lead Agency to compare the environmental effects of the proposed Project against what could reasonably occur on the Project site if the site were developed in accordance with the specifications provided in the City of Moreno Valley Zoning Ordinance.

Selection of the No Project Alternative – Warehouse Option would slightly lessen the Project's significant and unavoidable impact (i.e., long-term NO<sub>x</sub> emissions from mobile sources), and also would slightly lessen the Project's less-than-significant GHG, Land Use and Planning, and Noise impacts. All other impacts would be similar or identical to the Project. The No Project Alternative – Warehouse Option is identified as the environmentally superior alternative. The No Project Alternative – Warehouse Option would fail to meet the Project's Objectives "A" and "D" and would meet Objectives "B," "C," "E," and "H" to a lesser degree than the Project.



## **S.6 SUMMARY OF IMPACTS, MITIGATION MEASURES AND CONCLUSIONS**

### **S.6.1 EFFECTS FOUND NOT TO BE SIGNIFICANT**

The scope of detailed analysis in this EIR includes 12 subject areas determined through the completion of an Initial Study prepared by the City of Moreno Valley pursuant to CEQA Guidelines § 15063 and CEQA Statute § 21002(e), as well as consideration of public comments received by the City on this EIR's NOP. The Initial Study, NOP, and public comments received in response to the NOP, are attached to this EIR as *Technical Appendix A*. Subject areas for which the City concluded that impacts clearly would be less than significant and that do not warrant further analysis in this EIR include: Agriculture and Forestry Resources, Mineral Resources, Population and Housing, Public Services, and Recreation. This EIR addresses these five (5) topics in EIR Subsection 5.0, *Other CEQA Considerations*.

### **S.6.2 IMPACTS OF THE PROPOSED PROJECT**

Table S-1, *Mitigation Monitoring and Reporting Program*, provides a summary of the proposed Project's environmental impacts, as required by CEQA Guidelines § 15123(a). Also presented are the mitigation measures recommended by the City of Moreno Valley to further avoid adverse environmental impacts or to reduce their level of significance. After the application of all feasible mitigation measures, the Project would result in one (1) significant and unavoidable environmental effect, as summarized below.

- Air Quality - Significant and Unavoidable Direct and Cumulatively Considerable Impact (Project Operation). The Project would exceed the applicable SCAQMD regional thresholds for NO<sub>x</sub> emissions during operation. Emissions of NO<sub>x</sub> also would contribute to an existing air quality violation in the SCAB (i.e., ozone – NO<sub>x</sub> is a precursor for ozone). As such, Project-related emissions would violate SCAQMD air quality standards and contribute to the non-attainment of a criteria pollutant (i.e., NO<sub>x</sub> and ozone). The effects to human health from NO<sub>x</sub> exposure in the SCAB are decreases in lung function, such as asthma and pulmonary diseases. Mitigation measures would reduce the Project's operational NO<sub>x</sub> emissions by reducing demand for certain types of energy resource to operate the building. However, mobile source (tailpipe) emissions account for approximately 92 percent, by weight, of the Project's total operational emissions. Mobile source emissions are regulated by standards imposed by federal and State agencies, not local governments. The types of vehicle engines and the types of fuel used by trucking companies and vehicle operators that may access the Project site are well beyond the direct control of the City of Moreno Valley. CEQA Guidelines § 15091 provides that mitigation measures must be within the responsibility and jurisdiction of the Lead Agency in order to be implemented. No other mitigation measures are available that are feasible for the Project Applicant to implement and the City of Moreno Valley to enforce that have a proportional nexus to the Project's level of impact.



**Table S-1 Mitigation Monitoring and Reporting Program**

<b>THRESHOLD</b>	<b>MITIGATION MEASURES (MM)</b>	<b>RESPONSIBLE PARTY</b>	<b>MONITORING PARTY</b>	<b>IMPLEMENTATION STAGE</b>	<b>LEVEL OF SIGNIFICANCE</b>
<b>4.1 Aesthetics</b>					
<b>Summary of Impacts</b>					
<u>Threshold a: Less-than-Significant Impact.</u> The Project site does not comprise all or part of a scenic vista and does not contain any visually prominent scenic features. No unique views to scenic vistas are visible from the property. The Project would not substantially change a scenic view or substantially block or obscure a scenic vista.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<u>Threshold b: No Impact.</u> The Project site is not located within the viewshed of a scenic highway and, therefore, the Project site does not contain any scenic resources visible from a scenic highway.	No mitigation is required.	N/A	N/A	N/A	No Impact
<u>Threshold c: Less-than-Significant Impact.</u> The Project would not substantially degrade the existing visual character or quality of the site or its surrounding areas during construction or operation. Although the Project would change the visual character of the site from a vacant property to a development containing one warehouse building, the Project proposes a number of site design, architectural, and landscaping elements to ensure that the surrounding visual character and quality is not affected.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<u>Threshold d: Less-than-Significant Impact.</u> The Project would not create substantial light or glare. Compliance with City of Moreno Valley Municipal Code requirements for artificial lighting would ensure less-than-significant impacts associated with light and glare affecting day or nighttime views in the area.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact



THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	<p>are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas by water truck, sprinkler system, or other comparable means, shall occur in the mid-morning, afternoon, and after work is done for the day. The contractor or builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite.</p> <p>b) Temporary signs shall be installed on the construction site along all unpaved roads indicating a maximum speed limit of 15 miles per hour (MPH). The signs shall be installed before construction activities commence and remain in place for the duration of construction activities that include vehicle activities on unpaved roads.</p> <p>c) Gravel pads must be installed at all access points to prevent tracking of mud onto public roads.</p> <p>d) Install and maintain trackout control devices in effective condition at all access points where paved and unpaved access or travel routes intersect (eg. Install wheel shakers, wheel washers, and limit site access.)</p> <p>e) When materials are transported off-site, all material shall be covered or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.</p> <p>f) All street frontages adjacent to the construction site shall be swept at least once a day using SCAQMD Rule 1186 certified street sweepers utilizing reclaimed water trucks if visible soil materials are carried to adjacent streets.</p> <p>g) Post a publicly visible sign with the telephone number and person to contact regarding dust complaints. This person shall respond and initiate corrective action within 24 hours.</p> <p>h) Any vegetative cover to be utilized onsite shall</p>				



THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	<p>be planted as soon as possible to reduce the disturbed area subject to wind erosion. Irrigation systems required for these plants shall be installed as soon as possible to maintain good ground cover and to minimize wind erosion of the soil.</p> <p>i) Any on-site stock piles of debris, dirt, or other dusty material shall be covered or watered as necessary to minimize fugitive dust pursuant to SCAQMD Rule 403.</p> <p>j) A high wind response plan shall be formulated and implemented for enhanced dust control if winds are forecast to exceed 25 mph in any upcoming 24-hour period.</p> <p><b>MM 4.2-3</b> The Project shall comply with the provisions of South Coast Air Quality Management District Rule 1186 “PM<sub>10</sub> Emissions from Paved and Unpaved Roads and Livestock Operations” and Rule 1186.1, “Less-Polluting Street Sweepers” by complying with the following requirements. To ensure and enforce compliance with these requirements, prior to grading and building permit issuance, the City of Moreno Valley shall verify that the following notes are included on the grading and building plans. Project construction contractors shall be required to ensure compliance with the notes and permit periodic inspection of the construction site by City of Moreno Valley staff or its designee to confirm compliance. The notes also shall be specified in bid documents issued to prospective construction contractors.</p> <p>a) If visible dirt or accumulated dust is carried onto paved roads during construction, the contractor shall remove such dirt and dust at the end of each work day by street cleaning.</p> <p>b) Street sweepers shall be certified by the South Coast Air Quality Management District as meeting the Rule 1186 sweeper certification procedures and requirements for PM<sub>10</sub>-efficient sweepers. All street sweepers having a gross vehicle weight of 14,000 pounds or more shall be</p>	<p>Project Applicant; Project Construction Contractors</p>	<p>City of Moreno Valley Land Development Division, Building and Safety Division, and Planning Division</p>	<p>Prior to the issuance of building and grading permits</p>	



THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	<p>powered with alternative (non-diesel) fuel or otherwise comply with South Coast Air Quality Management District Rule 1186.1.</p> <p><b>MM 4.2-4</b> The Project shall comply with California Code of Regulations Title 13, Division 3, Chapter 1, Article 4.5, Section 2025, "Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and Other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles" and California Code of Regulations Title 13, Division 3, Chapter 10, Article 1, Section 2485, "Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling" by complying with the following requirements. To ensure and enforce compliance with these requirements and thereby limit the release of diesel particulate matter, oxides of nitrogen, and other criteria pollutants into the atmosphere from the burning of fuel, prior to grading permit and building permit issuance, the City of Moreno Valley shall verify that the following notes are included on the grading and building plans. Project construction contractors shall be required to ensure compliance with the notes and permit periodic inspection of the construction site by City of Moreno Valley staff or its designee to confirm compliance. These notes also shall be specified in bid documents issued to prospective construction contractors.</p> <p>a) Temporary signs shall be placed on the construction site at all construction vehicle entry points and at all loading, unloading, and equipment staging areas indicating that heavy duty trucks and diesel-powered construction equipment are prohibited from idling for more than three (3) minutes. The signs shall be installed before construction activities commence and remain in place during the duration of construction activities at all loading, unloading, and equipment staging areas.</p> <p><b>MM 4.2-5</b> The Project shall comply with the provisions of SCAQMD Rule 431.2, "Sulfur Content of Liquid Fuels" by complying with the following requirement. To ensure and enforce compliance with this requirement and thereby limit the release of sulfur</p>	<p>Project Applicant; Project Construction Contractors</p> <p>Project Applicant; Project Construction Contractors</p>	<p>City of Moreno Valley Land Development Division, Building and Safety Division, and Planning Division</p> <p>City of Moreno Valley Land Development Division &amp; Building and Safety Division</p>	<p>Prior to the issuance of building and grading permits</p> <p>Prior to issuance of a grading permit and building permit</p>	







THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	<p>c) Service equipment used on the Project site, such as forklifts, shall be electric;</p> <p>d) Preferential parking locations for carpool, vanpool, EVs and CNG vehicles;</p> <p>e) The building's roof shall be designed and constructed to accommodate the potential, future construction of maximally-sized photovoltaic (PV) solar arrays taking into consideration limitations imposed by other rooftop equipment, roof warranties, building and fire code requirements, and other physical or legal limitations. The building shall include an electrical system and other infrastructure sufficiently-sized to accommodate the potential installation of maximally-sized PV arrays in the future. The electrical system and infrastructure must be clearly labeled with noticeable and permanent signage which informs future occupants/owners of the existence of this infrastructure.</p>				
	<p><b>MM 4.2-8</b> Prior to the issuance of a building permit and/or tenant improvement project for any loading dock spaces utilizing refrigerated storage shall provide an electrical hookup for refrigeration units on delivery trucks. As a condition of occupancy permits, trucks incapable of utilizing the electrical hookup for powering refrigeration shall be prohibited from accessing the site.</p>	Project Applicant	City of Moreno Valley Planning Division & Building and Safety Division	Prior to the issuance of a building permit	
	<p><b>MM 4.2-9</b> The building plans shall specify that all fixtures installed in restrooms and employee break areas shall be U.S. EPA Certified WaterSense or equivalent. The City of Moreno Valley shall verify this information is provided on the Project's building plans prior to issuance of building permits and shall conduct an inspection prior to issuance of an occupancy permit to ensure the required fixtures are installed.</p>	Project Applicant	City of Moreno Valley Planning Division & Building and Safety Division	Prior to the issuance of a building permit	
	<p><b>MM 4.2-10</b> Prior to the issuance of permits that would allow the installation of landscaping, the City of Moreno Valley shall review and approve landscaping</p>	Project Applicant	City of Moreno Valley Planning Division & Building and Safety Division	Prior to the issuance of a building permit	



THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	plans for the site that requires: 1) a plant palette emphasizing drought-tolerant plants; 2) use of water-efficient irrigation techniques; and 3) sufficient shade trees are provided so that at least 50% of the automobile parking areas will be shaded within 15 years after Project construction is complete (excluding the truck courts where trees cannot be planted due to interference with truck maneuvering). The City of Moreno Valley shall inspect for adherence to these requirements after landscaping installation.		Division		
<p><b>Threshold d: Less-than-Significant Impact.</b> The Project's localized criteria pollution emissions during construction and operation would not exceed the applicable SCAQMD thresholds. The Project also would not expose sensitive receptors to toxic air contaminants (i.e., DPM) that exceed the applicable SCAQMD carcinogenic and non-carcinogenic risk thresholds. Lastly, the Project would not cause or contribute to the formation of a CO "hot spot."</p>	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<p><b>Threshold e: Less-than-Significant Impact.</b> The Project would not produce unusual or substantial construction-related odors. Odors associated with long-term operation of the Project would be minimal and less than significant. The Project would comply with SCAQMD Rule 402, which prohibits the discharge of odorous emissions that would create a public nuisance.</p>	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<b>4.3 Biological Resources</b>					
<b>Summary of Impacts</b>					
<p><b>Threshold a: Significant Direct and Cumulatively-Considerable Impact.</b> No sensitive vegetation communities, special-status plant species, or special-status wildlife species are located on the Project site. However, there is a potential that the western burrowing owl could migrate onto the property before Project-related</p>	<p><b>MM 4.3-1</b> Within 30 days prior to grading, a qualified biologist shall conduct a survey of suitable habitat on site and make a determination regarding the presence or absence of the burrowing owl. The determination shall be documented in a report and shall be submitted, reviewed, and accepted by the City of Moreno Valley prior to the issuance of a grading permit and subject to the following provisions:</p>	Project Applicant; Project Biologist	City of Moreno Valley Planning Division & Land Development Division	Within 30 days prior to grading activities	Less-than-Significant Impact after Mitigation



THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
<p>construction activities commence and, in this event, impacts to the burrowing owl would be significant on a direct and cumulatively-considerable basis.</p>	<p>a) In the event that the pre-construction survey identifies no burrowing owls on the property a grading permit may be issued without restriction.</p> <p>b) In the event that the pre-construction survey identifies the presence of at least one individual but less than three (3) mating pairs of burrowing owl, then prior to the issuance of a grading permit and prior to the commencement of ground-disturbing activities on the property, the qualified biologist shall passively or actively relocate any burrowing owls. Passive relocation, including the required use of one-way doors to exclude owls from the site and the collapsing of burrows, will occur if the biologist determines that the proximity and availability of alternate habitat is suitable for successful passive relocation. Passive relocation shall follow CDFW relocation protocol and shall only occur between September 15 and February 1. If proximate alternate habitat is not present as determined by the biologist, active relocation shall follow CDFW relocation protocol. The biologist shall confirm in writing that the species has fledged the site or been relocated prior to the issuance of a grading permit.</p> <p>c) In the event that the pre-construction survey identifies the presence of three (3) or more mating pairs of burrowing owl, the requirements of MSCHP Species-Specific Conservation Objectives 5 for the burrowing owl shall be followed. Objective 5 states that if the site (including adjacent areas) supports three (3) or more pairs of burrowing owls and supports greater than 35 acres of suitable habitat, at least 90 percent of the area with long-term conservation value and burrowing owl pairs will be conserved onsite until it is demonstrated that Objectives 1-4 have been met. A grading permit shall be issued, either:</p> <p>i. Upon approval and implementation of a property-specific Determination of Biologically Superior Preservation</p>				



THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	<p>(DBESP) report for the burrowing owl by the CDFW; or</p> <p>ii. A determination by the biologist that the site is part of an area supporting less than 35 acres of suitable Habitat, and upon passive or active relocation of the species following accepted CDFW protocols. Passive relocation, including the required use of one-way doors to exclude owls from the site and the collapsing of burrows, will occur if the biologist determines that the proximity and availability of alternate habitat is suitable for successful passive relocation. Passive relocation shall follow CDFW relocation protocol and shall only occur between September 15 and February 1. If proximate alternate habitat is not present as determined by the biologist, active relocation shall follow CDFW relocation protocol. The biologist shall confirm in writing that the species has fledged the site or been relocated prior to the issuance of a grading permit.</p>				
<p><u>Threshold b: No Impact.</u> Neither the Project site nor the adjacent segment of the concrete-lined Heacock Channel that would be affected by the Project contain riparian and/or other sensitive natural habitats; therefore, the Project would have no impact on riparian or other sensitive habitats as defined by the CDFW or USFWS.</p>	<p>No mitigation is required.</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>No Impact</p>
<p><u>Threshold c: Less-than-Significant Impact.</u> The Project proposes to install a storm drain outlet that would connect to the concrete-lined Heacock Channel. No federally-protected wetlands are located within this segment of the Heacock Channel or on the Project site.</p>	<p>No mitigation is required.</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>Less-than-Significant Impact</p>
<p><u>Threshold d: Less-than-Significant Impact.</u> There is no potential for the Project to interfere with the movement of fish or</p>	<p><b>MM 4.3-2</b> As a condition of approval for all grading permits, vegetation clearing shall be prohibited unless a nesting bird survey is completed in accordance with</p>	<p>Project Applicant; Project Biologist</p>	<p>City of Moreno Valley Planning Division</p>	<p>Within 3 days prior to initiating vegetation clearing</p>	<p>Less-than-Significant Impact</p>



THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
<p>impede the use of a native wildlife nursery site. The Project site also does not contain habitat that has the potential to support nesting birds.</p>	<p>the following requirements.</p> <p>a) A migratory nesting bird survey of the Project's impact footprint shall be conducted by a qualified biologist within three (3) days prior to initiating vegetation clearing or ground disturbance.</p> <p>b) A copy of the nesting bird survey results report shall be provided to the City of Moreno Valley. If the survey identifies the presence of active nests, then the qualified biologist shall provide the City of Moreno Valley with a copy of maps showing the location of all nests and an appropriate buffer zone around each nest sufficient to protect the nest from direct and indirect impact. The size and location of all buffer zones, if required, shall be subject to review and approval by the City of Moreno Valley and shall be no less than a 150-foot radius around the nest for non-raptors and a 300-foot radius around the nest for raptors. The nests and buffer zones shall be field checked weekly by a qualified biological monitor. The approved buffer zone shall be marked in the field with construction fencing, within which no vegetation clearing or ground disturbance shall occur until the qualified biologist verifies that the nests are no longer occupied and the juvenile birds can survive independently from the nests.</p>				
<p><u>Threshold e: No Impact.</u> Implementation of the Project site would not conflict with any local policies or ordinances protecting biological resources.</p>	<p>No mitigation is required.</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>No Impact</p>
<p><u>Threshold f: Significant Direct and Cumulatively-Considerable Impact.</u> The Project site is subject to the Western Riverside County MSHCP and its survey requirements for the western burrowing owl.</p>	<p>Refer to MM 4.3-1, above.</p>				<p>Less-than-Significant Impact after Mitigation</p>



THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
<b>4.4 Cultural Resources &amp; Tribal Cultural Resources</b>					
<b>Summary of Impacts</b>					
<u>Threshold a: No Impact.</u> No resources, defined as historically significant, are present on the Project site. Therefore, no historic resources would be altered or destroyed by development on the Project site.	No mitigation is required.	N/A	N/A	N/A	No Impact
<u>Threshold b: Less-than-Significant Impact.</u> No known prehistoric resources are present on the Project site and the likelihood of uncovering buried prehistoric resources on the Project site is low due to the magnitude of historic ground disturbance on the Project site.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<u>Threshold c: Significant Direct and Cumulatively-Considerable Impact.</u> The Project would not impact any known paleontological resource or unique geological feature. However, the Project site contains alluvium soils with a high sensitivity for paleontological resources. Accordingly, construction activities on the Project site have the potential to unearth and adversely impact paleontological resource that may be buried beneath the ground surface.	<p><b>MM 4.4-1</b> The paleontological monitor shall conduct full-time monitoring during grading and excavation operations in undisturbed, very old alluvial fan sediments. The paleontological monitor shall be equipped to salvage fossils if they are unearthed to avoid construction delays and to remove samples of sediments that may contain the remains of small fossil invertebrates and vertebrates. The paleontological monitor shall be empowered to temporarily halt or divert equipment to allow the removal of abundant and large specimens in a timely manner. The significance of the discovered resources shall be determined by the paleontologist. If the resource is significant, Mitigation Measure MM 4.4-7 shall apply. Monitoring may be reduced if the potentially fossiliferous units are not present in the subsurface, or if present, are determined upon exposure and examination by qualified paleontological personnel to have a low potential to contain or yield fossil resources.</p> <p><b>MM 4.4-2</b> If a significant paleontological resource is discovered on the property, discovered fossils or samples of such fossils shall be collected and identified by a qualified paleontologist. Significant specimens recovered shall be properly recorded, treated, and donated to the Western Science Center</p>	Project Paleontologist	City of Moreno Valley Planning Division	On-going construction during	Less-than-Significant Impact after Mitigation
		Project Paleontologist	City of Moreno Valley Planning Division	Prior to grading permit final inspection	



THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	Museum, or other repository with permanent retrievable paleontological storage. Prior to grading permit inspection approval, a qualified paleontologist shall prepare a final report that itemizes any fossils recovered, with maps to accurately record the original location of recovered fossils, and contains evidence that the resources were curated by an established museum repository. The report shall be submitted to the City of Moreno Valley.				
<u>Threshold d: No Impact.</u> In the unlikely event that human remains are discovered on the Project site during future grading or other ground disturbing activities, the Project would be required to comply with the applicable provisions of California Health and Safety Code § 7050.5 and California Public Resources Code § 5097 <i>et. seq.</i> Mandatory compliance with State law would ensure that human remains, if encountered, would be appropriately treated and would preclude the potential for significant impacts to human remains.	<b>MM 4.4-8</b> If human remains are discovered, no further disturbance shall occur in the affected area until the County Coroner has made necessary findings as to origin. If the County Coroner determines that the remains are potentially Native American, the California Native American Heritage Commission shall be notified within 5-days of the published finding to be given a reasonable opportunity to identify the “most likely descendant”. The “most likely descendant” shall then make recommendations and engage in consultations concerning the treatment of the remains (California Public Resources Code 5097.98).	Project Construction Manager; Riverside County Coroner	City of Moreno Valley Planning Division	On-going during grading	No Impact
<u>Threshold e: No Impact.</u> The Project site does not contain any recorded Native American cultural resources; therefore, the Project would not cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources or a local register of historical resources.	No mitigation is required.	N/A	N/A	N/A	No Impact
<u>Threshold f: Significant Direct and Cumulatively-Considerable Impact.</u> Construction activities on the Project site have the potential, however unlikely, to unearth and adversely impact tribal cultural resources that may be buried beneath the ground surface.	<b>MM 4.4-3</b> Prior to the issuance of a grading permit, the Developer shall retain a professional archaeologist to conduct monitoring of all mass grading and trenching activities. The Project Archaeologist shall have the authority to temporarily redirect earthmoving activities in the event that suspected archaeological resources are unearthed during Project construction. The Project Archaeologist, in consultation with the Consulting Tribe(s), the contractor, and the City, shall develop a Cultural Resources Management Plan (CRMP) in consultation pursuant to the definition in	Project Applicant	City of Moreno Valley Planning Division	Prior to the issuance of a grading permit	Less-than-Significant after Mitigation



THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
	<p>AB 52 to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the project site. A consulting tribe is defined as a tribe that initiated the AB 52 tribal consultation process for the Project, has not opted out of the AB 52 consultation process, and has completed AB 52 consultation with the City as provided for in Cal Pub Res Code Section 21080.3.2(b)(1) of AB 52. Details in the Plan shall include:</p> <ul style="list-style-type: none"> <li>a) Project grading and development scheduling;</li> <li>b) The Project archeologist and the Consulting Tribes(s) as defined in MM 4.4-3 shall attend the pre-grading meeting with the City, the construction manager and any contractors and will conduct a mandatory Cultural Resources Worker Sensitivity Training to those in attendance. The Training will include a brief review of the cultural sensitivity of the Project and the surrounding area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. All new construction personnel that will conduct earthwork or grading activities that begin work on the Project following the initial Training must take the Cultural Sensitivity Training prior to beginning work and the Project archaeologist and Consulting Tribe(s) shall make themselves available to provide the training on an as-needed basis; and</li> <li>c) The protocols and stipulations that the contractor, City, Consulting Tribe(s) and Project archaeologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation.</li> </ul>				





<b>THRESHOLD</b>	<b>MITIGATION MEASURES (MM)</b>	<b>RESPONSIBLE PARTY</b>	<b>MONITORING PARTY</b>	<b>IMPLEMENTATION STAGE</b>	<b>LEVEL OF SIGNIFICANCE</b>
	<p>occur until all legally required cataloging and basic recordation have been completed. No recordation of sacred items is permitted without the written consent of all Consulting Native American Tribal Governments as defined in MM 4.4-3.</p> <p><b>MM 4.4-6</b> The City shall verify that the following note is included on the Grading Plan:</p> <p>“If any suspected archaeological resources are discovered during ground-disturbing activities and the Project Archaeologist or Native American Tribal Representatives are not present, the construction supervisor is obligated to halt work in a 100-foot radius around the find and call the Project Archaeologist and the Tribal Representatives to the site to assess the significance of the find.”</p> <p><b>MM 4.4-7</b> If potential historic or cultural resources are uncovered during excavation or construction activities at the project site, work in the affected area must cease immediately and a qualified person meeting the Secretary of the Interior’s standards (36 CFR 61), Tribal Representatives, and all site monitors per the Mitigation Measures, shall be consulted by the City to evaluate the find, and as appropriate recommend alternative measures to avoid, minimize or mitigate negative effects on the historic, or prehistoric resource. Determinations and recommendations by the consultant shall be immediately submitted to the Planning Division for consideration and implemented as deemed appropriate by the Community Development Director, in consultation with the State Historic Preservation Officer (SHPO) and any and all Consulting Native American Tribes as defined in MM 4.4-3 before any further work commences in the affected area.</p>	<p>Project Applicant</p>     <p>Project Applicant; Project Archaeologist</p>	<p>City of Moreno Valley Planning Division</p>     <p>City of Moreno Valley Planning Division</p>	<p>Prior to issuance of a grading permit</p>     <p>During excavation or construction activities</p>	
<b>4.5 Geology and Soils</b>					
<b>Summary of Impacts</b>					
<p><u>Threshold a: Less-than-Significant Impact.</u> As with all properties within the southern California region, the Project site is subject</p>	<p>No mitigation is required.</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>Less-than-Significant Impact</p>



THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
to seismic ground shaking associated with earthquakes. However, mandatory compliance with local and state ordinances and building codes including, but not limited to, the CBSC (Chapter 18) and City of Moreno Valley Municipal Code § 8.21.050, would ensure that the Project minimizes potential hazards related to seismic ground shaking.					
<u>Threshold b: Less-than-Significant Impact.</u> The Project Applicant would be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for construction activities and adhere to a Storm Water Pollution Prevention Plan (SWPPP) as well as SCAQMD Rule 403. Following development, wind and water erosion on the Project site would be minimized, as the site would be landscaped or covered with impervious surfaces and drainage would be controlled through a storm drain system. Furthermore, the Project is required by law to implement a WQMP during operation, which would preclude substantial erosion impacts in the long-term.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<u>Threshold c: Less-than-Significant Impact.</u> There is no potential for the Project to cause on- or off-site landslides or lateral spreading. Potential hazards associated with unstable soils would be precluded through mandatory adherence to the recommendations contained in the site-specific geologic engineering report.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<u>Threshold d: Less-than-Significant Impact.</u> The Project site contains soils with low susceptibility to expansion.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<u>Threshold e: No Impact.</u> No septic tanks or alternative wastewater disposal systems are proposed to be installed on the Project site.	No mitigation is required.	N/A	N/A	N/A	No Impact



<b>THRESHOLD</b>	<b>MITIGATION MEASURES (MM)</b>	<b>RESPONSIBLE PARTY</b>	<b>MONITORING PARTY</b>	<b>IMPLEMENTATION STAGE</b>	<b>LEVEL OF SIGNIFICANCE</b>
<b>4.6 Greenhouse Gas Emissions</b>					
<b>Summary of Impacts</b>					
<u>Threshold a: Less-than-Significant Impact.</u> The Project is calculated to generate approximately 6,430.54 MTCO <sub>2</sub> e annually, which would not exceed the SCAQMD's industrial significance threshold of 10,000 MTCO <sub>2</sub> e.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<u>Threshold b: Less-than-Significant Impact.</u> The Project would be consistent with applicable regulations, policies, plans, and policy goals that would reduce GHG emissions.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<b>4.7 Hazards and Hazardous Materials</b>					
<b>Summary of Impacts</b>					
<u>Threshold a and b: Less-than-Significant Impact.</u> During Project construction and operation, mandatory compliance to federal, State, and local regulations would ensure that the proposed Project would not create a significant hazard to the environment due to routine transport, use, disposal, or upset of hazardous materials.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<u>Threshold c: Less-than-Significant Impact.</u> The Project site is not located within one-quarter mile of any existing or proposed school. Accordingly, the Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<u>Threshold d: No Impact.</u> The Project site is not located on any list of hazardous materials sites compiled pursuant to Government Code § 65962.5.	No mitigation is required.	N/A	N/A	N/A	No Impact
<u>Threshold e: Less-than-Significant Impact.</u> The Project is consistent with the restrictions and requirements of the March	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact



<b>THRESHOLD</b>	<b>MITIGATION MEASURES (MM)</b>	<b>RESPONSIBLE PARTY</b>	<b>MONITORING PARTY</b>	<b>IMPLEMENTATION STAGE</b>	<b>LEVEL OF SIGNIFICANCE</b>
ARB/IPA Land Use Compatibility Plan. As such, the Project would not result in an airport safety hazard for people residing or working in the Project area.					
<u>Threshold f: No Impact.</u> The Project site is not located within the vicinity of a private airstrip or a helipad.	No mitigation is required.	N/A	N/A	N/A	No Impact
<u>Threshold g: Less-than-Significant Impact.</u> The Project site does not contain any emergency facilities nor does it serve as an emergency evacuation route. During construction and long-term operation, adequate emergency vehicle access is required to be provided. Accordingly, the Project would not impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<u>Threshold h: No Impact.</u> The Project site is not located in close proximity to wildlands or areas with high fire hazards. Thus, the Project would not expose people or structures to a significant wildfire risk.	No mitigation is required.	N/A	N/A	N/A	No Impact
<b>4.8 Hydrology and Water Quality</b>					
<b>Summary of Impacts</b>					
<u>Threshold a: Less-than-Significant Impact.</u> The Project would not violate any water quality standards or waste discharge requirements on a direct or cumulatively-considerable basis. Compliance with a SWPPP and WQMP is required to address construction-related water quality issues.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<u>Threshold b: Less-than-Significant Impact.</u> The Project does not propose potable water wells and would not substantially impact the availability of potable groundwater in the Project area.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact



<b>THRESHOLD</b>	<b>MITIGATION MEASURES (MM)</b>	<b>RESPONSIBLE PARTY</b>	<b>MONITORING PARTY</b>	<b>IMPLEMENTATION STAGE</b>	<b>LEVEL OF SIGNIFICANCE</b>
<u>Threshold c: Less-than-Significant Impact.</u> The Project would retain the site's general drainage pattern is required to incorporate design features to minimize erosion and sediment within surface water runoff.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<u>Threshold d: Less-than-Significant-Impact.</u> The Project would not create or contribute runoff which would exceed the capacity of existing or planned stormwater drainage systems, nor would development of the Project provide substantial additional sources of polluted runoff.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<u>Threshold e: Less-than-Significant Impact.</u> Downstream stormwater drainage systems have sufficient available capacity to accommodate anticipated surface runoff flows upon development of the Project site. Additionally, the Project would be required to comply with a SWPPP and a site-specific WQMP to address water quality.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<u>Threshold f: No Impact.</u> There are no other components of the Project that would substantially degrade water quality.	No mitigation is required.	N/A	N/A	N/A	No Impact
<u>Threshold g: No Impact.</u> The Project would not construct housing within a 100-year flood hazard area.	No mitigation is required.	N/A	N/A	N/A	No Impact
<u>Threshold h: No Impact.</u> The Project would not construct structures within a 100-year flood hazard area that would impede or redirect flood flows.	No mitigation is required.	N/A	N/A	N/A	No Impact
<u>Threshold i: No Impact.</u> The Project would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.	No mitigation is required.	N/A	N/A	N/A	No Impact
<u>Threshold j: No Impact.</u> The Project site is not subject to hazards associated with seiches, tsunamis, or mudflow.	No mitigation is required.	N/A	N/A	N/A	No Impact



THRESHOLD	MITIGATION MEASURES (MM)	RESPONSIBLE PARTY	MONITORING PARTY	IMPLEMENTATION STAGE	LEVEL OF SIGNIFICANCE
<b>4.9 Land Use and Planning</b>					
<b>Summary of Impacts</b>					
<u>Threshold a: No Impact.</u> The Project would not physically divide an established community.	No mitigation is required.	N/A	N/A	N/A	No Impact
<u>Threshold b: Less-than-Significant Impact.</u> The Project would be consistent with all applicable land use plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<u>Threshold c: No Impact.</u> The Project would not conflict with the Western Riverside County MSHCP or the Stephens' Kangaroo Rat HCP.	No mitigation is required.	N/A	N/A	N/A	No Impact
<b>4.10 Noise</b>					
<b>Summary of Impacts</b>					
<u>Threshold a: Less-than-Significant Impact.</u> The Project would generate short-term construction and long-term operational noise but would not generate noise levels during construction and/or operation that exceed the standards established by the City of Moreno Valley Municipal Code.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<u>Threshold b: Less-than-Significant Impact.</u> The Project's construction and operational activities would not result in a perceptible groundborne vibration or noise.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<u>Threshold c: Less-than-Significant Impact.</u> The Project would generate long-term operational noise but would not result in a substantial permanent increase in ambient noise levels in the vicinity of the Project site.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<u>Threshold d: Less-than-Significant Impact.</u> The Project would not result in a substantial temporary or periodic increase in ambient	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact



<b>THRESHOLD</b>	<b>MITIGATION MEASURES (MM)</b>	<b>RESPONSIBLE PARTY</b>	<b>MONITORING PARTY</b>	<b>IMPLEMENTATION STAGE</b>	<b>LEVEL OF SIGNIFICANCE</b>
noise levels in the Project vicinity above levels existing without the Project.					
<u>Threshold e: Less-than-Significant Impact.</u> The Project site is located outside of the 60 dBA CNEL noise level contour of the March Air Reserve Base. As such, the Project would not expose people to excessive noise levels associated with a public airport or public use airport.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<u>Threshold f: No Impact.</u> The Project site is not located near any private airfields or airstrips.	No mitigation is required.	N/A	N/A	N/A	No Impact
<b>4.11 Transportation and Traffic</b>					
<b>Summary of Impacts</b>					
<u>Threshold a: Less-than-Significant Impact.</u> The Project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system during projected near- or long-term development conditions.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<u>Threshold b: Less-than-Significant Impact.</u> The Project would contribute less-than-significant traffic volumes to freeway facilities included within the <i>Riverside County CMP</i> roadway network under Short-Term Construction, E+P, Opening Year (2022), and Horizon Year (2040) traffic conditions.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<u>Threshold c: No Impact.</u> There is no potential for the Project to change air traffic patterns or create substantial air traffic safety risks.	No mitigation is required.	N/A	N/A	N/A	No Impact
<u>Threshold d: Less-than-Significant Impact.</u> No significant transportation safety hazards would be introduced as a result of the proposed Project.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact





<b>THRESHOLD</b>	<b>MITIGATION MEASURES (MM)</b>	<b>RESPONSIBLE PARTY</b>	<b>MONITORING PARTY</b>	<b>IMPLEMENTATION STAGE</b>	<b>LEVEL OF SIGNIFICANCE</b>
<u>Threshold e: No Impact.</u> Adequate emergency access would be provided to the Project site during construction and long-term operation. The Project would not result in inadequate emergency access to the site or surrounding properties.	No mitigation is required.	N/A	N/A	N/A	No Impact
<u>Threshold f: Less-than-Significant Impact.</u> The proposed Project is consistent with adopted policies and programs regarding public transit, bicycle, and pedestrian facilities, and is designed to minimize potential conflicts with non-vehicular means of transportation.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<b>4.12 Utilities and Service Systems</b>					
<b>Summary of Impacts</b>					
<u>Threshold a: Less-than-Significant Impact.</u> The Project would not exceed wastewater treatment requirements of the Santa Ana RWQCB. EMWD would provide wastewater treatment and collection services to the Project, and EMWD is required to operate all of its treatment facilities in accordance with applicable waste treatment and discharge standards and requirements set forth by the RWQCB.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<u>Threshold b: Less-than-Significant Impact.</u> The environmental effects associated with installing the Project's water and wastewater infrastructure is evaluated throughout this EIR and no impacts specific to the utilities and service systems issue area have been identified.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<u>Threshold c: Less-than-Significant Impact.</u> Stormwater would be collected on the Project site by an on-site drainage system. The environmental effects associated with installing the Project's water and wastewater infrastructure is evaluated throughout this EIR and no impacts specific to the utilities and service systems issue	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact



<b>THRESHOLD</b>	<b>MITIGATION MEASURES (MM)</b>	<b>RESPONSIBLE PARTY</b>	<b>MONITORING PARTY</b>	<b>IMPLEMENTATION STAGE</b>	<b>LEVEL OF SIGNIFICANCE</b>
area have been identified.					
<u>Threshold d: Less-than-Significant Impact.</u> The EMWD is expected to have sufficient water supplies to service the Project. The Project would not exceed EMWD's available supply of water, even during drought conditions through, at least, the year 2040.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<u>Threshold e: Less-than-Significant Impact.</u> EMWD would provide wastewater treatment services to the Project site via the Moreno Valley Regional Water Reclamation Facility. This facility has adequate capacity to service the Project and no new or expanded facilities would be needed.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<u>Threshold f: Less-than-Significant Impact.</u> There is adequate capacity available at the El Sobrante Landfill, Badlands Sanitary Landfill, and Lamb Canyon Sanitary Landfill to accept the Project's solid wastes during both construction and long-term operation.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact
<u>Threshold g: Less-than-Significant Impact.</u> The Project would comply with all applicable federal, State, and local statutes and regulations related to solid waste disposal, reduction, and recycling.	No mitigation is required.	N/A	N/A	N/A	Less-than-Significant Impact



## **1.0 INTRODUCTION**

This Environmental Impact Report (EIR) is an informational document that represents the independent judgment of the City of Moreno Valley (acting as the California Environmental Quality Act (CEQA) Lead Agency) and evaluates the physical environmental effects that could result from constructing and operating the proposed Brodiaea Commerce Center project (hereafter, the “Project”). Approvals requested from the City of Moreno Valley by the Project Applicant to implement the Project include a Plot Plan (PEN17-0143), Change of Zone (PEN17-0144), and other related discretionary and administrative actions that are required to construct and operate the Project described in this EIR.

### **1.1 PURPOSES OF CEQA AND THIS EIR**

As stated by CEQA Guidelines § 15002(a), the basic purposes of CEQA are to:

1. Inform governmental decision makers and the public about the potential, significant environmental effects of proposed activities (including the discretionary approval of private development projects);
2. Identify the ways that environmental damage can be avoided or significantly reduced;
3. Prevent significant, avoidable damage 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 the project involves significant environmental effects).

As the first step in the CEQA compliance process, the City of Moreno Valley prepared an Initial Study pursuant to CEQA Guidelines § 15063. The Initial Study determined that the Project has the *potential* to cause or contribute to significant environmental effects, and a Project EIR, as defined by CEQA Guidelines § 15161, would be required. Accordingly, this document serves as a Project EIR. As required by CEQA Guidelines § 15161, this Project EIR shall “...focus primarily on the changes in the environment that would result from the development project,” and “...examine all phases of the project including planning, construction, and operation.” Also, in conformance with CEQA Guidelines § 15121(a), the purposes of this EIR are to: (1) disclose information by informing public agency decision makers and the public generally of the significant environmental effects associated with all phases of the Project, (2) identify possible ways to minimize or avoid those significant effects, and (3) to describe a reasonable range of alternatives to the Project that would feasibly attain most of the basic Project objectives but would avoid or substantially lessen its significant environmental effects.

### **1.2 SUMMARY OF THE PROJECT EVALUATED BY THIS EIR**

For purposes of this EIR, the term “Project” refers to the discretionary actions required to implement the proposed Brodiaea Commerce Center and all of the activities associated with its implementation including planning, construction, and ongoing operation. The Project site comprises an approximately 12.0-acre property located north of Brodiaea Avenue, west of Heacock Street, and approximately 325 feet south of Alessandro Boulevard in the City of Moreno Valley, Riverside County, California. In summary, the Project Applicant proposes the construction and operation of a 261,807-square-foot (s.f.) warehouse facility. The Project also includes associated site improvements, including drive aisles, landscaping, and utility infrastructure.



The Project Applicant has requested the following discretionary actions, which are under consideration by the City of Moreno Valley:

- **Plot Plan (PEN17-0143)** proposes the construction of a warehouse facility with 261,807 s.f. of floor space on the subject property. The proposed facility would contain 248,807 s.f. of warehouse space and 13,000 s.f. of office and mezzanine space. Automotive parking would be provided on the north and south sides of the building; loading docks and truck parking areas are located on the west side of the building. Vehicular access to the Project site would be provided by two proposed driveways along Brodiaea Avenue. The Project also would include numerous site improvements, such as a storm water detention basin, ornamental landscaping, and utility infrastructure, as well as a bike path along the eastern boundary of the Project site.
- **Change of Zone (PEN17-0144)** would amend the City of Moreno Valley Zoning Map to change the zoning designation of the Project site to “Light Industrial.” Under existing conditions, approximately 3.7 acres of the Project site are zoned “Business Park – Mixed Use” with a “Mixed-Use Neighborhood” overlay and approximately 8.3 acres of the Project site are zoned “Business Park.”

### **1.3 PRIOR CEQA REVIEW**

The Project site is located within the geographical limits of the City of Moreno Valley and is covered by the City’s General Plan. The General Plan was approved by the City of Moreno Valley in 2006 and provides the fundamental basis for the City’s land use and development policies. The City’s General Plan designates the Project site for development with “Business Park/Light Industrial” land uses (City of Moreno Valley, 2017b). The City’s General Plan was the subject of a previous environmental review under CEQA; a Program EIR for the City’s General Plan was certified by the City of Moreno Valley in 2006 (State Clearinghouse Number 200091075). The Program EIR contains information relevant to the Project site and the site’s designation for uses permitted under the Business Park/Light Industrial land use designation. Accordingly, the Program EIR for the City’s General Plan is herein incorporated by reference pursuant to CEQA Guidelines § 15150 and is available for public review at the City of Moreno Valley, Planning Division, 14177 Frederick Street, Moreno Valley, CA 92553. The Program EIR for the General Plan analyzed development of the Project site with Business Park/Light Industrial land uses, and industrial uses are allowed under that designation; as such, use of the property for industrial purposes does not need to be re-evaluated. This EIR focuses on the potential impacts to environmental resources unique to the Project site, as well as potential environmental impacts specific to the Plot Plan and Change of Zone proposed by the Project Applicant.

### **1.4 LEGAL AUTHORITY**

This EIR has been prepared in accordance with all criteria, standards, and procedures of CEQA (California Public Resource Code Section 21000 *et seq.*) and the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3, Section 15000 *et seq.*).

Pursuant to CEQA § 21067 and CEQA Guidelines Article 4 and § 15367, the City of Moreno Valley is the Lead Agency under whose authority this EIR has been prepared. “Lead Agency” refers to the public agency that has the principal responsibility for carrying out or approving a project. Serving as the Lead Agency and before taking action to approve the Project, the City of Moreno Valley has the obligation to: (1) ensure that this EIR has been completed in accordance with CEQA; (2) review and consider the information contained in this EIR as part of its decision making process; (3) make a statement that this EIR reflects the City of Moreno



Valley's independent judgment; (4) ensure that all significant effects on the environment are eliminated or substantially lessened where feasible; and, if necessary (5) make written findings for each unavoidable significant environmental effect stating the reasons why mitigation measures or project alternatives identified in this EIR are infeasible and citing the specific benefits of the proposed Project that outweigh its unavoidable adverse effects (CEQA Guidelines §§ 15090 through 15093).

Pursuant to CEQA Guidelines §§ 15040 through 15043, and upon completion of the CEQA review process, the City of Moreno Valley will have the legal authority to do any of the following:

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

This EIR fulfills the CEQA environmental review requirements for the proposed Plot Plan (PEN17-0143), Change of Zone (PEN17-0144), and all other governmental discretionary and administrative actions related to the Project.

## **1.5 RESPONSIBLE AND TRUSTEE AGENCIES**

The California Public Resource Code (§ 21104) requires that all EIRs be reviewed by responsible and trustee agencies (see also CEQA Guidelines § 15082 and § 15086(a)). As defined by CEQA Guidelines § 15381, “the term ‘Responsible Agency’ includes all public agencies other than the Lead Agency which have discretionary approval power over the project.” A Trustee Agency is defined in CEQA Guidelines § 15386 as “a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the State of California.”

For the proposed Project, the Santa Ana Regional Water Quality Control Board (RWQCB) is identified as a Trustee Agency that is responsible for the protection of water resources and water quality. The Santa Ana RWQCB is responsible for issuance of a National Pollutant Discharge Elimination System (NPDES) Permit to ensure that during and after Project construction, on-site water flows do not result in siltation, other erosional actions, or degradation of surface or subsurface water quality. In addition, the California Department of Fish and Wildlife (CDFW) is identified as a Trustee Agency that is responsible for the protection of fish, wildlife, plants, and native habitats. Consultation with the CDFW may be required for pre-construction burrowing owl surveys. The Riverside County Flood Control and Water Conservation District is identified as a Responsible Agency that is responsible for the master planned drainage infrastructure that would be utilized by the Project. The Eastern Municipal Water District (EMWD) also is identified as a Responsible Agency that is responsible for the domestic and sewer system design of the Project site. There are no other agencies that are identified as known Responsible or Trustee Agencies for the proposed Project.



## **1.6 EIR SCOPE, FORMAT, AND CONTENT**

### **1.6.1 EIR SCOPE**

The City of Moreno Valley prepared an Initial Study to preliminarily identify the environmental issue areas that may be adversely impacted by the Project. Following completion of the Initial Study, the City filed a Notice of Preparation (NOP) with the California Office of Planning and Research (State Clearinghouse) to indicate that an EIR would be prepared to evaluate the Project’s potential to impact the environment. The NOP was filed with the State Clearinghouse (SCH) and distributed to Responsible Agencies, Trustee Agencies, and other interested parties on November 13, 2017. On December 5, 2017, the NOP was re-distributed and its review period was extended for 30 days. The NOP was distributed for public review to solicit responses to help the City identify the full scope and range of potential environmental concerns associated with the Project so that these issues could be fully examined in this EIR.

Based on the information contained in the Initial Study and in consideration of all comments received by the City on the NOP, this EIR evaluates the Project’s potential to cause adverse effects to the following environmental issue areas:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources & Tribal Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Transportation and Traffic
- Utilities and Service Systems

The Initial Study, NOP, and written comments received by the City during the NOP public review period are provided in *Technical Appendix A* to this EIR. Substantive issues raised in response to the NOP are summarized below in Table 1-1, *Summary of NOP Comments*. The purpose of this table is to present the primary environmental issues of concern raised by public agencies and the general public during the NOP review period and Scoping Meeting. The table is not intended to list every comment received by the City during the NOP review period. Regardless of whether or not a comment is listed in the table, all applicable comments received in responses to the NOP are addressed in this EIR.

**Table 1-1 Summary of NOP Comments**

<b>TOPIC OF CONCERN</b>	<b>COMMENTS RECEIVED DURING NOP REVIEW PERIOD</b>	<b>LOCATION IN EIR WHERE COMMENT(S) ADDRESSED</b>
Air Quality	<ul style="list-style-type: none"> <li>– Request for an analysis of any potential adverse air quality impacts that could occur from all operational phases of the Project.</li> <li>– Request for an analysis of the air quality effects from the Project’s temporary construction activity.</li> <li>– Request that criteria pollutant emissions from the Project be quantified and compared against the recommended regional significance thresholds.</li> <li>– Recommendation to perform a localized analysis by either using the Localized Significance Thresholds (LSTs)</li> </ul>	– Subsection 4.2, <i>Air Quality</i>



**Table 1-1 Summary of NOP Comments**

<b>TOPIC OF CONCERN</b>	<b>COMMENTS RECEIVED DURING NOP REVIEW PERIOD</b>	<b>LOCATION IN EIR WHERE COMMENT(S) ADDRESSED</b>
	<p>developed by the South Coast Air Quality Management District (SCAQMD) or performing dispersion modeling.</p> <ul style="list-style-type: none"> <li>- Request that the California Emissions Estimator Model (CalEEMod) land use emissions software be used for the Project's air quality analysis.</li> </ul>	
Biological Resources	<ul style="list-style-type: none"> <li>- Request for an analysis of the Project's consistency with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)</li> </ul>	<ul style="list-style-type: none"> <li>- Subsection 4.3, <i>Biological Resources</i></li> </ul>
Cultural Resources	<ul style="list-style-type: none"> <li>- Request for an assessment of whether the Project will have an impact on historical resources and if so, to provide mitigation for such effects.</li> <li>- Request for a records search to be performed through the appropriate regional Archaeological Information Center.</li> <li>- Request to include a mitigation plan with provisions for the identification and evaluation of accidentally discovered prehistoric archeological resources, for the disposition of recovered cultural items that are not burial associated, and for the potential discovery of Native American human remains.</li> </ul>	<ul style="list-style-type: none"> <li>- Subsection 4.4, <i>Cultural Resources &amp; Tribal Cultural Resources</i></li> </ul>
Greenhouse Gas Emissions	<ul style="list-style-type: none"> <li>- Request for an analysis of the greenhouse gas (GHG) emissions associated with the Project and the Project's consistency with applicable GHG emissions thresholds and GHG reduction plans.</li> </ul>	<ul style="list-style-type: none"> <li>- Subsection 4.6, <i>Greenhouse Gas Emissions</i></li> </ul>
Hazardous Materials	<ul style="list-style-type: none"> <li>- Request for any current or historic uses at the Project site that may result in the release of hazardous wastes/substances be identified.</li> <li>- Request for proper investigation, sampling and remedial actions of any recognized environmental conditions, if recognized environmental conditions present on the subject property.</li> <li>- Request that historical use of pesticides on the Project site be disclosed, if any.</li> <li>- Request for analysis of Project's potential hazardous materials-related effects on nearby schools.</li> </ul>	<ul style="list-style-type: none"> <li>- Subsection 4.7, <i>Hazards and Hazardous Materials</i></li> </ul>
Hydrology and Water Quality	<ul style="list-style-type: none"> <li>- Request for evidence of either a National Pollutant Discharge Elimination System (NPDES) permit or exemption prior to grading recordation or other final approval of the Project.</li> <li>- Request to meet all Federal Emergency Management Agency (FEMA) requirements prior to grading recordation or other final approval of the Project.</li> <li>- Request to comply with permits related to California Department Fish and Wildlife (CDFW), U.S. Army Corps of Engineers (ACOE), and the Regional Water Quality Control Board (RWQCB).</li> </ul>	<ul style="list-style-type: none"> <li>- Subsection 4.8, <i>Hydrology and Water Quality</i></li> </ul>
Traffic	<ul style="list-style-type: none"> <li>- Request for a Traffic Impact Analysis that evaluates the Project's potential impacts to existing local arterial and regional/state roadway facilities in the vicinity of the Project site.</li> </ul>	<ul style="list-style-type: none"> <li>- Subsection 4.11, <i>Transportation and Traffic</i></li> </ul>



The Lead Agency has not identified any issues of controversy associated with the proposed Project after consideration of all comments received in response to the NOP. Notwithstanding, the Lead Agency has identified several issues of local concern including, but not limited to, potential impacts to air quality, cultural resources, hazards and hazardous materials, and traffic.

**1.6.2 EIR FORMAT AND CONTENT**

This EIR contains all of the information required to be included in an EIR as specified by the CEQA Statutes and Guidelines (California Public Resources Code, § 21000 *et. seq.* and California Code of Regulations, Title 14, Chapter 5). CEQA requires that an EIR contain, at a minimum, certain specified content. Table 1-2, *Location of CEQA-Required Topics*, provides a quick reference in locating the CEQA-required sections within this document.

**Table 1-2 Location of CEQA-Required Topics**

<b>CEQA REQUIRED TOPIC</b>	<b>CEQA GUIDELINES REFERENCE</b>	<b>LOCATION IN THIS EIR</b>
Table of Contents	§ 15122	Table of Contents
Summary	§ 15123	Section S.0
Project Description	§ 15124	Section 3.0
Environmental Setting	§ 15125	Section 2.0
Consideration and Discussion of Environmental Impacts	§ 15126	Section 4.0
Significant Environmental Effects Which Cannot be Avoided if the Proposed Project is Implemented	§ 15126.2(b)	Section 4.0 & Subsection 5.1
Significant Irreversible Environmental Changes Which Would be Caused by the Proposed Project Should it be Implemented	§ 15126.2(b)	Subsection 5.2
Growth-Inducing Impact of the Proposed Project	§ 15126.2(c)	Subsection 5.3
Consideration and Discussion of Mitigation Measures Proposed to Minimize Significant Effects	§ 15126.4	Section 4.0 & Table S-1
Consideration and Discussion of Alternatives to the Proposed Project	§ 15126.6	Section 6.0
Effects Not Found to be Significant	§ 15128	Subsection 5.5
Organizations and Persons Consulted	§ 15129	Section 7.0 & Technical Appendices
Discussion of Cumulative Impacts	§ 15130	Section 4.0
Energy Conservation	Appendix F	Subsection 5.4





In summary, the content and format of this EIR is as follows:

- **Section S.0, Executive Summary**, provides an overview of the EIR document and CEQA process. The Project, including its objectives, is described, and the location and regional setting of the Project site is documented. Potential alternatives to the proposed Project are also identified as required by CEQA. Finally, the Executive Summary provides a summary of the Project's impacts, mitigation measures, and conclusions, in a table that forms the basis of the EIR's Mitigation, Monitoring, and Reporting Program.
- **Section 1.0, Introduction**, provides introductory information about the CEQA process and the responsibilities of the City of Moreno Valley, serving as the Lead Agency for this EIR, a brief description of the Project, the purpose of the EIR, and an overview of the EIR format.
- **Section 2.0, Environmental Setting**, describes the environmental setting, including descriptions of the Project site's physical conditions and surrounding context. The existing setting is defined as the condition of the Project site and surrounding area at the approximate date this EIR's NOP was released for public review (November 13, 2017). The setting discussion also addresses the relevant regional planning documents that are applicable to environmental issues and apply to the Project site and vicinity.
- **Section 3.0, Project Description**, serves as the EIR's Project Description for purposes of CEQA and contains a level of specificity commensurate with the level of detail proposed by the Project, including the summary requirements pursuant to CEQA Guidelines § 15123. This section provides a detailed description of the Project, including its purpose, main objectives, design features, construction characteristics, and operational characteristics expected over the Project's lifetime, should development occur on the property as proposed. In addition, the discretionary actions required of the City of Moreno Valley and other government agencies to implement the Project are discussed.
- **Section 4.0, Environmental Analysis**, provides an analysis of potential direct, indirect, and cumulative impacts that may occur with implementation of the proposed Project. A conclusion concerning significance is reached for each discussion; mitigation measures are presented as warranted. The environmental changes identified in Section 4.0 and throughout this EIR are referred to as "effects" or "impacts" interchangeably. The CEQA Guidelines also describe the terms "effects" and "impacts" as being synonymous (CEQA Guidelines § 15358).

In the environmental analysis subsections of Section 4.0, the existing conditions are disclosed that are pertinent to the subject area being analyzed, accompanied by a specific analysis of physical impacts that may be caused by implementing the proposed Project. Impacts are evaluated on a direct, indirect, and cumulative basis. Direct impacts are those that would occur directly as a result of the proposed Project. Indirect impacts represent secondary effects that would result from Project implementation. Cumulative effects are defined in CEQA Guidelines § 15355 as "...two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts."

The analyses in Section 4.0 are based in part upon technical reports that are appended to this EIR. Information also is drawn from other sources of analytical materials that directly or indirectly relate to the proposed Project and are cited in Section 7.0, *References*. Where the analysis demonstrates that a physical adverse environmental effect may or would occur without undue speculation,



feasible mitigation measures are recommended to reduce or avoid the significant effect. Mitigation measures must be fully enforceable, have an essential nexus to a legitimate governmental interest, and be “roughly proportional” to the impacts of the Project. The discussion then indicates whether the identified mitigation measures would reduce impacts to below a level of significance. In most cases, implementation of the mitigation measures would reduce the adverse environmental impacts to below a level of significance. If mitigation measures are not available or feasible to reduce an identified impact to below a level of significance, the environmental effect is identified as a significant and unavoidable adverse impact, for which a Statement of Overriding Considerations would need to be adopted by the City of Moreno Valley pursuant to CEQA Guidelines § 15093.

- **Section 5.0, Other CEQA Considerations**, includes specific topics that are required by CEQA. These include a summary of the Project’s significant and unavoidable environmental effects, a discussion of the significant and irreversible environmental changes that would occur should the Project be implemented, an analysis of the Project’s energy consumption, as well as potential growth-inducing impacts of the proposed Project. Section 5.0 also includes a discussion of the potential environmental effects that were found not be significant during preparation of the Initial Study and this EIR.
- **Section 6.0, Project Alternatives**, describes and evaluates alternatives to the proposed Project that could reduce or avoid the Project’s adverse environmental effects. CEQA does not require an EIR to consider every conceivable alternative to the Project but rather to consider a reasonable range of alternatives that will foster informed decision making and public participation. Three (3) alternatives are presented in Section 6.0.
- **Section 7.0, References**, cites all reference sources used in preparing this EIR and lists the agencies and persons that were consulted in preparing this EIR. Section 7.0 also lists the persons who authored or participated in preparing this EIR.

### **1.6.3 INCORPORATION BY REFERENCE**

CEQA Guidelines § 15147 states that the “information contained in an EIR shall include summarized...information sufficient to permit full assessment of significant environmental impacts by reviewing agencies and members of the public,” and that the “[p]lacement of highly technical and specialized analysis and data in the body of an EIR shall be avoided through the inclusion of supporting information and analyses as appendices to the main body of the EIR.” CEQA Guidelines § 15150 allows for the incorporation “by reference all or portions of another document...[and is] most appropriate for including long, descriptive, or technical materials that provide general background but do not contribute directly to the analysis of a problem at hand.” The purpose of incorporation by reference is to assist the Lead Agency in limiting the length of this EIR. Where this EIR incorporates a document by reference, the document is identified in the body of the EIR, citing the appropriate section(s) of the incorporated document and describing the relationship between the incorporated part of the referenced document and this EIR.

This EIR relies on a number of Project-specific technical appendices that are bound separately as Technical Appendices. The Technical Appendices are available for review at the City of Moreno Valley Community Development Department Planning Division, 14177 Frederick Street, Moreno Valley, California, 92552, during the City’s regular business hours, or can be requested in electronic form by contacting the City Planning Division. The individual technical studies, reports, and supporting documentation that comprise the Technical Appendices of this EIR are as follows:



- A: Initial Study, Notice of Preparation, and Written Comments on the NOP
- B1: Air Quality Impact Analysis
- B2: Mobile Source Health Risk Assessment
- C: Biological Resources Assessment
- D1: Phase I Cultural Resources Report
- D2: Paleontological Resource and Monitoring Assessment
- E1: Geotechnical Investigation
- E2: Soil Infiltration Study
- F: Greenhouse Gas Analysis
- G: Phase I Environmental Site Assessment
- H1: Water Quality Management Plan
- H2: Hydrology Report
- I: Noise Impact Analysis
- J: Traffic Impact Analysis
- K: Energy Analysis

Other reference sources that are incorporated into this EIR by reference are listed in Section 7.0, *References*, of this EIR. In most cases, documents or websites not included in the EIR's Technical Appendices are cited by a link to the online location where the document/website can be viewed. References relied upon by this EIR will be available for public review at the City of Moreno Valley Community Development Department, Planning Division, during the CEQA-required public review period of the EIR.



## **2.0 ENVIRONMENTAL SETTING**

### **2.1 REGIONAL SETTING AND LOCATION**

The approximately 12.0-acre Project site is located in the central portion of the City of Moreno Valley. The City of Moreno Valley is located in western Riverside County, California – north of the City of Perris, northwest of the City of Hemet, west of the City of Beaumont, east/southeast of the City of Riverside, and east of the unincorporated communities of Mead Valley and Woodcrest. The Project site is located approximately 2.2 miles northeast of Interstate 215 (I-215) and approximately 1.7 miles south of State Route 60 (SR-60). The site's location in a regional context is shown on Figure 3-1, *Regional Map*, in EIR Section 3.0, *Project Description*.

The Project site is located in an urbanizing area of southern California commonly referred to as the “Inland Empire.” The Inland Empire is an approximate 28,000 square mile region comprising Riverside County, San Bernardino County, and the eastern tip of Los Angeles County. According to U.S. Census data, the 2016 population of Riverside County was 2,387,741 (USCB, 2016). Southern California Association of Governments (SCAG) forecast models predict that the population of Riverside County will grow by 38%, to approximately 3.32 million persons, by the year 2035 (SCAG, 2012).

### **2.2 LOCAL SETTING AND LOCATION**

The Project site is located north of Brodiaea Avenue, west of Heacock Street, and approximately 325 feet south of Alessandro Boulevard. The Project site includes Assessor Parcel Numbers (APN) 297-170-038 and a portion of APN 297-170-036. Figure 3-2, *Vicinity Map*, in EIR Section 3.0, *Project Description*, identifies the location of the Project site.

### **2.3 SURROUNDING LAND USES AND DEVELOPMENT**

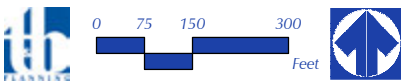
The Project site is located in a mostly-developed portion of the City of Moreno Valley; the Project site is located at the interface between employment uses to the west and south (business park, distribution warehousing, e-commerce, and light industrial) and residential and commercial uses to the north and east. Land uses in the immediate vicinity of the Project site are illustrated on Figure 2-1, *Surrounding Land Uses and Development*, and described below.

North: A vacant and undeveloped, approximately 4.0-acre property is located between the Project site and Alessandro Boulevard. Property located north of Alessandro Boulevard is occupied by the Moreno Valley Commerce Center, which offers neighborhood shopping, food service, and personal and automotive service businesses. Commercial land uses also are located on the northeast corner of Alessandro Boulevard and Heacock Street. To the north of the Moreno Valley Commerce Center are residential land uses and to the west is the Oasis Community Church, additional commercial establishments, and the Alessandro Plaza commercial development.

South: Property located south of the Project site (south of Brodiaea Avenue) includes vacant land and large warehouse buildings. The two closest warehouse buildings are currently occupied by the U.S. Postal Service (USPS) for mail sorting and distribution (the building directly south of the Project site) and Serta Simmons Mattress (the building southeast of the Project site). A large storm drain basin is located at the southeast corner of Brodiaea Avenue and Gilbert Street, north of the USPS building.



Figure 2-1



SURROUNDING LAND USES AND DEVELOPMENT



West: Property located immediately west of the Project site is vacant and undeveloped. Properties farther west of the Project are occupied by two (2) large warehouse buildings, a motel (Motel 7), and smaller-scale commercial land uses including a mini-mart and gas station at the southeast corner of Alessandro Avenue and Gram Street.

East: Immediately east of the Project site and west of Heacock Street is a concrete-lined storm drain channel (Heacock Channel). Land located east of Heacock Street is developed with single-family residential homes separated from Heacock Street by a solid wall. A neighborhood shopping center is located at the southeast corner of Heacock Street and Alessandro Boulevard.

## **2.4 PLANNING CONTEXT**

### **2.4.1 CITY OF MORENO VALLEY GENERAL PLAN**

The City of Moreno Valley's prevailing planning document is its General Plan, dated July 2006. As depicted on Figure 2-2, *Existing General Plan Land Use Designations*, the City's General Plan designates the entire Project site for "Business Park/Light Industrial (BP/LI)" land uses. The BP/LI land use designation is intended to provide manufacturing, research, and development, warehousing and distribution, as well as office and commercial activities (City of Moreno Valley, 2016).

### **2.4.2 ZONING**

As shown on Figure 2-3, *Existing Zoning Designations*, the City of Moreno Valley Zoning Map applies a "Business Park-Mixed Use" (BPX) designation with the "Mixed-Use Neighborhood" (MUN) overlay to the northern, approximately 3.7 acres of the Project site. According to the City of Moreno Valley Municipal Code, the primary purpose of the BPX district is to provide locations for limited convenience commercial and business support services within close proximity to industrial and business park uses. The MUN overlay district provides an area for low-rise, mixed-use development that serves the needs of residents, visitors, and employees from the surrounding immediate neighborhood. (City of Moreno Valley, 2017a)

The southern, approximately 8.3 acres of the Project site is designated by the City's Zoning Map as a "Business Park" (BP) zone. According to the City's Zoning Ordinance, the purpose of the BP district is to provide for light industrial, research and development, office-based firms and limited supportive commercial land uses in an attractive and pleasant working environment and a prestigious location (City of Moreno Valley, 2017a).

### **2.4.3 RIVERSIDE COUNTY AIRPORT LAND USE COMPATIBILITY PLAN**

The March Air Reserve Base Airport Land Use Compatibility Plan (ALUCP) identifies land use standards and design criteria for new development located in the proximity of the March Air Reserve Base to ensure compatibility between the airport and surrounding land uses and to maximize public safety. The Project site is located within the influence area of March Air Reserve Base and is subject to the March Air Reserve Base ALUCP. The entire Project site is located within "Compatibility Zone E." Within Compatibility Zone E, there are no land use or design restrictions, with the exception of hazards to flight. (ALUC, 2014a, p. 9, Table MA-1)

### **2.4.4 SCAG REGIONAL TRANSPORTATION PLAN / SUSTAINABLE COMMUNITIES STRATEGY**

The Southern California Association of Governments (SCAG) is a Joint Powers Authority (JPA) under California state law, established as an association of local governments and agencies that voluntarily convene

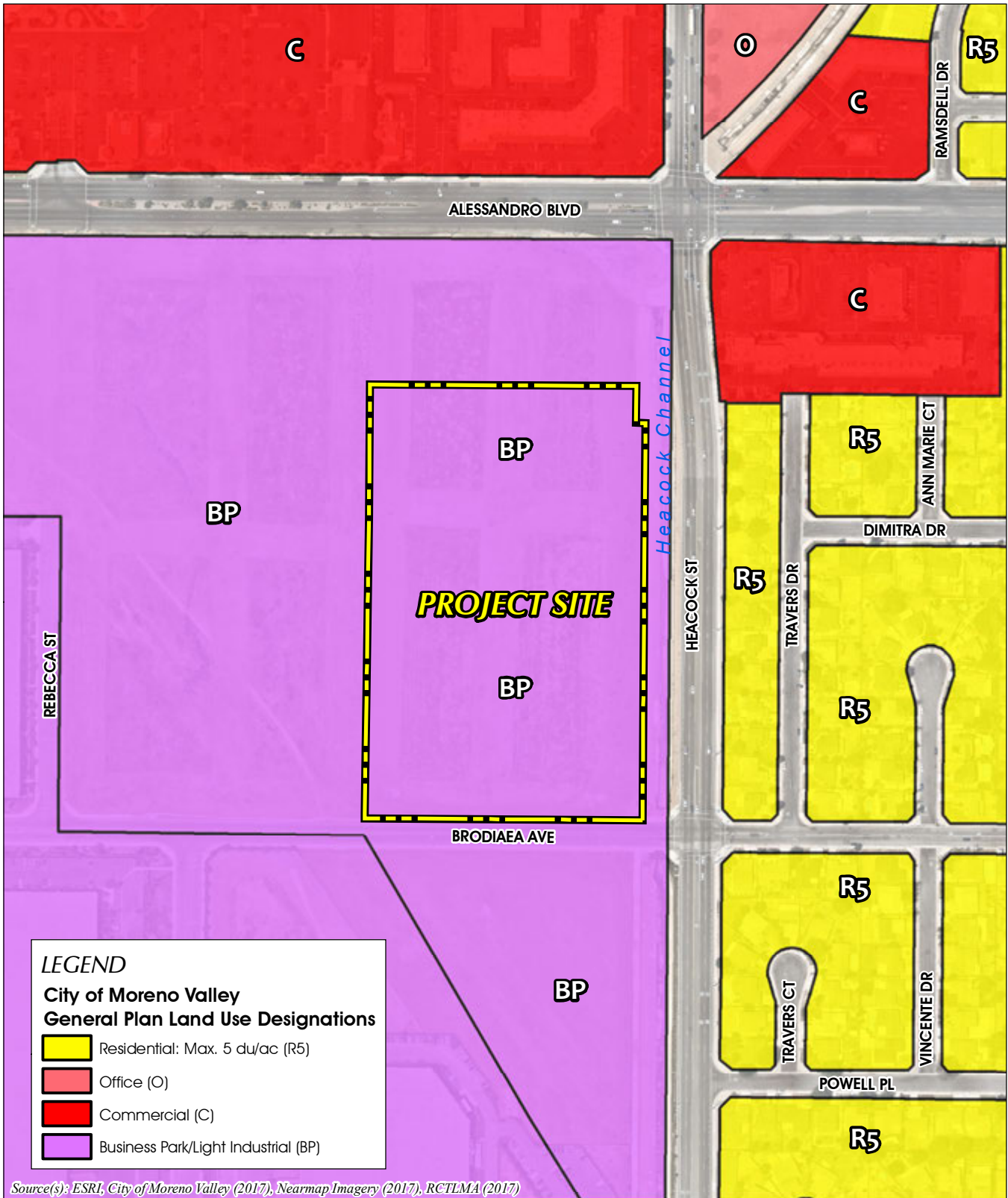
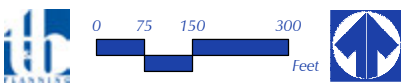


Figure 2-2



**EXISTING GENERAL PLAN AND LAND USE DESIGNATIONS**

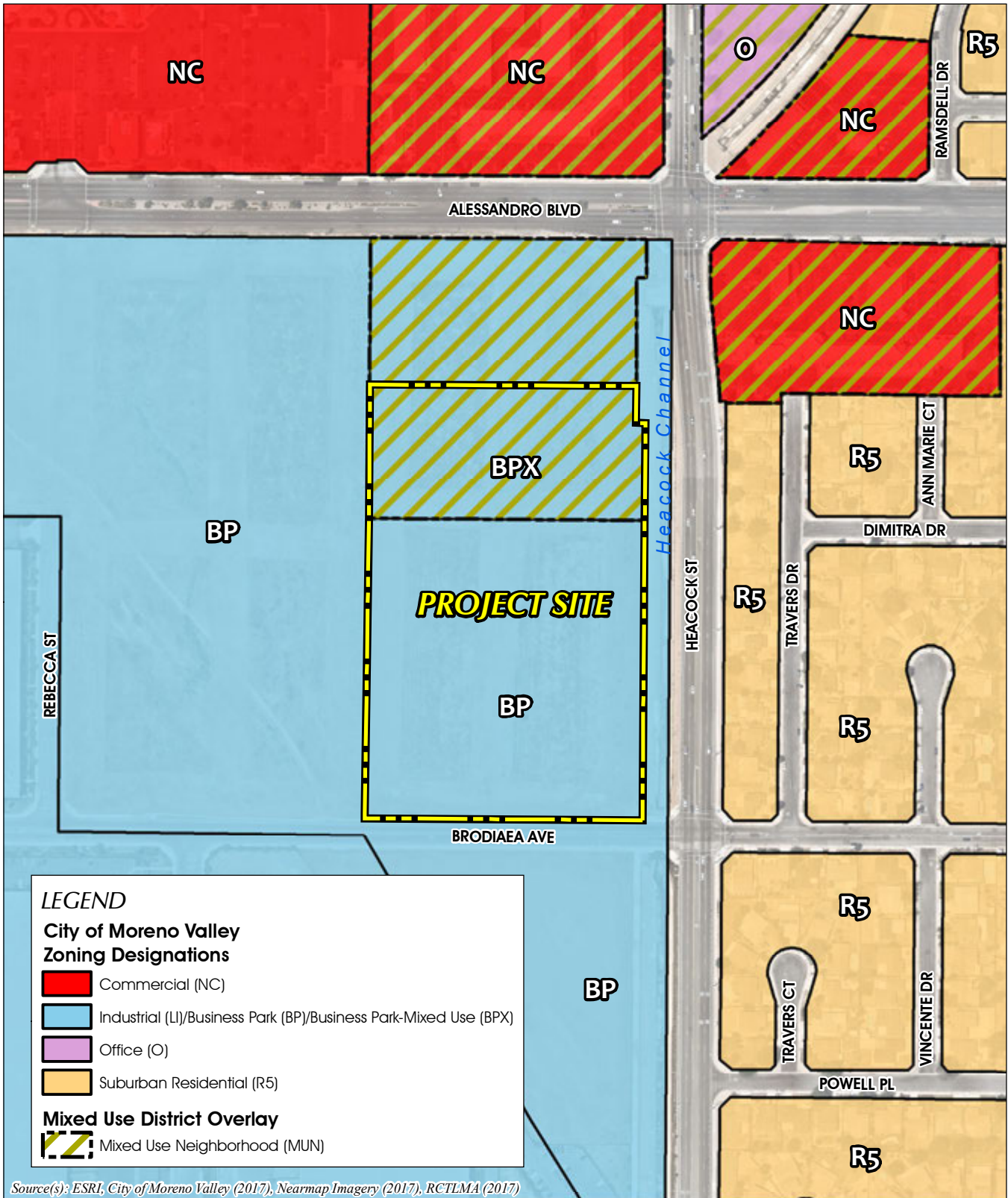
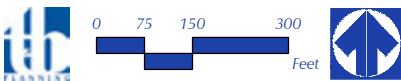


Figure 2-3



EXISTING ZONING DESIGNATIONS





as a forum to address regional issues. Under federal law, SCAG is designated as a Metropolitan Planning Organization (MPO) and under State law as a Regional Transportation Planning Agency and a Council of Governments. The SCAG region encompasses six counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura) and 191 cities in an area covering more than 38,000 square miles. SCAG develops long-range regional transportation plans including sustainable communities strategy and growth forecast components, regional transportation improvement programs, regional housing needs allocations and other plans for the region.

SCAG's 2016-2040 *Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)* develops long-range regional transportation plans including sustainable communities strategy and growth forecast components, regional transportation improvement programs, regional housing needs allocations and other plans for the region. The *RTP/SCS* provides objectives for meeting emissions reduction targets set forth by the California Air Resources Board (CARB); these objectives were provided as a direct response to Senate Bill 375 (SB 375) which was enacted to reduce greenhouse gas emissions from automobiles and light trucks through integrated transportation, land use, housing, and environmental planning. The Subregional Sustainable Communities Strategies identifies the Project site as being located in an area with a "Standard Suburban" land use pattern, which is defined as auto-oriented development with a minimal mix of land uses, and assumes this land use pattern will continue until at least the year 2040. (SCAG, 2016)

## **2.5 EXISTING PHYSICAL SITE CONDITIONS**

Pursuant to CEQA Guidelines § 15125, the physical environmental condition for purposes of establishing the setting of an EIR is the environment as it existed at the time the EIR's NOP was released for public review. The NOP for this EIR was released for public review on November 13, 2017, and redistributed on December 5, 2017. In accordance with CEQA, the following subsections provide a description of the Project site's physical environmental condition ("existing conditions") as of approximately mid-November 2017. The environmental conditions of the site did not change between the two NOP issuance dates. More information regarding the Project's site's environmental setting is provided in the various subsections of EIR Section 4.0, *Environmental Analysis*.

### **2.5.1 LAND USE**

As shown on Figure 2-4, *Aerial Photograph*, the Project site is vacant and does not contain any buildings or permanent structures/facilities. The Project site is routinely maintained (i.e., disced) for weed abatement and to remove vegetation from the site to reduce the risk of fire as required by the City of Moreno Valley and the Moreno Valley Fire Department, respectively.

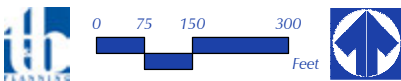
### **2.5.2 AESTHETICS AND TOPOGRAPHIC FEATURES**

The topography of the Project site is relatively flat with elevations ranging from approximately 1,560 feet above mean sea level (amsl) in the northern portion of the site to approximately 1,550 feet amsl in the southern portion of the Project site. There are no rock outcroppings or other unique topographic or aesthetic features present on the property. Figure 3-2, *USGS Topographic Map*, in EIR Section 3.0, *Project Description*, depicts the Project site's existing topographic conditions.



Source(s): ESRI, Nearmap Imagery (2017), RCTLMA (2017)

Figure 2-4



AERIAL PHOTOGRAPH



### **2.5.3 AIR QUALITY AND CLIMATE**

The Project site is located in the 6,745-square-mile South Coast Air Basin (SCAB), which includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County. The SCAB is bound by the Pacific Ocean to the west and the San Gabriel, San Bernardino, the San Jacinto Mountains to the north and east, and San Diego County to the south. The SCAB is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD), the agency charged with bringing air quality in the SCAB into conformity with federal and State air quality standards. As documented in the Project's air quality report (*Technical Appendix B* to this EIR), although the climate of the SCAB is characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. More than 90% of the SCAB's rainfall occurs from November through April. Temperatures during the year range from an average minimum of 36°F in January to over 100°F maximum in the summer. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings five to ten periods of strong, dry offshore winds, locally termed "Santa Ana[s]" each year. (Urban Crossroads, 2018a, pp. 13-14)

At the regional level, air quality in the SCAB has improved over the past several decades; however, the SCAB is currently not in attainment of State and/or federal standards established for Ozone (O<sub>3</sub>) one-hour and eight-hour, particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), and not in attainment for Lead (Pb) (only in Los Angeles County) (Urban Crossroads, 2018a, p. 18). Air pollutants are impactful to human health and the SCAQMD reports that the excess carcinogenic risk in the Project area due to toxic air contaminants is predicted to be approximately 568.32 in one million (SCAQMD, 2015b).

Refer to EIR Subsections 4.2, *Air Quality*, and 4.6, *Greenhouse Gas Emissions*, for a more detailed discussion of the Project's site existing air quality and climate setting.

### **2.5.4 CULTURAL RESOURCES & TRIBAL CULTURAL RESOURCES**

Under existing conditions, the Project site is vacant and undeveloped, and does not contain any manmade structures. The Project site is not known to have historical or prehistorical significance to the region and is not listed on the national, State, or local registers of historic places (BFSA, 2017a, p. 5.0-1). The Project site is adjacent to the Heacock Channel, which likely would have been a natural, intermittent source of water prehistorically. However, the Project site does not contain bedrock outcrops or other landforms that are typically associated with prehistoric use areas. Archival and published reports suggest that the Project area may be located within the traditional use areas of the Cahuilla, Gabrielino, and/or Luiseño, (BFSA, 2017a, pp. 3.0-4, 5.0-3).

Refer to EIR Subsection 4.4, *Cultural Resources & Tribal Cultural Resources*, for a more thorough discussion of the Project's site existing cultural setting.

### **2.5.5 GEOLOGY AND SOILS**

Regionally, the Project site is located in the Peninsular Ranges geomorphic province, a prominent natural geomorphic province that extends from the Santa Monica Mountains approximately 900 miles south to the tip of Baja California, Mexico, and is bounded to the east by the Colorado Desert. The Peninsular Ranges province is composed of plutonic and metamorphic rock, lesser amounts of Tertiary Volcanic and sedimentary rock, and Quaternary drainage in-fills and sedimentary veneers.



The geologic structure of the entire southern California area is dominated mainly by northwest-trending faults associated with the San Andreas system. The Project site is located in a seismically active region. No known active or potentially active faults exist on or near the Project site nor is the site situated within an “Alquist-Priolo” Earthquake Fault Zone. The nearest known fault to the Project site is the San Jacinto Fault, located approximately 5.3 miles to the northeast. Similar to other properties throughout southern California, the Project site is located within a seismically active region and is subject to ground shaking during seismic events. (NorCal Engineering, 2017a, p. 3)

The Project site is underlain by fill/disturbed top soils and native soils. Fill/disturbed top soils are found on the Project site at depths ranging from one (1) to two (2) feet below ground surface. The soils are classified as loose/soft and dry, clayey sand to sandy, clayey silt with some gravel, concrete pieces and roots. Native soils, classified as clayey sand, are found beneath the upper fill soils and extend to at least 51.5 feet below the existing ground surface. The soils consist of a mix of medium dense and damp to moist layers of sand, silt, and clay. (NorCal Engineering, 2017a, p. 4, Appendix B)

### **2.5.6 HYDROLOGY**

The Project site is located in the Santa Ana River watershed, which drains an approximately 2,650-square-mile area and is the principal surface flow water body within the region. The Santa Ana River starts in Santa Ana Canyon in the southern San Bernardino Mountains and runs southwesterly across San Bernardino, Riverside, and Orange Counties, where it discharges into the Pacific Ocean at the City of Huntington Beach. (SAWPA, 2014, Ch. 3, p. 1) The Project site and vicinity are within the purview of the Santa Ana Regional Water Quality Control Board (RWQCB). The Santa Ana RWQCB’s Santa Ana River Basin Water Quality Control Plan is the governing water quality plan for the region, which sets forth goals and objectives for protecting water quality within the region (Santa Ana RWQCB, 2016, p. 1-1).

Under existing conditions, stormwater runoff flows from the Project site travel south toward Brodiaea Avenue. Surface runoff flows enter a valley gutter that runs along Brodiaea Avenue, which conveys runoff easterly to an existing inlet grate located at the southeastern portion of the site. Stormwater runoff flows ultimately discharge into the Line “F” storm drain of the Riverside County Flood Control and Water Conservation District’s (RCFCWCD) *Sunnymead Master Drainage Plan* (MDP), which is installed beneath Brodiaea Avenue.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) No. 06065C0761F, dated August 28, 2008, the Project site is not located within a special flood hazard area subject to inundation by the 1-percent annual flood (100-year flood). The entirety of the Project site is located within FEMA Flood Zone X (Unshaded), which is correlated with areas of minimal flood hazard determined to be outside the 500-year floodplain (also referred to as the 0.2% annual chance floodplain). (FEMA, 2008)

### **2.5.7 NOISE**

Primary sources of noise in the Project vicinity include vehicle noise from residential traffic, truck traffic from the nearby landscape materials yard, and local traffic from nearby commercial centers. Urban Crossroads, Inc. collected 24-hour noise measurements at eight (8) locations in the Project vicinity on September 13, 2017, to determine the baseline for the existing noise environment. Measured daytime noise levels in the area ranged from 55.8 equivalent level decibels (dBA  $L_{eq}$ ) to 62.0 dBA  $L_{eq}$  and nighttime noise levels from 51.5 dBA  $L_{eq}$  to 59.6 dBA  $L_{eq}$ . The measured noise levels correlate to a Community Noise Level (CNEL) ranging from 54.9 CNEL to 66.1 CNEL. (Urban Crossroads, 2018e, pp. 29, 32)



Refer to EIR Subsection 4.10, *Noise*, for a more detailed discussion of the Project's site existing noise setting.

### **2.5.8 TRANSPORTATION**

The Project site is located north of Brodiaea Avenue, west of Heacock Street, and approximately 325 feet south of Alessandro Boulevard. Existing traffic on nearby roadways consists of both passenger vehicles and trucks accessing the existing residential, commercial, and industrial uses located east and south of the Project site.

Field observations conducted in 2017 indicated that there is nominal pedestrian and bicycle activity in the area (Urban Crossroads, 2018e, Exhibit 3-8). Public transit service in the region is provided by Riverside Transit Authority (RTA), with bus service along Alessandro Boulevard via Route 11 and Route 20. The nearest Route 11 transit stop is located approximately 0.1-mile northeast of the Project site, at the intersection of Heacock Street and Alessandro Boulevard. The nearest Route 20 transit stop is located less than 0.1-mile north of the Project site, also at the intersection of Heacock Street and Alessandro Boulevard. (Urban Crossroads, 2018e, p. 21; Google Earth Pro, 2017)

Regional vehicular travel routes in the Project area include I-215 and SR-60. The Project site is located approximately 2.0 miles southwest of the Cactus Avenue on/off ramp to I-215, and approximately 1.8 miles south of the Heacock Street on/off ramp to SR-60.

Refer to EIR Subsection 4.11, *Transportation and Traffic*, for a more detailed discussion of the Project site's existing transportation setting.

### **2.5.9 UTILITIES AND SERVICE SYSTEMS**

The Project site is located in the service area of the Eastern Municipal Water District (EMWD) for domestic water and sewer service. Under existing conditions, water lines are installed adjacent to the Project site, beneath both Heacock Street and Brodiaea Avenue. Wastewater flows generated within the Project area are collected by an existing sewer pipe network installed beneath Heacock Street and Brodiaea Avenue; collected wastewater flows are conveyed to the Moreno Valley Regional Water Reclamation Facility. The Moreno Valley Regional Water Reclamation Facility generally receives wastewater flows produced in areas north and east of the Perris Valley Storm Drain Channel.

Solid waste collection and disposal in the Project area is conducted by Waste Management of the Inland Empire, a division of Waste Management, Inc. Landfills that have the potential of receiving solid waste from the Project site include the El Sobrante Landfill, the Badlands Sanitary Landfill, and the Lamb Canyon Sanitary Landfill.

### **2.5.10 VEGETATION**

The entire Project site has been either disturbed or developed. Disturbed area consists of fallow agricultural fields, which contain sparse vegetation that is dominated by tilled, non-native grasses and exotic forb species. The developed areas include the Heacock Channel to the east and a portion of Brodiaea Avenue to the south. The Project site does not contain special-status vegetation or support sensitive vegetation communities. (Alden, 2017, p. 4)

Refer to EIR Subsection 4.3, *Biological Resources*, for a more detailed discussion of the Project's site existing biological setting.



### **2.5.11 WILDLIFE**

One special-status wildlife species, the California horned lark (*Eremophila apesttris actia*), was observed on the Project site during a biological survey conducted in 2017. No other special-status wildlife species were observed on the Project site. (Alden, 2017, p. 5) During field surveys, 21 additional, non-special status wildlife species were observed on the Project site, primarily consisting of numerous avian species, as well as several small mammal and reptile species (Alden, 2017, Appendix C). The complete list of wildlife species observed on the Project site is documented in *Technical Appendix C*.

Refer to EIR Subsection 4.3, *Biological Resources*, for a more detailed discussion of the Project’s site existing biological setting.

### **2.5.12 RARE AND UNIQUE RESOURCES**

As required by CEQA Guidelines § 15125(c), the environmental setting should identify any inconsistencies between a proposed project and applicable general, specific, or regional plans, and place special emphasis on resources that are rare or unique to that region and would be affected by the project. Based on the existing conditions of the Project site and the surrounding area described above and discussed in more detail in Section 4.0, *Environmental Analysis*, the Project site does not contain any resources that are rare or unique to the region. The Project Applicant proposes to develop an approximately 12.0-acre property with one high-cube warehouse building. The proposed use is consistent with the property’s General Plan designation of “Business Park/Light Industrial.” However, the Project Applicant proposes to change the zoning designations of the property from “Business Park – Mixed Use” with a “Mixed-Use Neighborhood” overlay and “Business Park” to “Light Industrial.” The potential environmental effects associated with the zoning designation change are evaluated in Section 4.0, *Environmental Analysis*, of this EIR.



## **3.0 PROJECT DESCRIPTION**

This section provides all of the information required of an EIR Project Description by CEQA Guidelines § 15124, including a description of the Project’s precise location and boundaries; a statement of the Project’s objectives; a description of the Project’s technical, economic, and environmental characteristics; and a description of the intended uses of this EIR, including a list of the government agencies that are expected to use this EIR in their decision-making processes; a list of the permits and approvals that are required to implement the Project; and a list of related environmental review and consultation requirements.

### **3.1 PROJECT LOCATION**

The Project site is located in the central portion of the City of Moreno Valley, in western Riverside County, California (see Figure 3-1, *Regional Map*). At the regional context, the Project site is located north of the City of Perris, northwest of the City of Hemet, west of the City of Beaumont, east/southeast of the City of Riverside, and east of the unincorporated communities of Mead Valley and Woodcrest. The Project site is located approximately 2.2 miles northeast of Interstate 215 (I-215) and approximately 1.7 miles south of State Route 60 (SR-60).

At the local scale, the Project site is located north of Brodiaea Avenue, west of Heacock Street, and approximately 325 feet south of Alessandro Boulevard as illustrated on Figure 3-2, *Vicinity Map*, and Figure 3-3, *USGS Topographic Map*. The Project site includes Assessor Parcel Numbers (APNs) 297-170-038 and a portion of 297-170-036.

Additional information about the Project site’s location and setting is provided in EIR Section 2.0, *Environmental Setting*.

### **3.2 STATEMENT OF OBJECTIVES**

The underlying purpose of the Project and its primary goal is to develop a vacant or underutilized property with a warehouse building to provide an employment-generating use that helps to grow the economy and fulfill regional market demand for this land use type in Moreno Valley. The Project would achieve this goal through the following specific objectives.

- A. To make efficient use of undeveloped property in Moreno Valley by maximizing its buildout potential for employment-generating uses.
- B. To attract new businesses and jobs to the City of Moreno Valley, thereby providing economic growth.
- C. To create employment-generating business in the City of Moreno Valley thereby reducing the need for members of the local workforce to commute outside the area for employment.
- D. To develop a vacant or underutilized property with a high-cube industrial warehouse building to help meet the substantial and unmet regional demands for this type of building space.
- E. To develop a warehouse building that can attract building occupants seeking modern warehouse building space in Moreno Valley constructed to contemporary design standards.

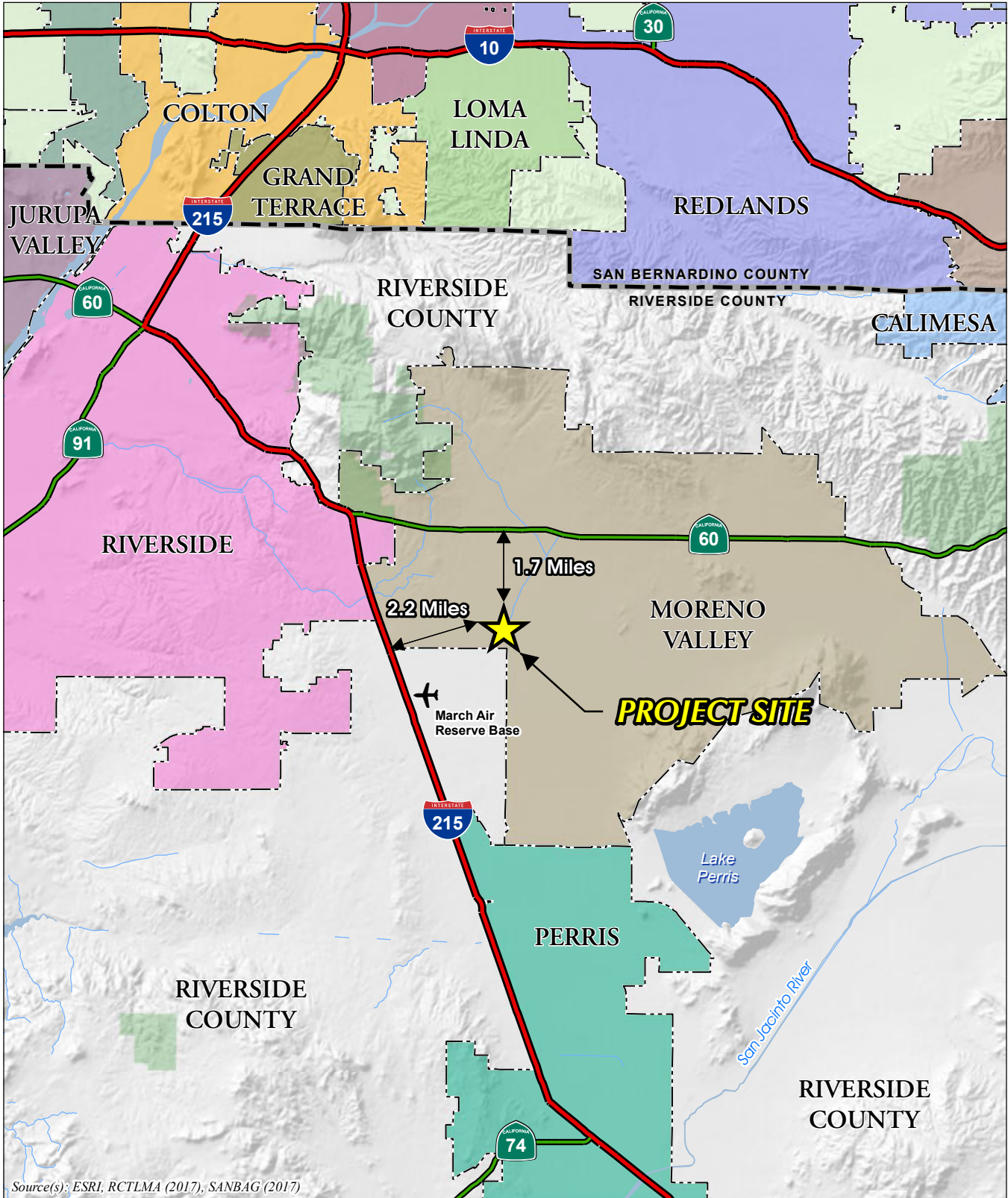
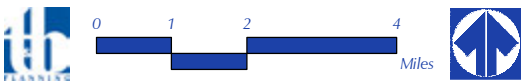


Figure 3-1



REGIONAL MAP



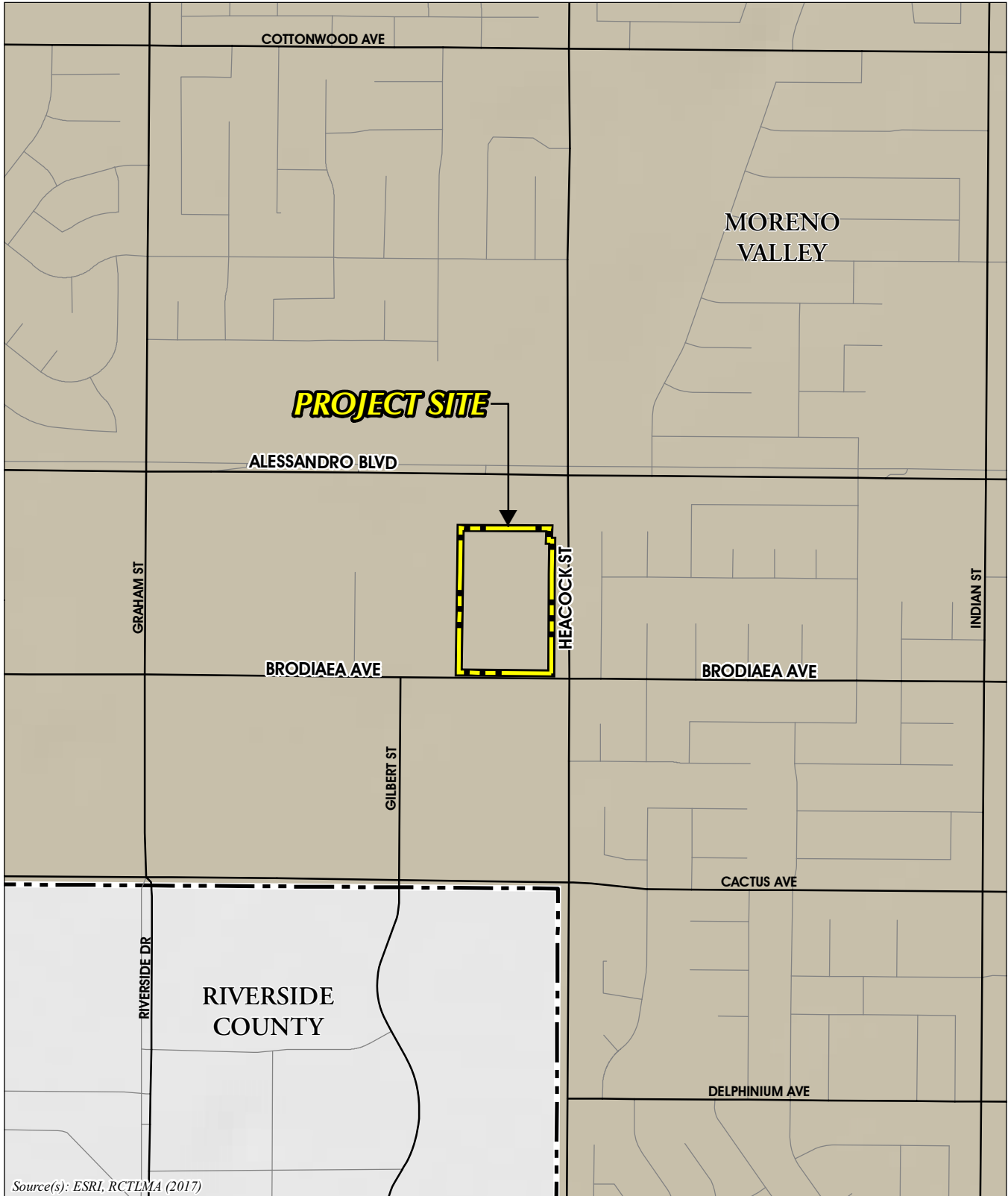
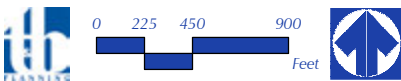


Figure 3-2



VICINITY MAP

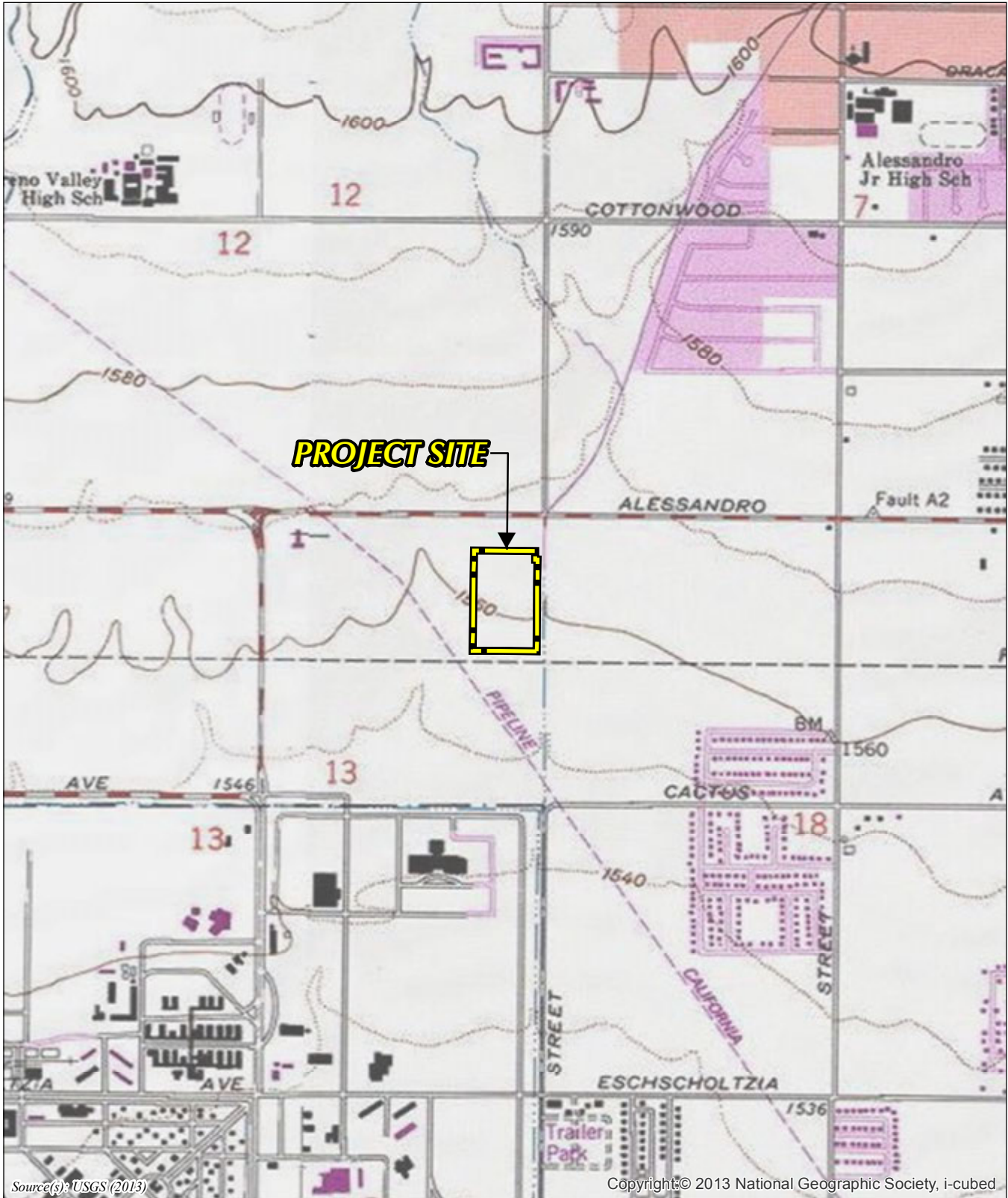
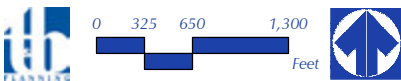


Figure 3-3



USGS TOPOGRAPHIC MAP



- F. To develop a property that has access to available infrastructure, including roads and utilities.
- G. To develop a vacant or underutilized property with a building that has architectural design and operational characteristics that complement other existing and planned buildings in the immediate vicinity and minimize conflicts with other nearby land uses.
- H. To develop a project that is economically competitive with similarly-sized projects in the local area and region.
- I. To develop light industrial uses in close proximity to designated truck routes and the State highway system to avoid or shorten truck-trip lengths on other roadways.

### **3.3 PROJECT'S COMPONENT PARTS**

The Project involves the development of one high-cube warehouse building on an approximately 12.0-acre site, located in the central portion of the City of Moreno Valley, Riverside County, California. Discretionary approvals requested from the City of Moreno Valley include a Plot Plan (PEN17-0143) and a Change of Zone (PEN17-0144). Additional discretionary and administrative actions that would be necessary to implement the proposed Project are listed in Table 3-2, *Matrix of Approvals/Permits*, at the end of this EIR section.

#### **3.3.1 PLOT PLAN (PEN17-0143)**

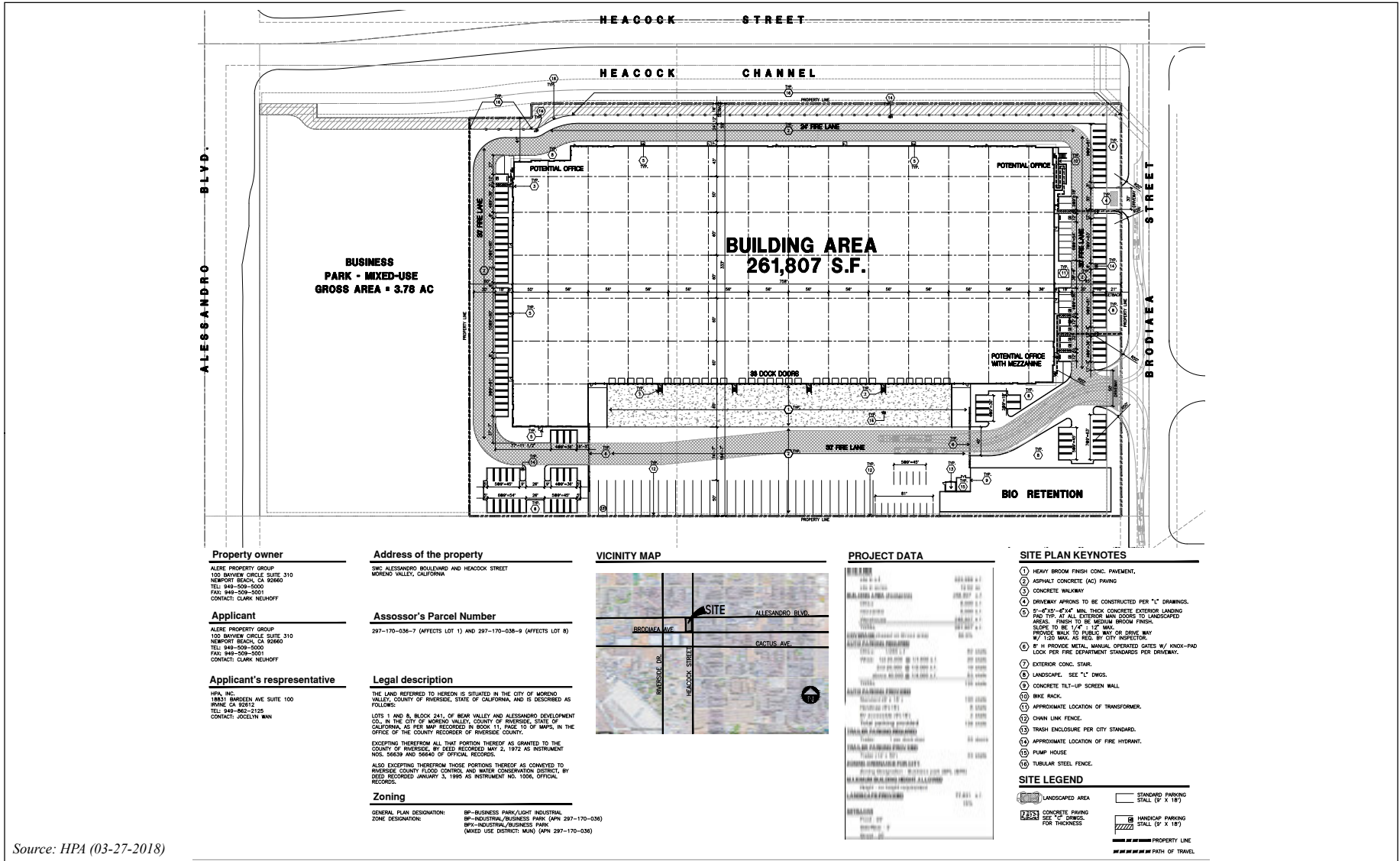
##### **A. General Description**

Plot Plan (PEN17-0143) proposes to construct a high-cube warehouse building with 261,807-square feet (s.f.) of floor space on the subject property. As shown on Figure 3-4, *Plot Plan (PEN17-0143)*, the proposed facility would contain 248,807 s.f. of warehouse space, 8,000 s.f. of office space, and 5,000 s.f. of mezzanine. A pump house, to support the warehouse building's Early Suppression Fast Response (ESFR) fire protection system, would be constructed in the southwestern portion of the subject property and a bioretention basin also would occur in the southwestern portion of the site. The building's design would be required to meet all applicable provisions of the California Green Building Standards Code (CalGreen) that are in effect at the time of the building's construction.

Vehicular access to the Project site would be provided by two driveways connecting to Brodiaea Avenue. The Project's eastern driveway would have no turning movement restrictions (vehicles could turn left or right in or out of the driveway); but, the use of the eastern driveway would be restricted to automobile use only. The Project's western driveway also would have no turning movement restrictions and would be accessible to all vehicle types including automobiles and trucks. Both Project driveways would be stop-sign controlled and a sign would be installed at the western Project driveway directing truck drivers to use designated City of Moreno Valley truck routes. Refer to Subsection 3.4.1A, *Public Access Improvements*, below, for information about Project-related improvements that would occur to Brodiaea Avenue and a segment of the Juan Bautista De Anza Multi-Use Trail to be constructed along the site's eastern boundary.

##### **B. Parking and Loading**

Figure 3-4 depicts the number and location of parking spaces and loading bays for the Project. The Project's parking areas would be striped to designate 138 total automobile parking spaces, including 131 standard spaces, 6 handicap-accessible stalls, and 1 electric vehicle (EV)-accessible stall. In addition, the Project includes 33 loading docks and 33 truck trailer parking spaces on the west side of the building.



Source: HPA (03-27-2018)

Figure 3-4



NOT TO SCALE





The Project provides bicycle racks at the southwest corner of the proposed warehouse building. The bicycle racks would provide a minimum of seven (7) spaces in compliance with the City of Moreno Valley Municipal Code § 9.11.060(B)(1), which requires bicycle parking to be provided at a minimum rate equal to 5% of the required automobile parking spaces (7 bicycle spaces ÷ 135 total required bicycle spaces = 5.2%).

### **C. Architecture, Walls, and Fences**

Figure 3-5, *Conceptual Architectural Elevations*, depicts the conceptual architecture elevations proposed for the Project's building. The proposed high-cube warehouse building would be constructed to a maximum height of approximately 43 feet (measured from finished grade to the top of parapets). The building would be constructed with painted concrete tilt-up panels and low-reflective blue/green glazed glass. Articulated building elements, including parapets, wall recesses, mullions and aluminum canopies, are proposed as decorative elements. The exterior color palette for the proposed building is composed of various neutral colors, including shades of tan and gray. The interior of the proposed building is designed to provide a main warehouse floor, office space(s), and mezzanine. A painted concrete tilt-up screen wall would be installed on the northern and sides of the truck loading/trailer parking area ("truck yard") to screen views of the truck yard from Brodiaea Avenue and Alessandro Boulevard. The screen wall would be painted to match the proposed warehouse building. A tube steel fence, painted black, would separate the proposed Juan Bautista De Anza Multi-Use Trail segment from on-site improvements and a chain-link metal fence is proposed along the western property boundary.

### **D. Conceptual Landscape Plan**

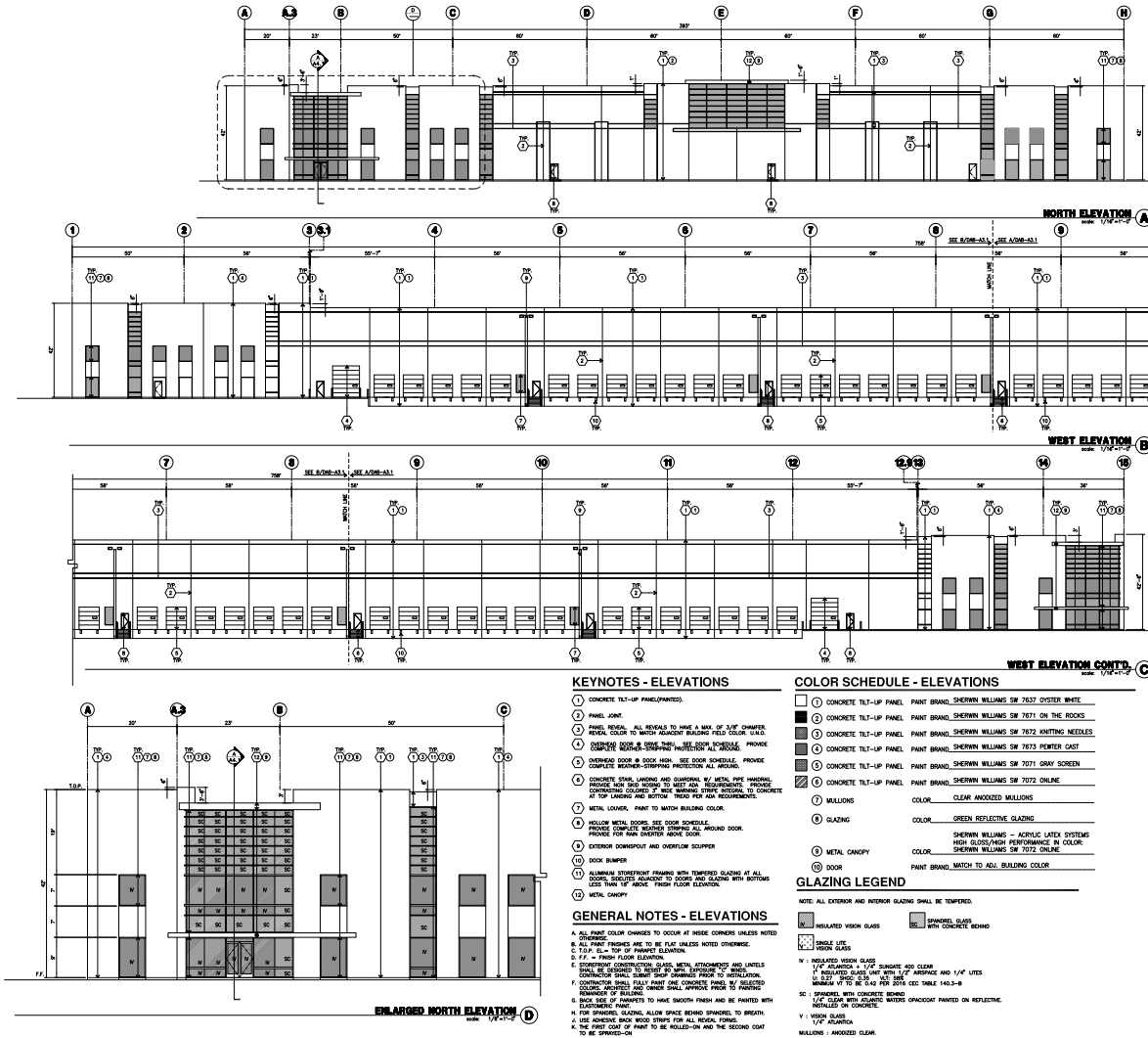
The conceptual landscape plan for the Project is depicted on Figure 3-6, *Conceptual Landscape Plan*. Landscaping would feature drought-tolerant evergreen trees, shrubs, accent succulents and ornamental grasses, and groundcovers. Plant materials would be concentrated along the Project site's frontages with Brodiaea Avenue and Heacock Street, at building entries, and within the automobile parking lot. Proposed landscaping would be ornamental in nature, except within the bioretention basin where plant materials would be selected to serve water quality functions. Landscaping would be installed with an automatic irrigation system using water efficient irrigation equipment. Landscape elements are required to comply with Chapter 9.17 of the City of Moreno Valley Municipal Code, which establishes requirements for landscape design, automatic irrigation system design, and water-use efficiency.

### **3.3.2 CHANGE OF ZONE (PEN17-0144)**

Change of Zone (PEN17-0144) would amend the City of Moreno Valley Zoning Map to change the zoning designation for the entire Project site from "Business Park – Mixed Use" with "Mixed-Use Neighborhood" overlay and "Business Park" to "Light Industrial" (refer to Figure 3-7, *Change of Zone (PEN17-0144)*). The "Light Industrial" zoning designation is intended "to provide for light manufacturing, light industrial, research and development, warehousing and distribution and multi-tenant industrial uses, as well as certain supporting administrative and professional offices and commercial uses on a limited basis."

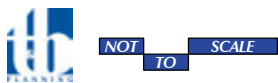
### **3.3.3 ASSOCIATED PROJECT ACTIONS**

The Project would require a Lot Line Adjustment to alter the parcel boundaries for APNs 297-170-036 and 297-170-038 so that APN 297-170-038 would encompass the entirety of the 12.0-acre Project site and APN 297-170-036 would encompass the approximately 4.0-acre off-site property located between the Project site's northern boundary and Alessandro Boulevard.

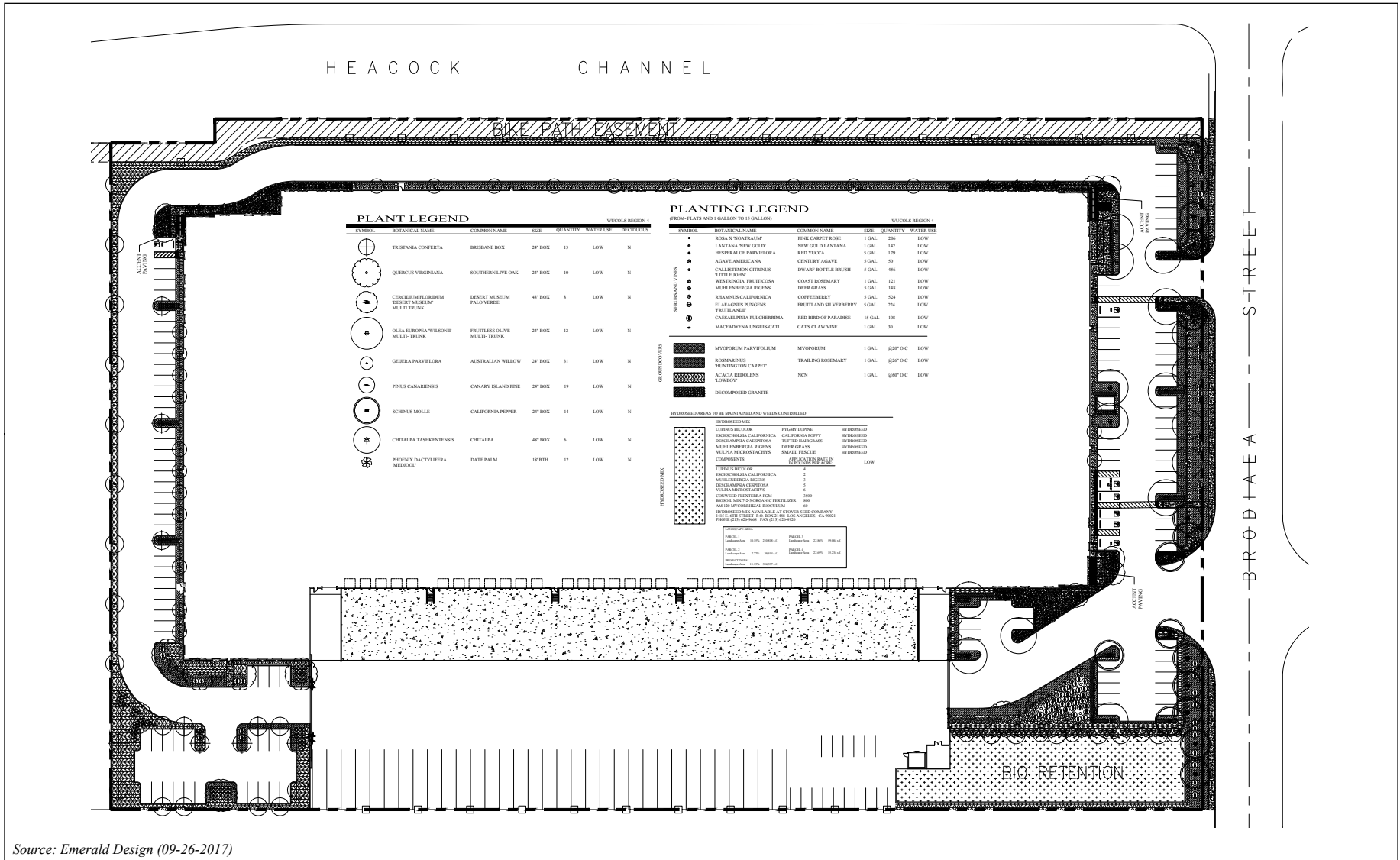


Source: HPA (03-27-2018)

Figure 3-5



CONCEPTUAL ARCHITECTURAL ELEVATIONS



Source: Emerald Design (09-26-2017)

Figure 3-6



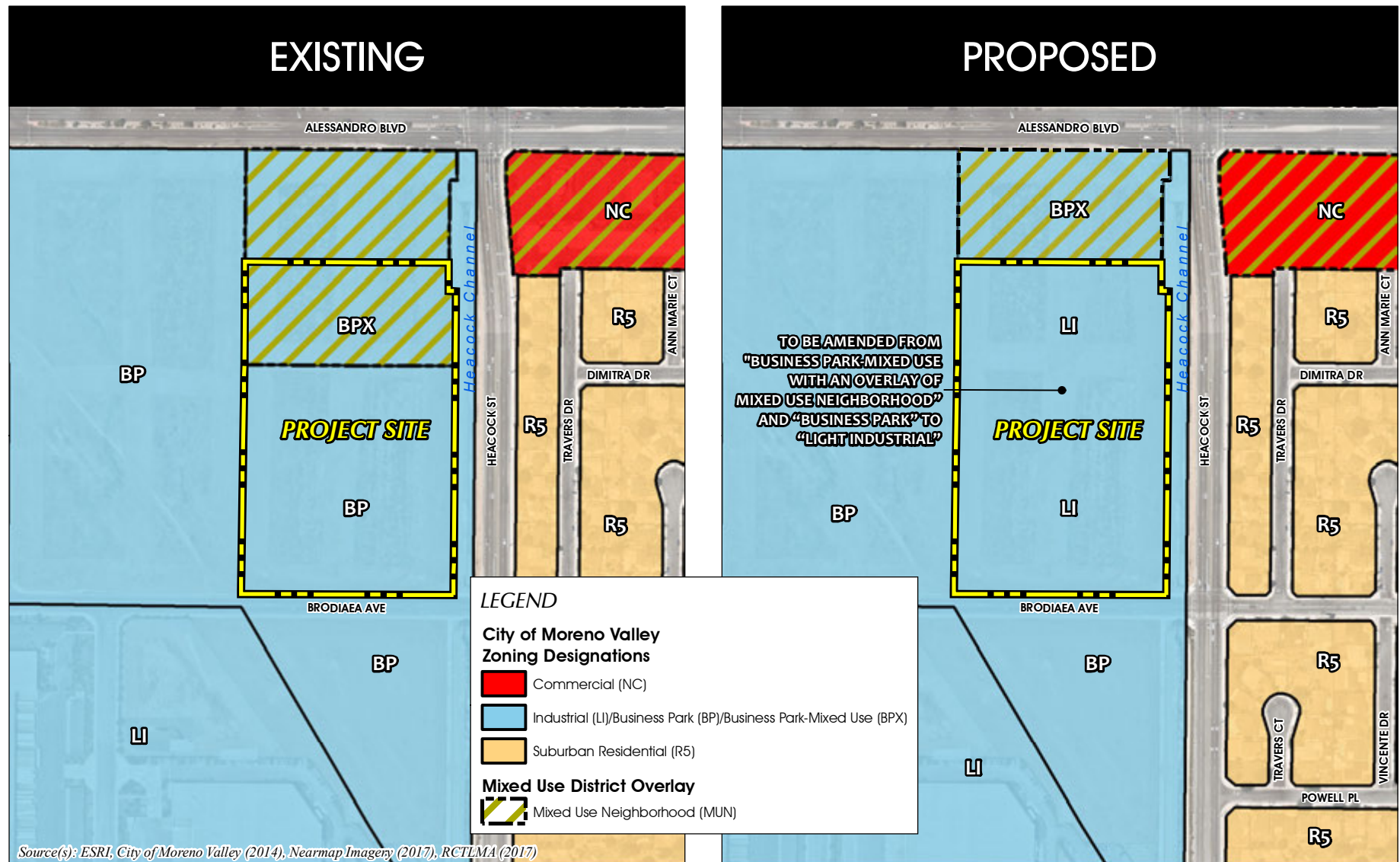
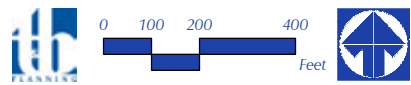


Figure 3-7



CHANGE OF ZONE (PEN17-0144)





### **3.4 PROJECT TECHNICAL CHARACTERISTICS**

#### **3.4.1 PROJECT IMPROVEMENTS**

##### ***A. Public Access Improvements***

The existing public street network abutting the Project site consists of Brodiaea Avenue to the south and Heacock Street to the east.

Along the south side of the Project site, the Project includes improvements to the northern side of Brodiaea Avenue, between the Project site's western boundary and Heacock Street. Along this segment of the road, Brodiaea Avenue is proposed to be improved to its ultimate half-section width as an Industrial Collector (78-foot right-of-way), by installing additional pavement for vehicular travel lanes, curb and gutter, and sidewalk. The existing v-gutter on the Project site that abuts, and runs parallel to, Brodiaea Avenue would be removed to accommodate the proposed improvements to Brodiaea Avenue, and stormwater would be conveyed under the improved condition by new curb and gutter.

Under existing conditions, Heacock Street is constructed to its full, planned width and the Project would not alter the segment of Heacock Street that abuts the Project site. However, the Project includes the construction of a segment of the Juan Bautista De Anza Multi-Use Trail along the eastern edge of the Project site (on the west side of the Heacock Channel). The Juan Bautista De Anza Multi-Use Trail segment that abuts the Project site would connect to the existing Multi-Use Trail segment along Heacock Street (located south of Brodiaea Avenue) and would, ultimately, connect to the Multi-Use Trail segment that is planned northeast of the Heacock Street / Alessandro Boulevard intersection (to be constructed by others).

##### ***B. Water and Sewer Infrastructure Improvements***

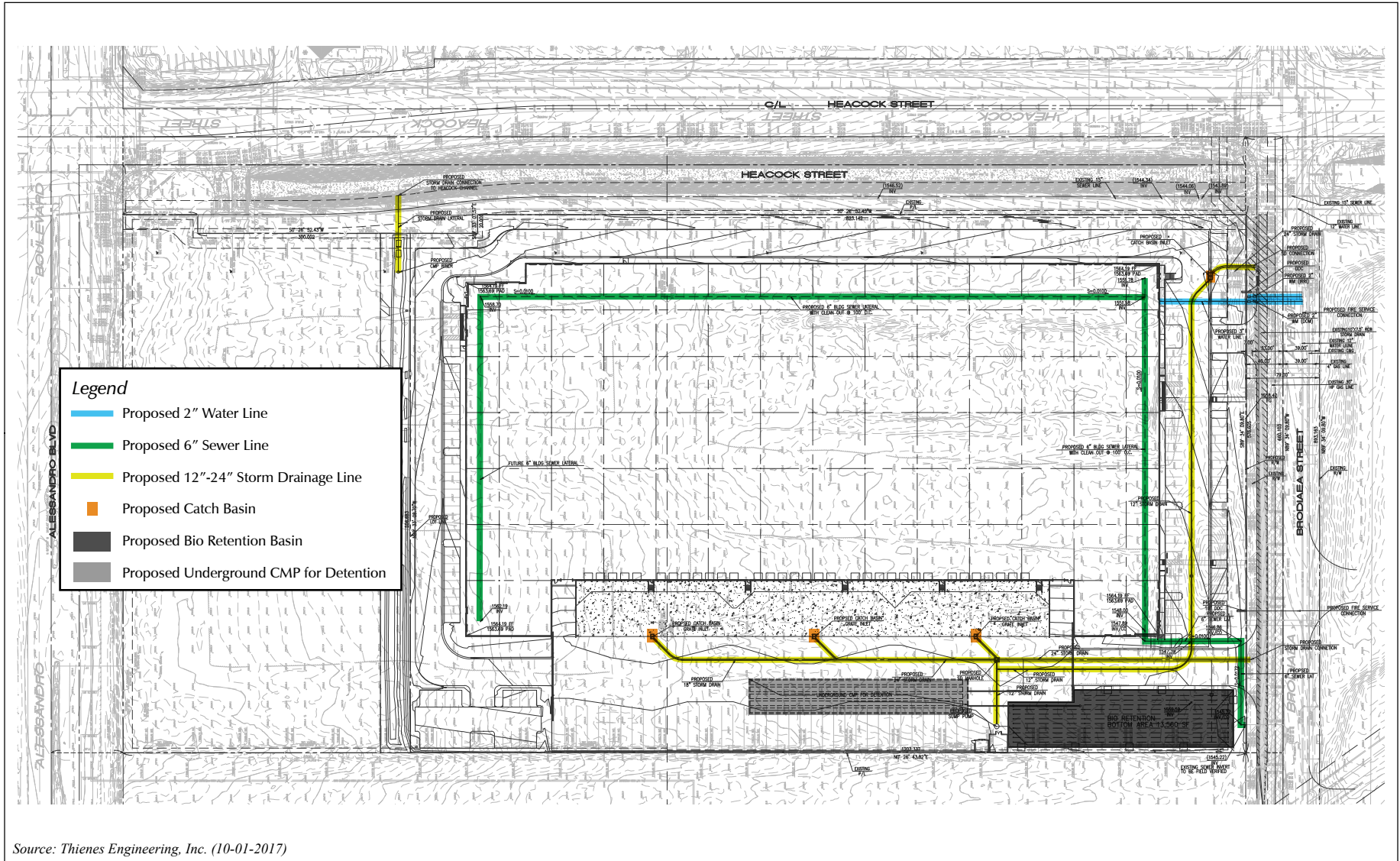
Water and sewer service would be provided to the Project by the Eastern Municipal Water District (EMWD). The Project would construct four new connections to the existing 12-inch diameter water line beneath Brodiaea Avenue – one connection for domestic service, one connection for landscaping irrigation, and two connections for fire service. The Project also would construct a pump house in the southwest portion of the site to facilitate operation of the warehouse building's fire suppression system.

For sewer service, the Project would construct one new connection to the existing 15-inch diameter sewer line beneath Brodiaea Avenue.

The Project's proposed water and sewer infrastructure improvements are depicted on Figure 3-8, *Conceptual Utility Plan*. All proposed water and wastewater facilities would be designed and constructed in accordance with EMWD standards.

##### ***C. Stormwater Drainage Infrastructure Improvements***

The Project's stormwater drainage system is depicted on Figure 3-8. The Project's on-site stormwater drainage system would consist of catch basins, underground storm drain pipes, an underground infiltration basin, and a bioretention basin (located in the southwest corner of the Project site). The system is designed to collect, treat, and/or temporarily detain on-site stormwater runoff before discharging treated flows off-site. Specifically, "first flush" flows (i.e., initial runoff) would be diverted into the underground infiltration basin and bioretention basin located within the southwestern portion of the Project site. The basins would allow "first flush" stormwater runoff to percolate through the soil thereby minimizing the volume of stormwater discharged off-



Source: Thienes Engineering, Inc. (10-01-2017)

Figure 3-8



NOT TO SCALE





site. If the infiltration and bioretention basins reach capacity during heavy storm events, stormwater flows would bypass the basins and would be conveyed to an existing 10-foot by 7.5-foot diameter reinforced concrete box (RCB) beneath Brodiaea Avenue (Line “F” of the Riverside County Flood Control and Water Conservation District’s *Sunnymead Master Drainage Plan*).

Off-site runoff, which sheet flows southerly toward the Project site from areas to the north, would be captured at the northern Project site boundary by a west-to-east oriented drainage swale to be installed as part of the Project. The drainage swale would convey the off-site runoff east to the Heacock Channel, and the water would be discharged into the Heacock Channel via a storm drain outlet to be installed in the sidewall of the Channel.

#### **D. Earthwork and Grading**

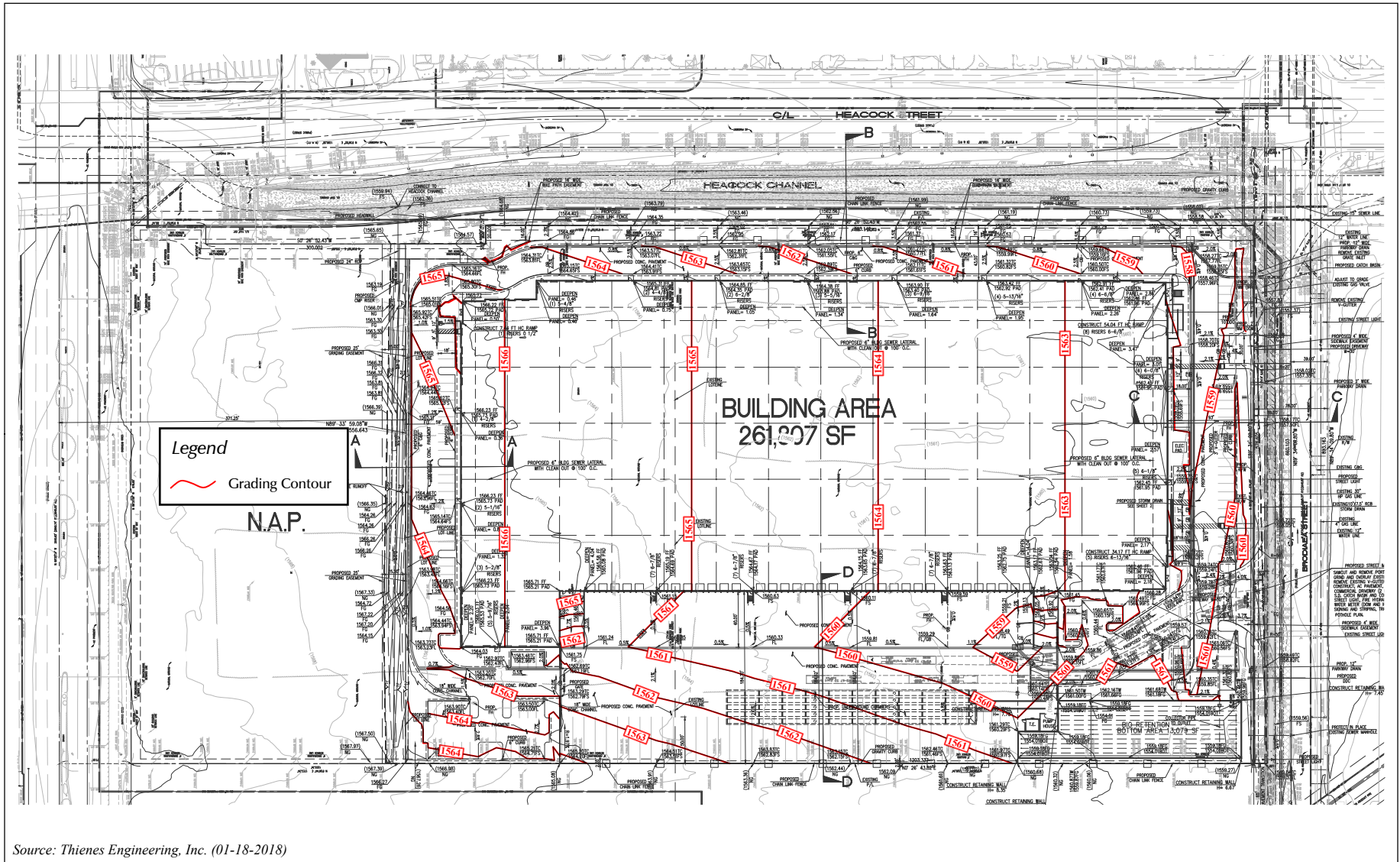
As shown on Figure 3-9, *Conceptual Grading Plan*, earthwork and grading would occur over the entire Project site. No area of the site would be left undisturbed. Proposed earthwork and grading activities would occur in one phase and would result in approximately 26,575 cubic yards (c.y.) of cut (including over-excavation) and 26,624 c.y. of fill. Due to the expected shrinkage and compaction of on-site soils, earthwork activities are expected to balance and no import or export of soil materials would be required. Proposed grading would not create manufactured slopes except along the proposed drainage swale that would be installed along the northern boundary of the site, where the swale slopes would have a maximum incline of 2:1. A retaining wall would be constructed below finished grade along the perimeter of the bioretention basin located in the southwestern portion of the site. The retaining wall panels would range from six (6) to nine (9) feet in height; however, because the retaining wall would be installed below finished grade, the top of the wall would be equal with the finished ground.

### **3.4.2 CONSTRUCTION CHARACTERISTICS**

The Project Applicant has indicated that the Project would be constructed over the course of approximately 13 months. As part of the first stage of construction, the property would be prepared for construction and mass graded, and underground utility infrastructure would be installed. Next, surface materials would be poured, frontage improvements to Brodiaea Avenue would be installed, and the building would be erected, connected to the underground utility system, and painted. Lastly, landscaping, fencing/walls, and other site improvements would be installed (including the Juan Bautista De Anza Multi-Use Trail segment), and fine grading would occur.

Construction equipment is expected to operate on the Project site up to eight hours per day, six days per week. Even though construction activities are permitted to occur between 7:00 a.m. to 7:00 p.m. on Mondays through Fridays, and 8:00 a.m. to 4:00 p.m. on Saturdays pursuant to the Moreno Valley Municipal Code (§ 8.14.040(e)), construction equipment is not in continual use and some pieces of equipment are used only periodically throughout a typical day of construction. Thus, eight hours of daily use per piece of equipment (approximately two-thirds of the weekday period during which construction activities are allowed per City Code) is a reasonable assumption. Should construction activities need to occur at night (such as concrete pouring activities that require air temperatures to be lower than occur during the day), the Project Applicant would be required to obtain authorization for nighttime work from the City of Moreno Valley.

The types and numbers of heavy equipment expected to be used during construction activities are listed in Table 3-1, *Construction Equipment Assumptions*. For purposes of evaluation in this EIR, the Project is assumed to be operational in the year 2019.



Source: Thienes Engineering, Inc. (01-18-2018)

Figure 3-9



NOT TO SCALE





**Table 3-1 Construction Equipment Assumptions**

<b>Activity</b>	<b>Equipment</b>	<b>Number</b>	<b>Hours Per Day</b>
Site Preparation	Crawler Tractors	4	8
	Rubber Tired Dozers	3	8
Grading	Crawler Tractors	3	8
	Excavators	1	8
	Graders	1	8
	Rubber Tired Dozer	1	8
Building Construction	Cranes	1	8
	Crawler Tractors	3	8
	Forklifts	3	8
	Generator Sets	1	8
	Welders	1	8
Paving	Pavers	2	8
	Paver Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

Source: (Urban Crossroads, 2018a, Table 3-3)

**3.4.3 OPERATIONAL CHARACTERISTICS**

At the time this EIR was prepared, the future occupant(s) of the Project’s building was unknown. The Project Applicant expects that the building would be occupied by warehouse distribution operators; the building is not designed to accommodate any cold storage or refrigerated uses. For purposes of evaluation in this EIR, the Project is assumed to be operational 24 hours per day, seven days per week, with exterior loading and parking areas illuminated at night. Lighting would be subject to compliance with Moreno Valley Municipal Code § 9.08.100, which states that exterior lighting shall be energy-efficient, shielded, or recessed, and directed downward and away from adjoining properties.

The building is designed such that business operations would be conducted within the enclosed building, with the exception of traffic movement, parking, and the loading, and unloading of tractor trailers at designated loading bays. The Project’s building is designed to have 33 loading bays on the west side of the building. The outdoor cargo handling equipment used during loading, and unloading of trailers (e.g., yard trucks, hostlers, yard goats, pallet jacks, forklifts) is expected to be electric powered. As a practical matter, dock doors on warehouse buildings are not occupied by a truck at all times of the day. There are typically many more dock positions on warehouse buildings than are needed for receiving and shipping volumes. The dock doors that are in use at any given time are usually selected based on interior building operation efficiencies. In other words, trucks ideally dock in the position closest to where the goods carried by the truck are stored inside the warehouse. As a result, many dock positions are frequently inactive throughout the day. Pursuant to State law, on-road diesel-fueled trucks are required to comply with various air quality and greenhouse gas emission standards, including but not limited to the type of fuel used, engine model year stipulations, aerodynamic features, and idling time restrictions. Compliance with State law is mandatory and inspections of on-road diesel trucks subject to applicable State laws are conducted by the California Air Resources Board (CARB).



During long-term operating conditions, and using trip generation rates given in the Institute of Transportation Engineers (ITE) *Trip Generation Manual (9th Edition, 2012)*, the Project is calculated to generate approximately 441 total vehicle trips on a daily basis, including 273 daily passenger vehicle trips (actual trips) and 168 daily truck trips (actual trips) (Urban Crossroads, 2017, Table 4-2). Based on standard EMWD demand rates for industrial warehouse/distribution land uses, the Project is estimated to result in a demand for approximately 6,600 gallons of water per day and 20,400 gallons of wastewater per day. (EMWD's standard demand rates for industrial warehouse/distribution land uses are 550 gallons of water per acre per day and 1,700 gallons of wastewater per acre per day, respectively.) Based on calculations from the Project's energy report (*Technical Appendix K*), the Project's energy use is estimated at approximately 1,012,413 kilowatt hours (kWh) per year, and natural gas usage is estimated at approximately 697,369 thousand British thermal units per year (kBTU/yr).

### **3.5 CITY REVIEW PROCESS**

The proposed Project and its technical aspects have been reviewed in detail by the City of Moreno Valley. Various City departments and divisions are responsible for reviewing land use applications for compliance with City codes and regulations. These departments and divisions also were responsible for reviewing this EIR for technical accuracy and compliance with CEQA. The City of Moreno Valley departments and divisions responsible for technical review include:

- Community Development Department, Building and Safety Division
- Community Development Department, Planning Division
- Public Works Department, Land Development Division
- Public Works Department, Transportation Engineering Division
- Public Works Department, Special Districts Division
- Fire Prevention Bureau
- Moreno Valley Utility

The City of Moreno Valley has primary approval responsibility for the proposed Project. As such, the City serves as the Lead Agency for this EIR pursuant to CEQA Guidelines § 15050. The role of the Lead Agency was previously described in detail in Subsection 1.4 of this EIR. The City's Planning Commission will evaluate this EIR and the Project's requested discretionary applications (Plot Plan and Change of Zone) and make a recommendation to the City Council whether the Project's discretionary applications should be approved and the EIR should be certified. The City Council is the decision-making authority for the Project and will consider the Project along with the Planning Commission's recommendations and will make a final decision to approve, approve with changes, or deny the Project.

### **3.6 RELATED ENVIRONMENTAL REVIEW AND CONSULTATION REQUIREMENTS**

In the event the Project described herein is approved, additional discretionary and/or administrative actions would be necessary to implement the Project. Table 3-2, lists the government agencies that are expected to use this EIR and provides a summary of the subsequent actions associated with the Project. This EIR covers all federal, state, local government and quasi-government approvals which may be needed to construct or implement the Project, whether or not they are explicitly listed in Table 3-2, or elsewhere in this EIR (CEQA Guidelines § 15124(d)).



**Table 3-2 Matrix of Approvals/Permits**

<b>Public Agency</b>	<b>Approvals and Decisions</b>
<b>City of Moreno Valley</b>	
<b>Proposed Project – City of Moreno Valley Discretionary Approvals</b>	
City of Moreno Valley Planning Commission	<ul style="list-style-type: none"> <li>• Recommend approval, conditional approval, or denial of Plot Plan (PEN17-0143) and Change of Zone (PEN17-0144).</li> <li>• Recommend that the City Council reject or certify this EIR along with appropriate CEQA Findings.</li> </ul>
City of Moreno Valley City Council	<ul style="list-style-type: none"> <li>• Approve, conditionally approve, or deny Plot Plan (PEN17-0143) and Change of Zone (PEN17-0144).</li> <li>• Reject or certify this EIR along with appropriate CEQA Findings.</li> </ul>
<b>Subsequent City of Moreno Valley Discretionary and Ministerial Approvals</b>	
City of Moreno Valley Implementing Approvals	<ul style="list-style-type: none"> <li>• Approve Lot Line Adjustment.</li> <li>• Issue Grading Permits.</li> <li>• Issue Building Permits.</li> <li>• Approve Road Improvement Plans.</li> <li>• Issue Encroachment Permits.</li> <li>• Accept public right-of-way dedications.</li> </ul>
<b>Other Agencies – Subsequent Approvals and Permits</b>	
Riverside County Flood Control and Water Conservation District	<ul style="list-style-type: none"> <li>• Administrative approvals related to the design and construction of stormwater drainage infrastructure.</li> </ul>
Eastern Municipal Water District	<ul style="list-style-type: none"> <li>• Administrative approvals for the design of on- and off-site water and sewer infrastructure.</li> </ul>
Santa Ana Regional Water Quality Control Board	<ul style="list-style-type: none"> <li>• Issuance of a Construction Activity General Construction Permit.</li> <li>• Issuance of a National Pollutant Discharge Elimination System (NPDES) Permit.</li> </ul>



## **4.0 ENVIRONMENTAL ANALYSIS**

### **4.0.1 SUMMARY OF EIR SCOPE**

In accordance with CEQA Guidelines §§ 15126-15126.4, this EIR Section 4.0, *Environmental Analysis*, includes analyses of potential direct, indirect, and cumulatively-considerable impacts that could occur from planning, constructing, and/or operating the proposed Project.

In compliance with the procedural requirements of CEQA, an Initial Study was prepared to determine the scope of environmental analysis for this EIR and the City solicited input on the scope of the EIR from public agencies and interested members of the public via a NOP. Taking all known information and public comments into consideration, 12 primary environmental subject areas are evaluated in detail in this Section 4.0, as listed below. Each subsection evaluates several specific topics related to the primary environmental subject. The title of each subsection is not limiting; therefore, refer to each subsection for a full account of the subject matters addressed therein.

- |     |  |      |                             |
|-----|--|------|-----------------------------|
| 4.1 | Aesthetics                                     | 4.7  | Hazards/Hazardous Materials |
| 4.2 | Air Quality                                    | 4.8  | Hydrology/Water Quality     |
| 4.3 | Biological Resources                           | 4.9  | Land Use/Planning           |
| 4.4 | Cultural Resources & Tribal Cultural Resources | 4.10 | Noise                       |
| 4.5 | Geology/Soils                                  | 4.11 | Transportation/Traffic      |
| 4.6 | Greenhouse Gas Emissions                       | 4.12 | Utilities/Service Systems   |

As concluded by the Project’s Initial Study (included in *Technical Appendix A* to this EIR) and after consideration of all comments received by the City on the scope of this EIR and documented in the City’s administrative record, five (5) environmental subjects were determined by the City to have no potential to be significantly impacted by the Project: Agriculture and Forestry Resources, Mineral Resources, Population and Housing, Public Services, and Recreation. These five (5) subjects are discussed briefly in Section 5.0, *Other CEQA Considerations*.

Public Resources Code (PRC) § 21100(b)(3) and CEQA Guidelines § 15126.4 require EIRs to describe, where relevant, the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Accordingly, in addition to the subject matters listed above, this EIR addresses the topic of energy conservation in Section 5.0, *Other CEQA Considerations*.

### **4.0.2 SCOPE OF CUMULATIVE EFFECTS ANALYSIS**

CEQA requires that an EIR contain an assessment of the cumulative impacts that may be associated with a proposed project. As noted in CEQA Guidelines § 15130(a), “an EIR shall discuss cumulative impacts of a project when the project’s incremental effect is cumulatively considerable.” “A cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects creating related impacts” (CEQA Guidelines § 15130(a)(1)). As defined in CEQA Guidelines § 15355:

*‘Cumulative Impacts’ refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.*



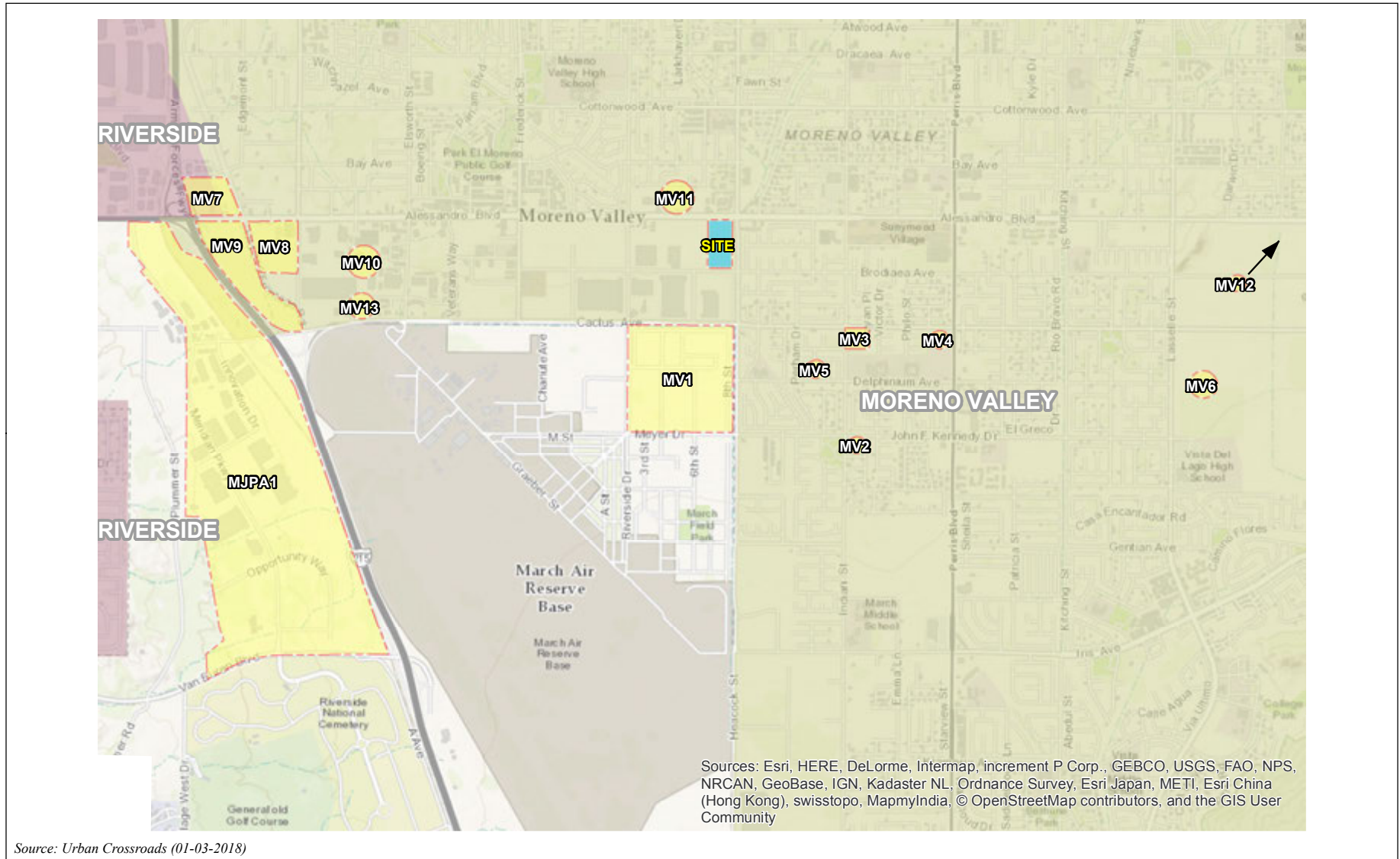


- (a) *The individual effects may be changes resulting from a single project or a number of separate projects.*
- (b) *The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.*

CEQA Guidelines § 15130(b) describes two acceptable methods for identifying a study area for purposes of conducting a cumulative impact analysis. These two approaches include: “1) a list of past, present, and probable future projects producing related or cumulative impacts, including if necessary, those projects outside the control of the agency [‘the list of projects approach’], or 2) a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact [‘the summary of projections approach’].”

The summary of projections approach is used in this EIR, except for the evaluation of cumulative traffic impacts and vehicular-related air quality, greenhouse gas, and noise impacts. The analysis of cumulative traffic impacts uses a “combined approach,” utilizing the summary of projections approach with the manual addition of past, present, and reasonably foreseeable projects that may not have been accounted for in the summary of projections, where appropriate. The combined approach was determined to be appropriate by the City of Moreno Valley because long-range planning documents contain a sufficient amount of information to enable an analysis of cumulative effect for all subject areas, with expectation of traffic and vehicular-related air quality, greenhouse gas, and noise effects, which require a greater level of detailed study. The cumulative impact analyses of vehicular-related air quality, greenhouse gas, and noise impacts, which rely on data from the Project’s traffic study, inherently utilize the combined approach. With the combined approach, the cumulative impact analyses for the air quality, greenhouse gas, noise, and traffic issue areas overstate the Project’s potential cumulative impacts as compared to an analysis that would rely solely on the list of projects approach or solely the summary of projections approach; therefore, the combined approach provides a conservative, “worst-case” analysis for cumulative air quality, greenhouse gas, noise, and traffic impacts.

The list of projects used to supplement the summary of projections approach for the cumulative traffic impact analysis (as well as vehicular-related air quality, greenhouse gas, and noise impact analyses) includes approved and pending development project in proximity to the Project site that would contribute traffic to the same transportation facilities as the Project, as well as several large, traffic-intensive projects farther from the Project site that have the potential to affect regional transportation facilities. As such, the cumulative impact analysis of traffic and vehicular-related air quality, greenhouse gas, and noise impacts includes 20 other past, present, and reasonably foreseeable projects within this study area in addition to the summary of projections (Urban Crossroads, 2018e, Table 4-3). This methodology recognizes development projects that have the potential to contribute measurable traffic to the same intersections, roadway segments, and/or state highway system facilities as the proposed Project and have the potential to be made fully operational in the foreseeable future. Specific development projects included in the traffic and vehicular-related air quality, greenhouse gas, and noise cumulative impact analyses shown in Figure 4.0-1, *Cumulative Development Location Map*, and are listed in Table 4.0-1, *Cumulative Development List of Projects Summary*.



Source: Urban Crossroads (01-03-2018)

Figure 4.0-1



NOT TO SCALE



**CUMULATIVE DEVELOPMENT LOCATION MAP**



**Table 4.0-1 Cumulative Development List of Projects Summary**

ID	Project Name	Land Use <sup>1</sup>	Quantity	Units <sup>2</sup>
MV1	March Lifecare Campus Specific Plan	Medical Offices	190.00	TSF
		Commercial Retail	210.00	TSF
		Research & Education	200.00	TSF
		Hospital	50	Beds
		Institutional Residential	660	Beds
MV2	O'Reilly Automotive	Automobile Parts Sale	7.50	TSF
	PA15-004	Retail/Restaurant/Fast	2.97	TSF
MV3	TM 33417	Condo/Townhomes	60	DU
MV4	TM 33607	Condo/Townhomes	52	DU
MV5	32711 Isaac Genah	SFDR	9	DU
MV6	a Moreno Medical Campus	Medical Offices	80.00	TSF
	b Aqua Bella Specific Plan	SFDR	2,92	DU
	c TR 34329 (Granite Capitol)	SFDR	90	DU
	d Cresta Bella	General Office	30.00	TSF
MV7	P07-0102; and P09-0416, -0418, -0419	General Light Industrial	652.01	TSF
	Alessandro Bl. (APN 263-091-008; 263-100-019; 263	Commercial and Industrial Complex	101.58	TSF
MV8	Alessandro Metrolink Station	Light Rail Transit Station	300	SP
MV9	Freeway Business Center	High-Cube Warehouse	709.08	TSF
MV10	PA 08-0047-0052 (Komar Cactus Plaza)	Hotel	110	Rooms
		Fast Food w/Drive Thru	8.00	TSF
		Commercial	42.40	TSF
MV11	PA 09-0031	Gas Station	12	VFP
MV12	Prologis	High-Cube Warehouse	1,916.19	TSF
		High-Cube Warehouse	328.44	TSF
	World Logistics Center	High-Cube Warehouse	41,400.00	TSF
		Warehousing	200.00	TSF
		Gas Station w/ Market	12	VFP
		Existing SFDR	7	DU
MV13	Moreno Valley Cactus Center (PEN16-0131)	Warehouse	36.950	TSF
		Fast Food w/Drive Thru	7.900	TSF
		Gas Station w/Car Wash	28	VFP
MJPA1	Meridian Business Park North	Industrial Park	5,985.000	TSF

<sup>1</sup>SFDR = Single Family Detached Residential

<sup>2</sup>DU = Dwelling Units; TSF= Thousand Square Feet; SP= Spaces; VFP= Vehicle Fueling Positions

Source: (Urban Crossroads, 2018e, Table 4-3)

For the cumulative impact analyses that rely on the summary projections approach (i.e., all issue areas with the exception of traffic and vehicular-related air quality, greenhouse gas, and noise, as described in the preceding pages), the cumulative study area includes the City of Moreno Valley, City of Perris, and portions of unincorporated Riverside County that abut the City of Moreno Valley. These jurisdictions encompass the western area of Riverside County and have similar environmental characteristics as the Project area. The selected study area encompasses the Perris Valley, which is largely bounded by prominent topographic



landforms, such as Reche Canyon to the north, the Badlands to the east, and the Lakeview Mountains to the southeast. This study area exhibits similar characteristics in terms of climate, geology, and hydrology, and therefore is also likely to have similar biological, archaeological, and tribal cultural resource characteristics as well. This study area also encompasses the service areas of the Project site's primary public service and utility providers. Areas outside of this study area either exhibit topographic, climatological, or other environmental circumstances that differ from those of the Project area, or are simply too far from the proposed Project site to produce environmental effects that could be cumulatively-considerable when considered together with the Project's impacts. Exceptions include cumulative air quality analysis, which considers the entire South Coast Air Basin (SCAB) and greenhouse gas emissions and associated global climate change, which potentially affect all areas of Earth. Additionally, the analysis of potential cumulative hydrology and water quality effects considers other development projects located within the boundary of the Santa Ana River Basin watershed and the analysis of biological resource impacts considers other projects located in the geographic area covered by the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).

Environmental impacts associated with buildout of the cumulative study area were evaluated in CEQA compliance documents prepared for the respective General Plans of each of the above-named jurisdictions. The location where each of these CEQA compliance documents is available for review is provided below. All of the CEQA compliance documents listed below are herein incorporated by reference pursuant to CEQA Guidelines § 15150.

- City of Moreno Valley General Plan EIR (SCH No. 200091075), available for review at the City of Moreno Valley Community Development Department, 14177 Frederick Street, Moreno Valley, CA 92552;
- City of Perris General Plan EIR (SCH No. 2004031135), available for review at the City of Perris Department of Community Development, 135 North "D" Street, Perris, CA 92570; and
- County of Riverside General Plan EIR (SCH No. 200904105), available for review at the County of Riverside Transportation and Land Management Agency Planning Department, 4080 Lemon Street, 12th Floor, Riverside, CA 92502.

#### **4.0.3 IDENTIFICATION OF IMPACTS**

Subsections 4.1 through 4.12 of this EIR evaluate the 12 environmental subjects warranting detailed analysis, as determined by this EIR's Initial Study and in consideration of public comment on this EIR's NOP. The format of discussion is standardized as much as possible in each section for ease of review. The environmental setting is discussed first, followed by a discussion of the Project's (and Project-related components') potential environmental impacts based on specified thresholds of significance used as criteria to determine whether potential environmental effects are significant.

The thresholds of significance used in this EIR are based on the thresholds presented in CEQA Guidelines Appendix G and as applied by the City of Moreno Valley to create the Project's Initial Study Checklist (included in *Technical Appendix A* to this EIR). The thresholds are intended to assist the reader of this EIR in understanding how and why this EIR reaches a conclusion that an impact would or would not occur, is significant, or is less than significant.

Serving as the CEQA Lead Agency for this EIR, the City of Moreno Valley is responsible for determining whether an adverse environmental effect identified in this EIR should be classified as significant or less than significant. The standards of significance used in this EIR are based on the independent judgment of the City



of Moreno Valley, taking into consideration CEQA Guidelines Appendix G, the City of Moreno Valley's Municipal Code and adopted City policies, the judgment of the technical experts that prepared this EIR's Technical Appendices, performance standards adopted, implemented, and monitored by regulatory agencies, significance standards recommended by regulatory agencies, and the standards in CEQA that trigger the preparation of an EIR.

As required by CEQA Guidelines § 15126.2(a), impacts are identified in this EIR as direct, indirect, cumulative, short-term, long-term, on-site, and/or off-site impacts of the proposed Project and/or Project-related components. A summarized "impact statement" is provided in each subsection following the analysis. Each subsection also includes a discussion or listing of the applicable regulatory criteria (laws, policies, regulations) that the Project and its implementing actions are required to comply with (if any). If impacts are identified as significant after mandatory compliance with regulatory criteria, feasible mitigation measures are presented that would either avoid the impact or reduce the magnitude of the impact. For any impact identified as significant and unavoidable, the City of Moreno Valley would be required to adopt a statement of overriding considerations pursuant to CEQA Guidelines § 15093 in order to approve the Project despite its significant impact(s) to the environment. The statement of overriding considerations would list the specific economic, legal, social, technological, and other benefits of the Project, supported by substantial evidence in the Project's administrative record, that outweigh the unavoidable impacts.

## 4.1 AESTHETICS

This Subsection describes the aesthetic qualities and potential visual resources present on the Project site and in the site's vicinity and evaluates the potential effects that the Project may have on these resources. Descriptions of existing aesthetic/visual conditions and the analysis of potential impacts to aesthetic resources are based, in part, on field observations and site photographs collected by T&B Planning, Inc. in August 2017 (T&B Planning, 2017), analysis of aerial photography (Google Earth Pro, 2017), and the Project application materials submitted to the City of Moreno Valley described in Section 3.0, *Project Description*, of this EIR. This Subsection also is based on information contained in the Community Development Element of the City of Moreno Valley General Plan (City of Moreno Valley, 2016), the Aesthetics section of the certified Final Program EIR prepared for the City's General Plan (SCH No. 200091075) (City of Moreno Valley, 2006), and the City of Moreno Valley Municipal Code (City of Moreno Valley, 2017). All references used in this Subsection are listed in EIR Section 7.0, *References*.

### 4.1.1 EXISTING CONDITIONS

#### A. Project Site and Surrounding Area

The Project site encompasses approximately 12.0 acres in the western portion of the City of Moreno Valley. The site is located north of Brodiaea Avenue, west of Heacock Street, and approximately 325 feet south of Alessandro Boulevard (as illustrated on Figure 3-2, *Vicinity Map*). Topographically, the site ranges in elevation from approximately 1,550 feet above mean sea level (amsl) at the southern portion of the site, to a topographic high point of approximately 1,560 feet amsl at the northern portion of the site. The overall topographic relive of the Project site is approximately 10 feet; the site is perceived as flat from off-site public viewing areas (i.e., public streets). There are no unique topographic or aesthetic features present on the property, such as rock outcroppings or mature trees.

Pursuant to CEQA Guidelines § 15125, the environmental conditions that existed on the Project site at the time the EIR's NOP was released for public review shall comprise the site's "existing setting." The NOP for this EIR was released on December 5, 2017. As of that approximate date, the entire Project site consisted of vacant, undeveloped land. There are no structures on the Project site. The existing conditions of the Project site can be seen on Figure 2-4, *Aerial Photograph*.

Figure 4.1-1, *Site Photograph Key Map*, depicts the locations of the five (5) vantage points used in the photographic inventory and are relied upon herein to describe the Project site's existing aesthetic condition. Each of the vantage points and the representative photographs taken from those locations are described on the following pages.

The existing visual conditions of the Project site are shown in the photographic inventory presented on Figure 4.1-2 and Figure 4.1-3. These photographs provide a representative visual depiction of the site's visual characteristics as seen from surrounding public viewing areas, which consist of public roads adjacent or near the Project site. The site photographs presented on the following pages were stitched together from multiple photos taken at an approximate height of six feet during the same photography session in order to provide wider panoramic views of the Project site and its surroundings. Due to the presentation of panoramic views, portions of the site photographs may appear slightly distorted.

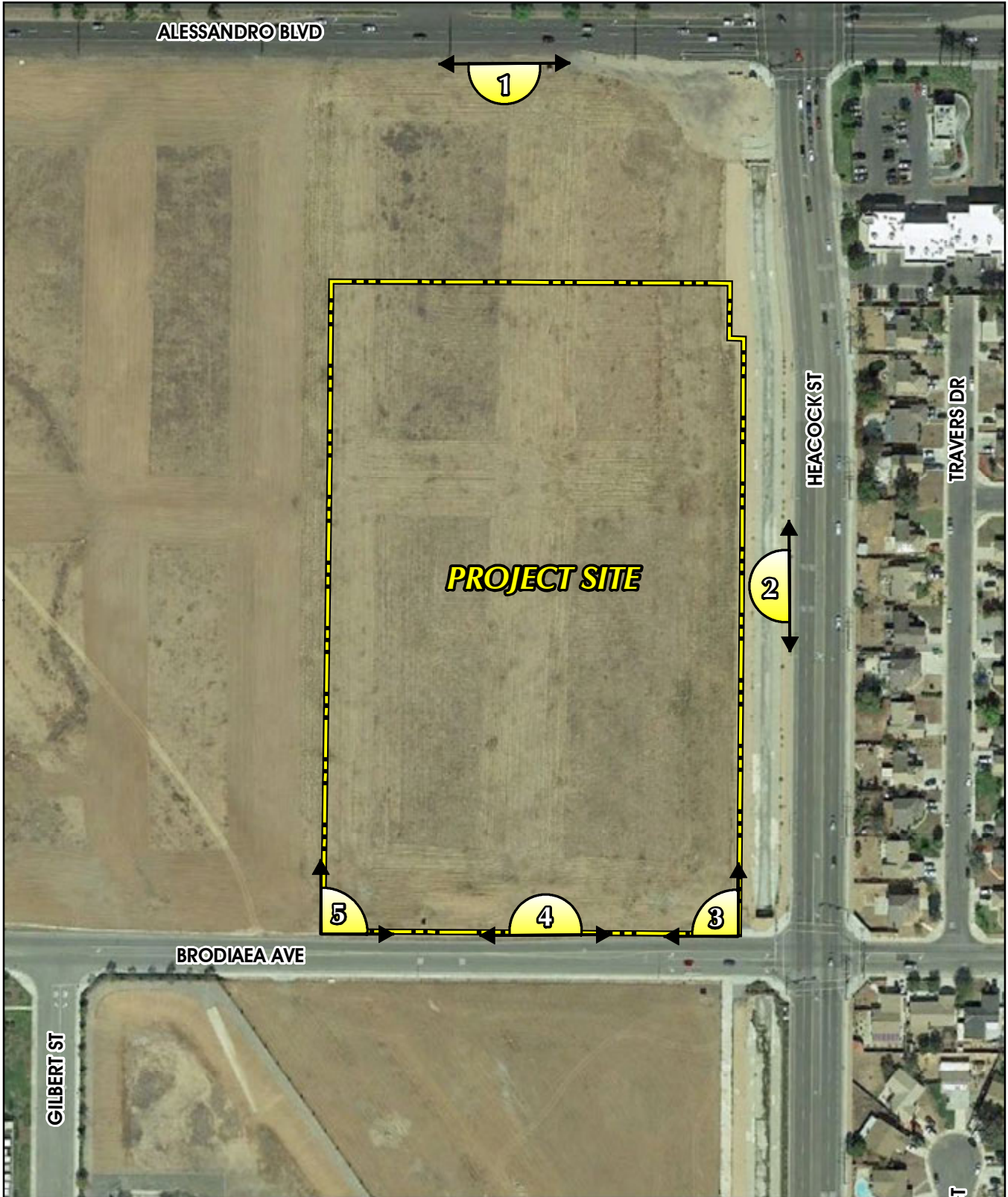
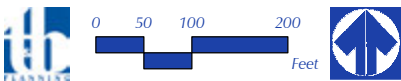


Figure 4.1-1



SITE PHOTOGRAPH KEY MAP



- Site Photograph 1: (Figure 4.1-2) Site Photograph 1 provides a 180-degree view from Alessandro Boulevard. The Project's site's northern boundary is located approximately 325 feet south of Alessandro Boulevard; therefore, the Project site is visible in the mid- and background of the photograph. Undeveloped land with scattered weedy vegetation is visible across the Project site. Mount Russell and its associated foothills are visible on the horizon, on the left-hand side of the photograph. Off-site warehouse buildings, located south of Brodiaea Avenue, are visible on the horizon along the center and right-hand side of the photograph.
- Site Photograph 2 (Figure 4.1-2) Site Photograph 2 provides a 180-degree view of the Project site from Heacock Street, looking west. The Heacock Channel, a concrete-lined drainage channel that abuts the Project site on the east, is visible in the foreground of the photograph. A chain-link, steel fence separates the Heacock Channel from the Project site. The Project site, characterized by flat land with some scattered weedy vegetation, is visible in the center portion of the photograph. Off-site warehouse buildings located to the south and west of the Project site are visible in the background (on the left-hand side and center of the photograph), and off-site commercial buildings located along Alessandro Boulevard north of the Project site are visible in the background (on the right-hand side of the photograph).
- Site Photograph 3 (Figure 4.1-2): Site Photograph 3 provides a 90-degree view from the southeastern corner of the Project site near the intersection of Heacock Street and Brodiaea Avenue, looking west to north. The left-hand portion of the photograph provides a view along the site's southern boundary. The center of the photograph provides a view across the Project site, looking northwest. The right-hand side of the photograph provides a view along the site's eastern boundary, adjacent to the Heacock Channel. Visible in the foreground and mid-ground of the photograph, the Project site appears as vacant, undeveloped land with scattered, weedy vegetation. Off-site warehouse buildings are visible in the background of the left-hand side of the photograph. Existing off-site commercial buildings located north of the Project site along Alessandro Boulevard are visible in the background of the center and right-hand side of the photograph. Box Springs Mountains are visible along the horizon of the center and right-hand side of the photograph.
- Site Photograph 4 (Figure 4.1-3): Site Photograph 4 provides a 180-degree view from the southern boundary of the Project site. The left-hand side of the photograph provides a view looking toward Brodiaea Avenue to the west. The center of the photograph provides a view across the site looking north. The right-hand side of the photograph provides a view looking toward the Brodiaea Avenue/Heacock Street intersection to the east. Vacant undeveloped land with scattered weedy vegetation is visible across the Project site. Visible on the background of the photograph are various off-site land uses, including warehouse buildings located to the west of the Project site (left-hand portion of photograph), commercial/retail buildings located to the north of the Project site along Alessandro Boulevard (center of photograph), and single-family residences located east of the Project site on the opposite side of Heacock Street (right-hand portion of photograph). The Box Springs Mountains are visible on the horizon from this vantage point.
- Site Photograph 5 (Figure 4.1-3): Site Photograph 5 provides a 90-degree view from the southwestern corner of the Project site along Brodiaea Avenue, looking north to east. The left-hand side of the photograph provides a view looking toward Alessandro Boulevard to the north. The center of the photograph provides a view across the site looking northeast. The right-hand side of the photograph



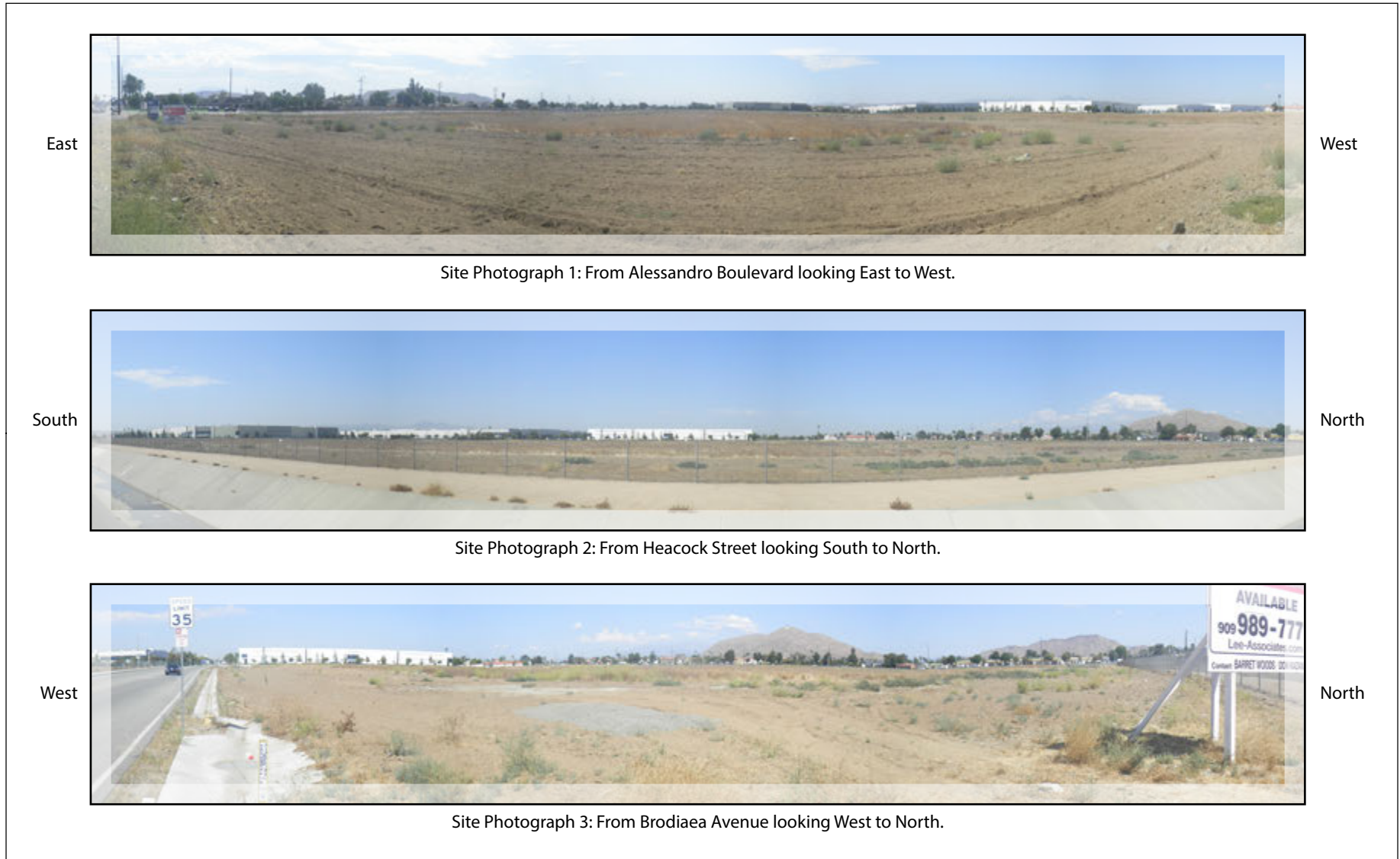


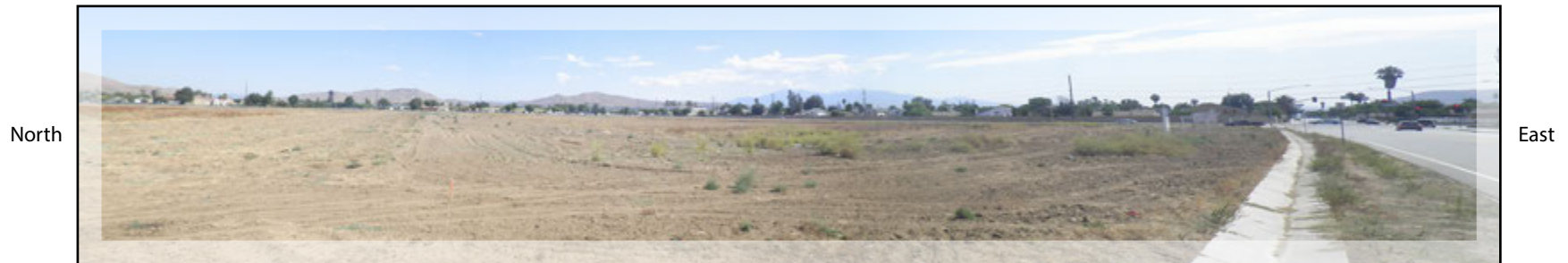
Figure 4.1-2



NOT TO SCALE



Site Photograph 4: From Brodiaea Avenue looking West to East.



Site Photograph 5: From Brodiaea Avenue looking North to East.

Figure 4.1-3



NOT TO SCALE



provides a view looking toward Brodiaea Avenue to the east. Vacant undeveloped land with scattered weedy vegetation is visible across the Project site in the foreground and mid-ground of the photograph. Off-site commercial uses located north of the Project site along Alessandro Boulevard and residential development located east of the Project site on the opposite side of Heacock Street is visible in the background of the photograph. The Box Springs Mountains and the Mount Russell foothills are visible along the horizon.

***B. Scenic Vistas and Scenic Resources***

The Project site is located within a relatively flat valley floor surrounded by rugged hills and mountains. Major scenic resources in Moreno Valley that contribute to scenic vistas include the Box Springs Mountains and Reche Canyon to the north of the City, the Badlands to the east of the City, and the Mount Russell area to the southeast of the City. The Project site is not located within a City-designated scenic vista or view corridor for the Box Springs Mountains, Reche Canyon, the Badlands, or Mount Russell. (City of Moreno Valley, 2016, p. 7-14, Figure 7-2)

The Project site does not contain scenic resources, such as trees of scenic value, rock outcroppings, or historic buildings (as depicted on Figure 4.1-2 and Figure 4.1-3). The Project site also is not located within or adjacent to a scenic highway corridor, as there are no State-designated or eligible scenic highways within the City of Moreno Valley (Caltrans, 2017). The City of Moreno Valley General Plan notes that all of the major scenic resources within the City are visible from SR-60 and designates SR-60 as a local scenic road. The Project site is located approximately 1.7 miles south of SR-60; but, is not visible from SR-60 due to distance and intervening topography and development (City of Moreno Valley, 2016, p. 7-12). (The City of Moreno Valley General Plan also designates Moreno Beach Drive and Gilman Springs Road as local scenic roads; however, these streets are each 4+ miles from the Project site and not visible from the site due to distance and intervening topography and distance.)

***C. Light and Glare***

The Project site is vacant undeveloped land and no sources of artificial light or glare are present on the site under existing conditions. Artificial light sources occur in the immediate vicinity of the Project site, with the most notable sources of light emanating from commercial development along Alessandro Boulevard, warehouses to the south and southwest of the property, and the residential community located east of Heacock Street, as well as street lights along Heacock Street (on the east side of the street) and Brodiaea Avenue (on the south side of the street).

Mt. Palomar Observatory is located approximately 44 miles southeast of the Project site, on the top of Palomar Mountain in north San Diego County. The Observatory contains three active research telescopes owned and operated by the California Institute of Technology (Caltech). Since at least the 1980s, CalTech has worked with the surrounding communities to mitigate and minimize the effects of ambient light occurring from increased urbanization on the Observatory's research mission. (Caltech, 2015) Although not addressed by the City of Moreno Valley General Plan, properties located within a 45-mile radius of the Mt. Palomar Observatory are considered to have the potential to contribute to lighting impacts on the Observatory (Riverside County, 1988).



## **4.1.2 APPLICABLE REGULATORY REQUIREMENTS**

### **A. Local Regulations**

#### **1. *City of Moreno Valley General Plan***

The City of Moreno Valley General Plan guides future development within the City. The General Plan's Community Development Element, Parks, Recreation and Open Space Element, and Conservation Element each identify goals, objectives, policies and actions that will preserve the City's character and scenic resources while improving overall community design.

#### **2. *City of Moreno Valley Municipal Code***

The City of Moreno Valley Municipal Code § 9.08.100 regulates light and glare associated with new development in the City, and requires the following of non-residential development:

*All outdoor lighting associated with nonresidential uses shall be fully shielded and directed away from surrounding residential uses. Such lighting shall not exceed one-quarter foot-candle minimum maintained lighting measured from within five feet of any property line, and shall not blink, flash, oscillate, or be of unusually high intensity or brightness (City of Moreno Valley, 2017)*

## **4.1.3 BASIS FOR DETERMINING SIGNIFICANCE**

The proposed Project would result in a significant aesthetic impact if the Project or any Project-related component would:

- a. Have a substantial adverse effect on a scenic vista;*
- b. Substantially damage scenic resources, including, but not limited to, trees, outcroppings, and historic buildings within a state scenic highway;*
- c. Substantially degrade the existing visual character or quality of the site and its surroundings; or*
- d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.*

The above-listed thresholds are derived directly from Appendix G to the CEQA Guidelines and address the typical, adverse effects that development projects could have on aesthetics/visual quality and scenic resources. The use of these thresholds for the evaluation of Project-related impacts is intended to ensure that the proposed Project's impacts to aesthetic resources are appropriately evaluated and that feasible mitigation measures are applied for any impacts that are determined to be significant.

Regarding the determination of significance under Threshold "a," if the unique view of a scenic vista(s) would be blocked or otherwise substantially adversely affected as seen from a public viewing location(s), such as a public road, park, trail, and/or other publicly-owned property at which the general public is legally authorized to use or congregate, the impact will be regarded as significant. Effects to scenic vistas from private properties will not be considered significant in this EIR because the City of Moreno Valley General Plans calls for the protection of public views and the City does not have any ordinances or policies in place that protect views from privately-owned property.



Regarding the determination of significance under Threshold “c,” if the character or quality of the Project area, including both publicly- and privately-owned properties, would be degraded, the impact will be regarded as significant. In this context, “degrade” will mean the introduction of physical features that would have a demonstratively inconsistent character and/or would be constructed with inferior design characteristics than currently found in the Project area, based on the independent judgment of the City of Moreno Valley.

#### **4.1.4 IMPACT ANALYSIS**

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

The representative site photographs provided on Figure 4.1-2 and Figure 4.1-3 depict the Project site under existing conditions. As shown, the Project site consists of relatively flat, vacant, undeveloped land that is routinely disturbed (i.e., disced) as part of weed abatement activities. The Project site does not contribute to a scenic vista under existing conditions and the City of Moreno Valley General Plan does not identify any scenic vistas or scenic corridors on the Project site or in the vicinity of the site (City of Moreno Valley, 2016, Figure 7-2).

Scenic resources within and surrounding Moreno Valley include the Box Springs Mountains and Reche Canyon area, located approximately 3.0 miles to the northwest of the Project site, the Badlands, located approximately 6.8 miles to the northeast of the Project site, and the Russell Mountains, located approximately 4.4 miles to the southeast of the Project site (Google Earth Pro, 2017). Under existing conditions, views of the Box Springs Mountains, Reche Canyon and Russell Mountains are available from the Project site and its vicinity on clear days.

The Project would involve the construction and operation of one (1) warehouse structure on the Project site with a maximum height of approximately 43 feet above finished grade. Other vertical features (walls, fences, light poles, landscaping, etc.) would be shorter and have substantially less physical mass than the building, so the 43-foot-high building is considered to have the greatest potential to affect a scenic vista. The Project’s proposed warehouse building would be set back from Heacock Street by approximately 140 feet, from Brodiaea Avenue by 93 feet, and from Alessandro Boulevard by approximately 360 feet. These roadways are the only existing public viewing areas that have the potential to be substantially affected by the Project. At a maximum height of 43 feet, the proposed warehouse building would not be so tall as to obstruct views or otherwise substantially detract from views of the Box Springs Mountains, Reche Canyon, or the Russell Mountains, which due to the heights of these landform features and distances from the Project site, would still be visible along the horizon. Additionally, the proposed warehouse building’s setback distances from Heacock Street, Brodiaea Avenue, and Alessandro Boulevard would ensure that the lines of sight are maintained from these public roads and trail to the Box Springs Mountains, Reche Canyon, and Russell Mountains. As such, the Project would not have a substantial adverse effect on views of these scenic resources. Impacts would be less than significant.

The Project also would have less-than-significant impacts on public views of the Badlands. Due to its distance and orientation in relation to the Project site, prominent, distinct views of the Badlands are not available from the Project site under existing conditions. The views that are available under existing conditions, primarily from the Project site’s southern boundary would not be obstructed by development of the Project because a viewer would need to look due east from Brodiaea Avenue and Heacock Street to see the mountain views, and not across the Project site. The Project’s warehouse building would be set back 93 feet from Brodiaea Avenue and this distance would ensure that the building does not encroach within the west-to-east view corridor along



Brodiaea Avenue, thereby preserving public views of the Badlands from Brodiaea Avenue. Accordingly, the Project would have no impact on views of the Badlands from public viewing areas near the Project site.

Based on the foregoing analysis, the Project would not have a substantial adverse effect on scenic vistas, and impacts would be less than significant.

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

The Project site is not located within or adjacent to a scenic highway corridor and does not contain scenic resources, such as trees of scenic value, rock outcroppings, or historic buildings. Furthermore, there are no State-designated or eligible scenic highways within the City of Moreno Valley (Caltrans, 2017). Because the Project site is not visible from a State scenic highway and contains no scenic resources, there is no potential for the proposed Project to adversely impact the viewshed within a scenic highway corridor and no potential for the Project to damage important scenic resources within a scenic highway corridor, including trees, rock outcroppings, and historic buildings. No impact would occur.

Notwithstanding the fact that the Project site is not located within view of a State scenic highway and thus would not cause a significant impact under this threshold, it is noted that the Project site is located approximately 1.7 miles south of SR-60, which the City of Moreno Valley designates as a local scenic route (City of Moreno Valley, 2006, p. 5.11-6). Based on an analysis of topography and other development located between the Project site and SR-60, the proposed Project's warehouse building and other physical features (e.g., landscaping, walls/fences, etc.) would not be visible from SR-60 due to distance and intervening topography and development. (Google Earth Pro, 2017)

***Threshold c: Would the Project substantially degrade the existing visual character or quality of the site and its surroundings?***

#### **Construction-Related Activities**

As described in Section 3.0, *Project Description*, of this EIR, heavy equipment would be used on the Project site during the Project's construction activities. Refer to Section 3.0 for a description of the expected number and types of equipment and the duration of construction activity. Construction equipment would be visible to the immediately surrounding areas during the Project's temporary construction period. Construction activities are a common occurrence in the City of Moreno Valley, and do not inherently or substantially degrade an area's visual quality. Except for the short-term use of cranes during building construction and lifts during the architectural coating phase, the construction equipment used on the Project site is expected to be low in height and not particularly visible to the surrounding area. From Heacock Street located east of the Project site, construction activities would occur west of and beyond the roadway, the existing Heacock Channel, and the existing chain-link fence (with the exception of a very short period of time when a new storm drain outlet is constructed within the Heacock Channel). From Alessandro Boulevard, construction activities would be at least 325 feet away from the roadway. Project-related construction activities would occur within and adjacent to Brodiaea Avenue, but the character of development along Brodiaea Avenue is industrial/warehouse in nature and not sensitive to construction-related activity. Furthermore, Project-related construction activities would be temporary in nature and all construction equipment would be removed from the Project site following completion of Project-related construction activities. Based on the foregoing, Project-related changes to local visual character and quality are determined to be less than significant during temporary, short-term construction activities.



□ **Project Buildout**

Upon buildout of the Project, the visual character of the site would change from a vacant, undeveloped property to a developed property containing one (1) warehouse building. The Project site is located in a portion of the City of Moreno Valley that has a mix of land uses. Near the Project site, the Alessandro Boulevard roadway corridor (approximately 325 feet north of the Project site) is commercial in character and contains several large shopping centers and stand-alone commercial establishments. The segment of Brodiaea Avenue that abuts the Project site to the south, and land to the west of the Project site, is industrial in character and several large warehouse buildings have been developed in these areas. To the east of the Project site is the concrete-lined Heacock Channel and a chain-link fence, and on the opposite side of Heacock Street is a solid wall behind which is a neighborhood of single-family residential homes. The development proposed by the Project is similar in nature to the warehouse developments located to the west and south of the Project site. Thus, the Project would be aesthetically compatible with the existing character and quality of development to the south and to the west. To the immediate north of the Project site is vacant land designated “Business Park-Mixed Use” by the City of Moreno General Plan and which is expected to develop in the future with commercial or business park uses in character with the existing uses that already occur along Alessandro Boulevard. Therefore, the proposed Project would not disrupt the commercial character of the Alessandro Boulevard roadway corridor. To the east, the Project’s warehouse building would occur on the opposite side of the street where a residential community occurs. Between these homes and the Project site is a solid wall, sidewalk, the travel lanes of Heacock Street, a chain-link fence, and the concrete-lined Heacock Channel. The Project would construct a segment of the Juan Bautista De Anza Multi-Use Trail parallel to the Heacock Channel and install landscaping. The east-facing architectural elevation of the proposed warehouse building includes a number of features to enhance the aesthetic quality of the Project. The building is designed to incorporate a handsome color palette that would not be visually offensive and also incorporates accent elements, such as colored glass and decorative building elements, for visual interest. The Project’s landscape plan incorporates plant species that can maintain vibrancy during drought conditions. Additionally, no loading docks, truck courts, or other uses associated with trucking would occur on the east side of the Project site facing the residential uses located east of Heacock Street. The proposed facility is designed to position the loading docks and truck parking areas away from public viewing areas, and along the west-facing side of the building, behind a screen wall. The Project’s visual features would thus provide an aesthetic for the site that complements surrounding development. Further, the Project’s design is required to meet or exceed all of the applicable design standards for industrial development provided by the City of Moreno Valley’s Zoning Ordinance.

While the proposed Project would alter the visual character of the site from a vacant parcel to a warehouse development, due to the Project’s similarity to the existing character of other large buildings in the surrounding area to the south and to the west, its setback distance from Alessandro Boulevard, and its east-facing design features, such an alteration would not result in a substantial degradation to the existing visual character or quality of the site or the surrounding area. The Project’s impacts to visual character would thus be less than significant.

***Threshold d: Would the Project create a new source of substantial light of glare, which would adversely affect daytime or nighttime view of the area?***

The proposed Project would include exterior lighting; however, the installation of exterior lighting would be ancillary to the proposed warehouse building. The proposed Project would be required to adhere to the lighting requirements as set forth in the City of Moreno Valley Municipal Code. The City of Moreno Valley Municipal Code (Chapter 9.08.100) requires that all outdoor lighting associated with nonresidential uses shall be fully shielded and directed away from surrounding residential uses to reduce glare and light trespass, and shall not



exceed one-quarter-foot-candle minimum maintained lighting measured from within five (5) feet of any property line. The City's Municipal Code also specifies that exterior lighting associated with nonresidential uses shall not blink, flash, oscillate, or be of unusually high intensity or brightness. The Project would be required to demonstrate compliance with the aforementioned requirements prior to issuance of building permits. The Project's compliance with the City of Moreno Valley Municipal Code would ensure that the Project would not produce a new source of substantial light or glare from artificial lighting sources that would adversely affect day or nighttime views in the area (or adversely affect operations at the Mount Palomar Observatory).

The proposed Project would involve the construction of one (1) warehouse building with exterior building surfaces that consist of concrete tilt-up panels and blue/green glass. While window glazing has a potential to result in minor glare effects, such effects would not adversely affect daytime views of any surrounding properties, including motorists on adjacent roadways, because the glass used by the Project would be low-reflective. Areas proposed for window glazing would be limited, as shown on the Project's application materials on file with the City of Moreno Valley. Accordingly, a less-than-significant daytime glare impact would occur.

In conclusion, the proposed Project would introduce new sources of artificial light and glare to the Project site, but these sources would not result in the production of substantial light or glare, and would not adversely affect daytime or nighttime views of the area. Impacts would be less than significant.

#### **4.1.5 CUMULATIVE IMPACT ANALYSIS**

As noted under the discussion of Threshold "a," the Project site is relatively flat and does not contribute to any prominent scenic vistas under existing conditions. Although views of the Box Springs Mountains and Russell Mountains are available in the Project area; such views are available throughout the cumulative study area and are not unique to the Project site's vicinity. Furthermore, development in the cumulative study area would be required to comply with the applicable policies of governing General Plans and Municipal Codes, which include policies and regulations to preserve vistas to important, designated scenic resources. Accordingly, with buildout of the proposed Project and other developments within the Project's viewshed, impacts to scenic vistas would not be cumulatively significant and the Project's contributions would be less than cumulatively-considerable.

As noted under the analysis of Threshold "b," the Project site is not located within close proximity to any designated Scenic Routes and does not contain any scenic resources. Therefore, the proposed Project has no potential contribute to a cumulatively significant impact to scenic resources within a designated Scenic Route corridor.

With respect to visual quality and character of the site and surrounding area, as with the proposed Project, new development in the surrounding area would be subject to applicable development regulations and design standards, including, but not limited to, the Moreno Valley Municipal Code. Mandatory compliance to the development regulations and design standards would ensure that development would incorporate high quality building materials, site design, and landscaping to minimize the potential for adverse effects associated with visual quality. The development proposed by the Project is similar in nature to the warehouse developments located to the west and south of the Project site. Thus, the Project would be aesthetically compatible with the existing character and quality of development to the south and to the west. To the immediate north of the Project site is vacant land designated "Business Park-Mixed Use" by the City of Moreno General Plan and which is expected to develop in the future with commercial or business park uses in character with the existing





uses that already occur along Alessandro Boulevard. Therefore, the proposed Project would not disrupt the commercial character of the Alessandro Boulevard roadway corridor. To the east, the Project's warehouse building would occur on the opposite side of the street where a residential community occurs. Between these homes and the Project site is a solid wall, sidewalk, the travel lanes of Heacock Street, a chain-link fence, and the concrete-lined Heacock Channel. These qualities have been incorporated into the proposed Project's design as described in EIR Section 3.0, *Project Description*. Accordingly, Project impacts are less than cumulatively-considerable to the existing visual character or quality of the Project site or its surroundings.

With respect to potential cumulative light and glare impacts, the City of Moreno Valley Municipal Code requires all outdoor light fixtures to be shielded and sets a maximum limit of 0.25-foot candles of "spill over" lighting that can directly or indirectly affect adjacent properties and requires light fixtures to incorporate shielding to prevent potential glare impacts. The restriction on unshielded light fixtures and "spill over" lighting enforced by these lighting regulations has the effect of minimizing light and glare that would affect daytime views and/or create sky glow. Additionally, development projects with artificial light sources in surrounding jurisdictions would be required to comply with the light reduction requirements applicable in their respective jurisdiction. Therefore, the cumulative effect to the surrounding area, to the area of concern for the Mt. Palomar Observatory, would be less than significant.

#### **4.1.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION**

Threshold a: Less-than-Significant Impact. The Project site does not comprise all or part of a scenic vista and does not contain any visually prominent scenic features. No unique views to scenic vistas are visible from the property. The Project would not substantially change a scenic view or substantially block or obscure a scenic vista; therefore, impacts to scenic vistas would be less than significant.

Threshold b: No Impact. The Project site is not located within the viewshed of a scenic highway and, therefore, the Project site does not contain any scenic resources visible from a scenic highway.

Threshold c: Less-than-Significant Impact. The Project would not substantially degrade the existing visual character or quality of the site or its surrounding areas during construction or operation. Although the Project would change the visual character of the site from a vacant property to a development containing one warehouse building, the Project proposes a number of site design, architectural, and landscaping elements to ensure that the surrounding visual character and quality is not substantially affected.

Threshold d: Less-than-Significant Impact. The Project would not create substantial light or glare. Compliance with City of Moreno Valley Municipal Code requirements for artificial lighting would ensure less-than-significant impacts associated with light and glare affecting day or nighttime views in the area.

#### **4.1.7 MITIGATION**

Impacts would be less than significant; therefore, mitigation is not required.



## **4.2 AIR QUALITY**

This Subsection is based, primarily, on two technical studies that were prepared by Urban Crossroads, Inc. to evaluate the potential effects to local and regional air quality that could result from the Project. The air quality impact analysis prepared for the Project is titled “Brodiaea Commerce Center Air Quality Impact Analysis,” dated January 22, 2018, and is included as *Technical Appendix B1* to this EIR (Urban Crossroads, 2018a). The mobile source health risk assessment prepared for the Project is titled “Brodiaea Commerce Center Mobile Source Diesel Health Risk Assessment,” dated January 25, 2018, and is included as *Technical Appendix B2* to this EIR (Urban Crossroads, 2018b). Refer to Section 7.0, *References*, for a complete list of reference sources used in this Subsection.

### **4.2.1 EXISTING CONDITIONS**

#### **A. Atmospheric Setting**

The Project site is located in the South Coast Air Basin (SCAB, or “Basin”), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAB encompasses approximately 6,745 square miles and includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County. The SCAB is bound by the Pacific Ocean to the west; the San Gabriel, San Bernardino, and the San Jacinto Mountains to the north and east, respectively; and the San Diego County line to the south. (Urban Crossroads, 2018a, p. 13)

#### **B. Regional Climate and Meteorology**

The regional climate – temperature, wind, humidity, precipitation, and the amount of sunshine – has a substantial influence on air quality. The SCAB’s distinctive climate is determined by its terrain and geographical location, which comprises a coastal plain connected to broad valleys and low hills bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter. The SCAB is semi-arid, with average annual temperatures varying from the low-to-middle 60s, measured in degrees Fahrenheit (F); however, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of the SCAB’s climate. Humidity restricts visibility in the SCAB and the relative high humidity heightens the conversion of sulfur dioxide to sulfates. The marine layer provides an environment for that conversion process, especially during the spring and summer months. Inland areas of the SCAB, including where the Project site is located, show more variability in annual minimum/maximum temperatures and lower average humidity than coastal areas within the SCAB due to decreased marine influence. (Urban Crossroads, 2018a, p. 13)

More than 90 percent of the SCAB’s rainfall occurs between November and April. The annual average rainfall varies from approximately nine inches in Riverside to 14 inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SCAB. Due to its generally clear weather, about three-quarters of available sunshine is received in the SCAB; the remaining one-quarter is absorbed by clouds. The abundant amount of sunshine (and its associated ultraviolet radiation) is a key factor to the photochemical reactions of air pollutants in the SCAB. (Urban Crossroads, 2018a, p. 14)

Dominant airflow direction and speed are the driving mechanisms for transport and dispersion of air pollution. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with storms moving through the region from the northwest. This period also brings five to 10 periods of strong, dry offshore winds, locally termed “Santa Anas” each year. During the dry season, which coincides with the



months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over southern California. During the nighttime, heavy, cool air descends mountain slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. (Urban Crossroads, 2018a, p. 14)

In the SCAB, there are two distinct temperature inversion structures that control the vertical mixing of air pollution. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing which effectively acts as an impervious lid to pollutants over the entire SCAB. The mixing height for the inversion structure is normally situated 1,000 to 1,500 feet above mean sea level. A second inversion-type forms in conjunction with the drainage of cool air off of the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter, when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as nitrogen oxides and carbon monoxide, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline. (Urban Crossroads, 2018a, p. 14)

### **C. Air Quality Pollutants and Associated Human Health Effects**

The federal government and State of California have established maximum permissible concentrations for common air pollutants that may pose a risk to human health or would otherwise degrade air quality and adversely affect the environment. These regulated air pollutants are referred to as “criteria pollutants.” An overview of the common criteria air pollutants in the SCAB, their sources, and associated effects to human health are summarized on the following pages (refer also to Section 2.6 of *Technical Appendix B1*).

- Carbon Monoxide (CO) is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest in the winter during the morning, when there is little to no wind and surface-based inversions trap the pollutant at ground levels. CO is emitted directly from internal combustion engines; therefore, motor vehicles operating at slow speeds are the primary source of CO and the highest ambient CO concentrations in the SCAB are generally found near congested transportation corridors and intersections. Inhaled CO does not directly affect the lungs, but affects tissues by interfering with oxygen transport and competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Therefore, health conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. The most common symptoms associated with CO exposure include headache, nausea, vomiting, dizziness, fatigue, and muscle weakness. Individuals most at risk to the effects of CO include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic oxygen deficiency. (Urban Crossroads, 2018a, pp. 19, 21)
- Sulfur Dioxide (SO<sub>2</sub>) is a colorless gas or liquid. SO<sub>2</sub> enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO<sub>2</sub> oxidizes in the atmosphere, it forms sulfates (SO<sub>4</sub>). Collectively, these pollutants are referred to as sulfur oxides (SO<sub>x</sub>). SO<sub>2</sub> is a respiratory irritant to people afflicted with asthma. After a few minutes' exposure to low levels of SO<sub>2</sub>, asthma sufferers can experience breathing difficulties, including airway constriction and reduction in breathing capacity. Although healthy individuals do not exhibit similar acute breathing difficulties in response



to SO<sub>2</sub> exposure at low levels, animal studies suggest that very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract. (Urban Crossroads, 2018a, pp. 19-20, 22-23)

- Nitrogen Oxides (NO<sub>x</sub>) consist of nitric oxide (NO), nitrogen dioxide (NO<sub>2</sub>) and nitrous oxide (N<sub>2</sub>O) and are formed when nitrogen (N<sub>2</sub>) combines with oxygen (O<sub>2</sub>). Their lifespan in the atmosphere ranges from one to seven days for nitric oxide and nitrogen dioxide, to 170 years for nitrous oxide. Nitrogen oxides are typically created during combustion processes, and are major contributors to smog formation and acid deposition. NO<sub>2</sub> is a criteria air pollutant, and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere, and reduced visibility. Of the nitrogen oxide compounds, NO<sub>2</sub> is the most abundant in the atmosphere. As ambient concentrations of NO<sub>2</sub> are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO<sub>2</sub> than those indicated by regional monitoring stations. Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO<sub>2</sub>. Short-term exposure to NO<sub>2</sub> can result in resistance to air flow and airway contraction in healthy subjects. Exposure to NO<sub>2</sub> can result decreases in lung functions in individuals with asthma or chronic obstructive pulmonary diseases (e.g., chronic bronchitis, emphysema), as these individuals are more susceptible to the effects of NO<sub>x</sub> than healthy individuals. (Urban Crossroads, 2018a, pp. 20, 22)
- Ozone (O<sub>3</sub>) is a highly reactive and unstable gas that is formed when volatile organic compounds (VOCs) and nitrogen oxides (NO<sub>x</sub>), both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, warm temperatures, and light wind conditions are favorable to the formation of this pollutant. Short-term exposure (lasting for a few hours) to ozone 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. Individuals exercising outdoors, children, and people with pre-existing lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for ozone effects. Children who participate in multiple outdoor sports and live in communities with high ozone levels have been found to have an increased risk for asthma. (Urban Crossroads, 2018a, pp. 20-21)
- Particulate Matter less than 10 microns (PM<sub>10</sub>) and Particulate Matter less than 2.5 microns (PM<sub>2.5</sub>) are air pollutants consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols that are 10 microns or smaller or 2.5 microns or smaller, respectively. These particles are formed in the atmosphere from primary gaseous emissions that include sulfates formed from SO<sub>2</sub> release from power plants and industrial facilities and nitrates that are formed from NO<sub>x</sub> release from power plants, automobiles and other types of combustion sources. The chemical composition of fine particles is highly dependent on location, time of year, and weather conditions. The small size of PM<sub>10</sub> and PM<sub>2.5</sub> allows them to enter the lungs where they may be deposited, resulting in adverse health effects. Elevated ambient concentrations of fine particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) have been linked to an increase in respiratory infections, number, and severity of asthma attacks, and increased hospital admissions. Some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in life-span, and an increased mortality from lung cancer. Daily fluctuations in PM<sub>2.5</sub> concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long-term exposure to particulate matter. The



elderly, people with pre-existing respiratory or cardiovascular disease, and children, appear to be the most susceptible to the effects of high levels of PM<sub>10</sub> and PM<sub>2.5</sub>.

- Volatile Organic Compounds (VOCs) and Reactive Organic Gasses (ROGs) are a family of hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. Both VOCs and ROGs are precursors to ozone and contribute to the formation of smog through atmospheric photochemical reactions. Individual VOCs and ROGs have different levels of reactivity; that is, they do not react at the same speed or do not form ozone to the same extent when exposed to photochemical processes. VOCs often have an odor, including such common VOCs as gasoline, alcohol, and the solvents used in paints. Odors generated by VOCs can irritate the eye, nose, and throat, which can reduce respiratory volume. In addition, studies have shown that the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. (Urban Crossroads, 2018a, pp. 20, 23)
- Lead (Pb) is a heavy metal that is highly persistent in the environment. Historically, the primary source of lead in the air was emissions from vehicles burning leaded gasoline. As a result of the removal of lead from gasoline, ambient levels of lead have not exceeded applicable air quality standards at any of the SCAQMD's regular air quality monitoring stations since 1982. Currently, emissions of lead are largely limited to stationary sources such as lead smelters. Exposure to low levels of lead can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased lead levels are associated with increased blood pressure. Lead poisoning can cause anemia, lethargy, seizures, and death. Fetuses, infants, and children are more sensitive than others to the adverse effects of lead exposure. (Urban Crossroads, 2018a, pp. 21, 23)

#### **D. Existing Air Quality**

Air quality is evaluated in the context of ambient air quality standards published by the federal and State governments. These standards are the levels of air quality that are considered safe with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect, as well as health effects of each pollutant regulated under these standards are detailed in Table 4.2-1, *Ambient Air Quality Standards*. A region's air quality is determined to be healthful or unhealthful by comparing contaminant levels in ambient air samples to the State and federal standards presented in Table 4.2-1.

##### **1. Regional Air Quality**

###### **Criteria Pollutants**

The SCAQMD monitors levels of various criteria pollutants at 30 monitoring stations throughout its jurisdiction. In 2015, which is the most recent year for which detailed data was available at the time the NOP for this EIR was issued, the federal and State ambient air quality standards for ozone, PM<sub>10</sub>, and PM<sub>2.5</sub> were exceeded on at least one day at most monitoring locations within the SCAB. Measured levels of NO<sub>2</sub>, SO<sub>2</sub>, CO, sulfates, and lead within the SCAB did not exceed federal or State standards in 2015. (Urban Crossroads, 2018a, p. 18)



**Table 4.2-1 Ambient Air Quality Standards**

Pollutant	Averaging Time	California Standards <sup>1</sup>		National Standards <sup>2</sup>		
		Concentration <sup>3</sup>	Method <sup>4</sup>	Primary <sup>3,5</sup>	Secondary <sup>3,6</sup>	Method <sup>7</sup>
Ozone (O <sub>3</sub> ) <sup>8</sup>	1 Hour	0.09 ppm (180 µg/m <sup>3</sup> )	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m <sup>3</sup> )		0.070 ppm (137 µg/m <sup>3</sup> )		
Respirable Particulate Matter (PM <sub>10</sub> ) <sup>9</sup>	24 Hour	50 µg/m <sup>3</sup>	Gravimetric or Beta Attenuation	150 µg/m <sup>3</sup>	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m <sup>3</sup>		—		
Fine Particulate Matter (PM <sub>2.5</sub> ) <sup>9</sup>	24 Hour	—	—	35 µg/m <sup>3</sup>	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m <sup>3</sup>	Gravimetric or Beta Attenuation	12.0 µg/m <sup>3</sup>		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m <sup>3</sup> )	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m <sup>3</sup> )	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m <sup>3</sup> )		9 ppm (10 mg/m <sup>3</sup> )	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m <sup>3</sup> )		—	—	
Nitrogen Dioxide (NO <sub>2</sub> ) <sup>10</sup>	1 Hour	0.18 ppm (339 µg/m <sup>3</sup> )	Gas Phase Chemiluminescence	100 ppb (188 µg/m <sup>3</sup> )	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m <sup>3</sup> )		0.053 ppm (100 µg/m <sup>3</sup> )	Same as Primary Standard	
Sulfur Dioxide (SO <sub>2</sub> ) <sup>11</sup>	1 Hour	0.25 ppm (655 µg/m <sup>3</sup> )	Ultraviolet Fluorescence	75 ppb (196 µg/m <sup>3</sup> )	—	Ultraviolet Fluorescence, Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m <sup>3</sup> )	
	24 Hour	0.04 ppm (105 µg/m <sup>3</sup> )		0.14 ppm (for certain areas) <sup>10</sup>	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) <sup>10</sup>	—	
Lead <sup>12,13</sup>	30 Day Average	1.5 µg/m <sup>3</sup>	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m <sup>3</sup> (for certain areas) <sup>12</sup>	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m <sup>3</sup>		
Visibility Reducing Particles <sup>14</sup>	8 Hour	See footnote 13	Beta Attenuation and Transmittance through Filter Tape	<b>No National Standards</b>		
Sulfates	24 Hour	25 µg/m <sup>3</sup>	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m <sup>3</sup> )	Ultraviolet Fluorescence			
Vinyl Chloride <sup>12</sup>	24 Hour	0.01 ppm (26 µg/m <sup>3</sup> )	Gas Chromatography			

Source: (Urban Crossroads, 2018a, Table 2-1)



The attainment status for criteria pollutants within the SCAB is summarized in Table 4.2-2, *SCAB Criteria Pollutant Attainment Status*.

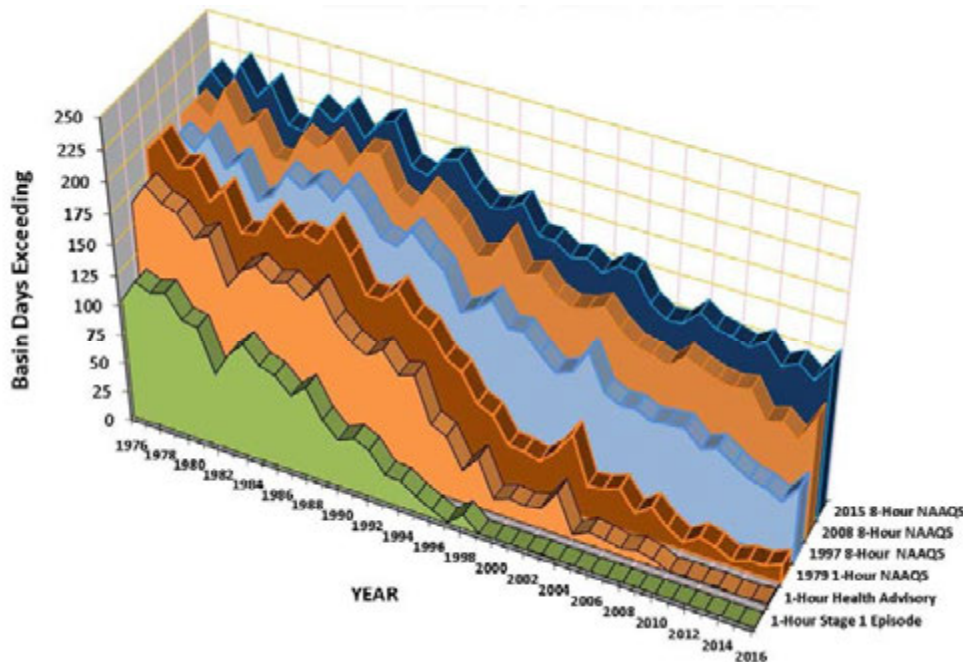
**Table 4.2-2 SCAB Criteria Pollutant Attainment Status**

Criteria Pollutant	State Designation	Federal Designation
Ozone – 1 hour standard	Nonattainment	Nonattainment (“extreme”)
Ozone – 8 hour standard	Nonattainment	Nonattainment (“extreme”)
PM <sub>10</sub>	Nonattainment	Attainment (Maintenance)
PM <sub>2.5</sub>	Nonattainment	Nonattainment (“serious”)
Carbon Monoxide	Attainment	Attainment (Maintenance)
Nitrogen Dioxide	Attainment	Unclassifiable/Attainment
Sulfur Dioxide	Attainment	Unclassifiable/Attainment
Lead <sup>1</sup>	Attainment	Nonattainment (Partial)

State/Federal designations were taken from <http://www.arb.ca.gov/design/adm/adm.htm>  
Source: (Urban Crossroads, 2018a, Table 2-2)

The SCAB has been one of the most unhealthful air basins in the United States and has experienced unhealthful air quality since World War II; however, as a result of the region’s air pollution control efforts over the last 60+ years, criteria pollutant concentrations in the SCAB have reduced dramatically and are expected to continue to improve in the future as government regulations become more stringent (Urban Crossroads, 2018a, pp. 25-29). Criteria pollutant trends within the SCAB are illustrated on the graphs presented on the following pages and described in detail in Section 2.8 of *Technical Appendix B1*.

**South Coast Air Basin Ozone Trend**

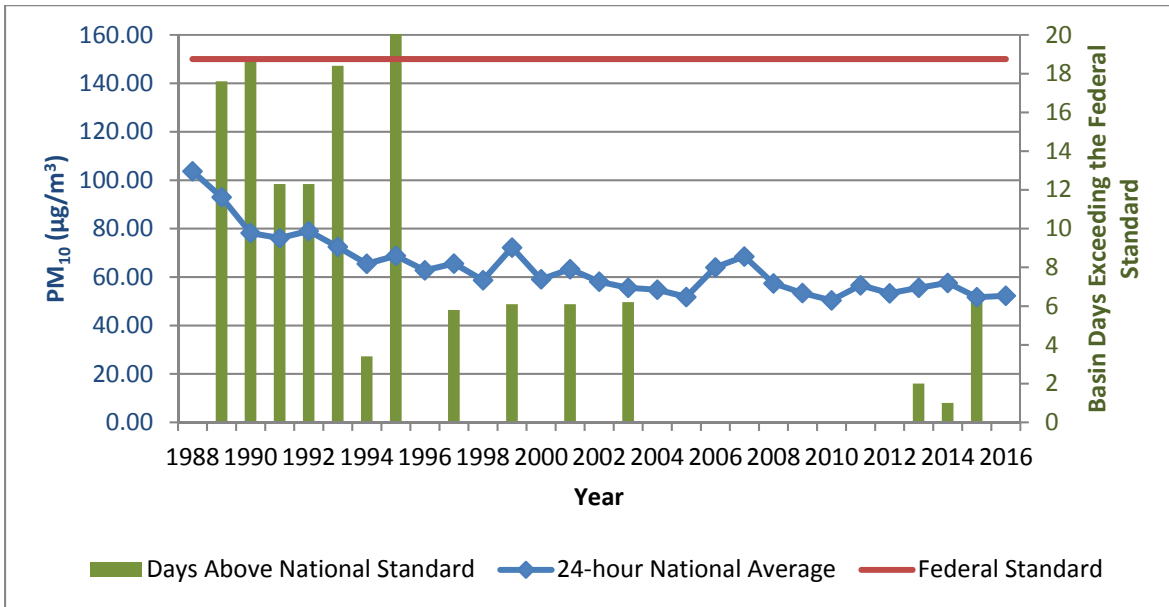


Source: (Urban Crossroads, 2018a, Table 2-4)

<sup>1</sup>In 2015, the Los Angeles County portion of the SCAB exceeded applicable Federal lead standards; however, all other portions of the SCAB – including the portion of the SCAB where the Project site is located – did not exceed Federal lead standards.

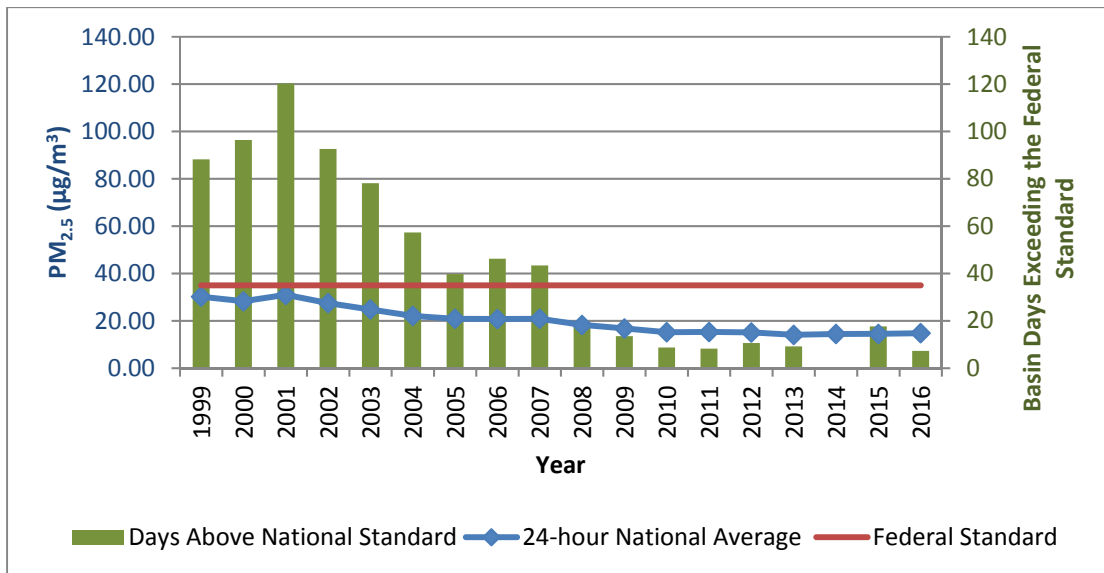


*South Coast Air Basin PM10 Trend*



Source: (Urban Crossroads, 2018a, Table 2-5)

*South Coast Air Basin PM2.5 Trend*

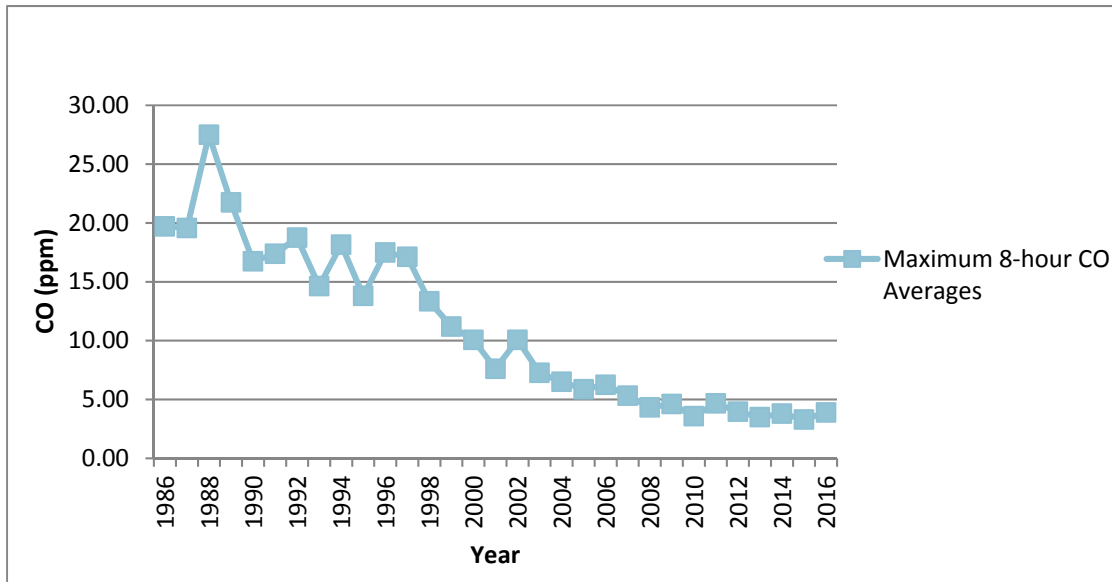


Source: (Urban Crossroads, 2018a, Table 2-6)



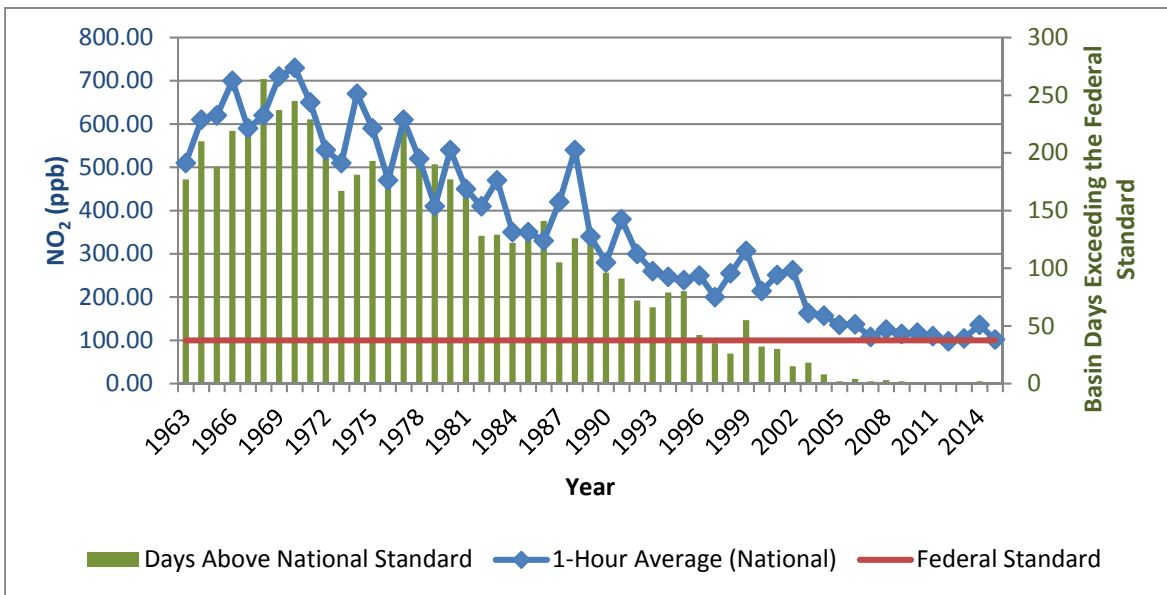


*South Coast Air Basin CO Trend*



Source: (Urban Crossroads, 2018a, Table 2-7)

*South Coast Air Basin NO<sub>2</sub> Trend*



Source: (Urban Crossroads, 2018a, Table 2-8)

**☐ Toxic Air Contaminants**

Toxic air contaminants (TACs) are a classification of air pollutants that have been attributed to carcinogenic and non-carcinogenic health risks. Beginning in the mid-1980s, the California Air Resources Board (CARB) adopted a series of regulations to reduce the amount of air toxic contaminant emissions resulting from mobile and stationary sources, such as cars, trucks, stationary sources, and consumer products. As a result of CARB's



regulatory efforts, ambient concentrations of TACs have declined substantially across the state. (Urban Crossroads, 2018a, pp. 30-31)

To reduce TAC emissions from mobile sources, CARB has required that all light- and medium-duty vehicles sold in California since 1996 be equipped with an on-board diagnostic system to alert drivers of potential engine problems (as approximately half of all tailpipe emissions result from malfunctioning emissions control devices). Also, since 1996, CARB has required the use of cleaner burning, reformulated gasoline in all light- and medium-duty vehicles. These two regulations resulted in an over 80 percent reduction in TAC emissions from light- and medium-duty vehicles in the State between 1990 and 2012 despite an approximately 30 percent increase in the State's population over that same time period. The CARB also implemented programs to retrofit diesel-fueled engines and facilitate the use of diesel fuels with ultra-low sulfur content to minimize the amount of diesel emissions and their associated TACs. As a result of CARB's programs, diesel emissions and their associated TACs fell by approximately 68 percent between 1990 and 2012 despite an approximately 81 percent increase in miles traveled by diesel vehicles during that same time period. (Urban Crossroads, 2018a, p. 31) CARB's efforts at reducing stationary source TACs have been focused mainly on the dry cleaning and paint/architectural coating industries, which have resulted in a greater than 85 percent reduction of stationary source TACs across the State between 1990 and 2012. (Urban Crossroads, 2018a, pp. 31-32)

In 2000, the SCAQMD prepared a comprehensive urban toxic air pollution study to evaluate the TAC concentration levels in the SCAB and their associated health risks, called *MATES-II (Multiple Air Toxics Exposure Study in the South Coast Air Basin)*. *MATES-II* showed the average excess cancer risk within the SCAB ranging from 1,100 in one million persons to 1,750 in one million persons, with an average excess regional risk of about 1,400 in one million. As part of the *MATES-II* study, the SCAQMD concluded that diesel particulate matter (DPM) accounted for more than 70 percent of the identified cancer risk (Urban Crossroads, 2018a, p. 33). The SCAQMD has updated their urban toxic air pollution survey twice since 2000, with the 2008 (*MATES-III*) and 2014 updates (*MATES-IV*) showing reductions in the average excess cancer risk within the SCAB as compared to *MATES-II*. The current version of the urban toxic air pollution survey, *MATES-IV*, is the most comprehensive dataset of ambient air toxic levels and health risks within the SCAB. The *MATES-IV* report estimates the average Basin-wide excess cancer risk level within the SCAB to be 418 million, an approximately 70 percent improvement from the findings of *MATES-II* report just 14 years earlier. According to SCAQMD, DPM accounts for approximately 68 percent of the total risk shown in *MATES-IV* (Urban Crossroads, 2018a, p. 33).

## **2. Local Air Quality**

### **□ Criteria Pollutants**

Local air quality data was collected from the SCAQMD air quality monitoring stations located nearest to the Project site. Data was collected for the three most recent years for which data was available (2014-2016). Data for O<sub>3</sub> and PM<sub>10</sub> was obtained from the Perris monitoring station; data for CO, NO<sub>2</sub>, and PM<sub>2.5</sub> was obtained from the Metropolitan Riverside County 2 (for 2014) and Lake Elsinore (for 2015 & 2016) monitoring stations. (Urban Crossroads, 2018a, p. 18) Ambient air pollutant concentrations in the Project area are summarized in Table 4.2-3, *Project Area Air Quality Monitoring Summary*.



**Table 4.2-3 Project Area Air Quality Monitoring Summary**

Pollutant	Standard	Year		
		2014	2015	2016
Ozone (O <sub>3</sub> )				
Maximum 1-Hour Concentration (ppm)		0.117	0.124	0.131
Maximum 8-Hour Concentration (ppm)		0.094	0.102	0.098
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	16	25	23
Number of Days Exceeding State 8-Hour Standard	> 0.07 ppm	63	50	56
Number of Days Exceeding Federal 1-Hour Standard	> 0.12 ppm	0	0	1
Number of Days Exceeding Federal 8-Hour Standard	> 0.07 ppm	59	49	55
Carbon Monoxide (CO)				
Maximum 1-Hour Concentration (ppm)		2.0	2.5	1.9
Maximum 8-Hour Concentration (ppm)		2.4	1.7	1.4
Nitrogen Dioxide (NO <sub>2</sub> )*				
Maximum 1-Hour Concentration (ppm)		0.058	0.068	0.065
Annual Arithmetic Mean Concentration (ppm)		0.014	0.013	0.014
Particulate Matter ≤ 10 Microns (PM <sub>10</sub> )				
Maximum 24-Hour Concentration (µg/m <sup>3</sup> )		87	74	76
Annual Arithmetic Mean (µg/m <sup>3</sup> )		35.1	30.3	32.2
Number of Samples		60	57	57
Number of Samples Exceeding State Standard	> 50 µg/m <sup>3</sup>	6	3	5
Particulate Matter ≤ 2.5 Microns (PM <sub>2.5</sub> )*				
Maximum 24-Hour Concentration (µg/m <sup>3</sup> )		73.6	56.6	45.6
Annual Arithmetic Mean (µg/m <sup>3</sup> )		14.5	13.3	14.0
Number of Samples Exceeding Federal 24-Hour Standard	> 35 µg/m <sup>3</sup>	9	17	6

-- = data not available from SCAQMD or ARB; \*Data from the Riverside County 2 monitoring station is only available up to year 2014. As such, data from the Lake Elsinore monitoring station is used for the year 2015 and 2016.

Source: (Urban Crossroads, 2018a, Table 2-3)

**☐ Toxic Air Contaminants**

As part of preparation of the *MATES-IV* study, the SCAQMD collected toxic air contaminant data at ten fixed sites within the SCAB. None of the fixed monitoring sites are located within the vicinity of the Project site; however, *MATES-IV* extrapolates the excess cancer risk levels throughout the SCAB by modeling specific geographic grids. *MATES-IV* predicts an estimated excess carcinogenic risk of 568.32 in one million for the Project area. (Urban Crossroads, 2018a, p. 33)



## **4.2.2 APPLICABLE ENVIRONMENTAL PLANS, POLICIES, AND REGULATIONS**

The following is a brief description of the federal, State, and local environmental laws and related regulations governing air quality emissions.

### **A. Federal Plans, Policies, and Regulations**

#### **1. Federal Clean Air Act**

The Clean Air Act (CAA; 42 U.S.C. § 7401 *et seq.*) is the comprehensive federal law that regulates air emissions from stationary and mobile sources. Among other things, this law authorizes the Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) to protect public health and public welfare and to regulate emissions of hazardous air pollutants, which include O<sub>3</sub>, CO, NO<sub>x</sub>, SO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and lead. (EPA, 2017d)

One of the goals of the CAA was to set and achieve NAAQS in every state by 1975 in order to address the public health and welfare risks posed by certain widespread air pollutants. The setting of these pollutant standards was coupled with directing the states to develop State implementation plans (SIPs), applicable to appropriate industrial sources in the state, in order to achieve these standards. The CAA was amended in 1977 and 1990 primarily to set new goals (dates) for achieving attainment of NAAQS since many areas of the country had failed to meet the deadlines. (EPA, 2017d)

The sections of the federal CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions). Title I provisions address the urban air pollution problems of ozone (smog), carbon monoxide (CO), and particulate matter (PM<sub>10</sub>). Specifically, it clarifies how areas are designated and re-designated "attainment." It also allows EPA to define the boundaries of "nonattainment" areas: geographical areas whose air quality does not meet federal air quality standards designed to protect public health. (EPA, 2017e) Mobile source emissions are regulated in accordance with the CAA Title II provisions. These standards are intended to reduce tailpipe emissions of hydrocarbons, CO, and NO<sub>x</sub> on a phased-in basis that began in model year 1994. Automobile manufacturers also are required to reduce vehicle emissions resulting from the evaporation of gasoline during refueling. These provisions further require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. (EPA, 2017f)

Section 112 of the Clean Air Act addresses emissions of hazardous air pollutants. Prior to 1990, CAA established a risk-based program under which only a few standards were developed. The 1990 Clean Air Act Amendments revised Section 112 to first require issuance of technology-based standards for major sources and certain area sources. "Major sources" are defined as a stationary source or group of stationary sources that emit or have the potential to emit 10 tons per year or more of a hazardous air pollutant or 25 tons per year or more of a combination of hazardous air pollutants. An "area source" is any stationary source that is not a major source. (EPA, 2017d)

For major sources, Section 112 requires that EPA establish emission standards that require the maximum degree of reduction in emissions of hazardous air pollutants. These emission standards are commonly referred to as "maximum achievable control technology" or "MACT" standards. Eight years after the technology-based MACT standards are issued for a source category, EPA is required to review those standards to determine whether any residual risk exists for that source category and, if necessary, revise the standards to address such risk. (EPA, 2017d)



## **2. *SmartWay Program (Voluntary)***

The US EPA's SmartWay Program is a voluntary public-private program developed in 2004, which 1) provides a comprehensive and well-recognized system for tracking, documenting and sharing information about fuel use and freight emissions across supply chains; 2) helps companies identify and select more efficient freight carriers, transport modes, equipment, and operational strategies to improve supply chain sustainability and lower costs from goods movement; 3) supports global energy security and offsets environmental risk for companies and countries; and 4) reduces freight transportation-related emissions by accelerating the use of advanced fuel-saving technologies. This program is supported by major transportation industry associations, environmental groups, State and local governments, international agencies, and the corporate community. (EPA, n.d.)

### **B. *State Plans, Policies, and Regulations***

#### **1. *California Clean Air Act (CCAA)***

The California Clean Air Act (CCAA) establishes numerous requirements for district plans to attain State ambient air quality standards for criteria air contaminants. The CCAA mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the State's ambient air quality standards, the California Ambient Air Quality Standards (CAAQS), by the earliest practical date. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, established standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. Generally, the CAAQS are more stringent than the NAAQS. For districts with serious air pollution, its attainment plan should include the following: no net increase in emissions from new and modified stationary sources; and best available retrofit technology for existing sources. (SCAQMD, 2017)

#### **2. *Air Quality Management Planning***

The California Air Resources Board (CARB) and local air districts throughout the State are responsible for developing clean air plans to demonstrate how and when California will attain air quality standards established under both the CAA and CCAA. For the areas within California that have not attained air quality standards, CARB works with local air districts to develop and implement State and local attainment plans. In general, attainment plans contain a discussion of ambient air quality data and trends; a baseline emissions inventory; future year projections of emissions, which account for growth projections and already adopted control measures; a comprehensive control strategy of additional measures needed to reach attainment; an attainment demonstration, which generally involves complex modeling; and contingency measures. Plans may also include interim milestones for progress toward attainment. Air quality planning activities undertaken by CARB also include the development of policies, guidance, and regulations related to State and federal ambient air quality standards; coordination with local agencies on transportation plans and strategies; and providing assistance to local districts and transportation agencies. (CARB, 2012)

#### **3. *Truck & Bus Rule for 2010 Engines by 2023***

Under the Truck and Bus Regulation, adopted by CARB in 2008, all diesel truck fleets operating in California are required to adhere to an aggressive schedule for upgrading and replacing heavy-duty truck engines. Older, more polluting trucks are required to be replaced first, while trucks that already have relatively clean engines are not required to be replaced until later. Pursuant to the Truck and Bus Regulation, all pre-1994 heavy trucks (trucks with a gross vehicle weight rating greater than 26,000 pounds) were to be removed from service on California roads by 2015. Between 2015 and 2020, pre-2000 heavy trucks will be equipped with PM filters and will be upgraded or replaced with an engine that meets 2010 emissions standards. The

upgrades/replacements will occur on a rolling basis based on model year. By 2023, all heavy trucks operating on California roads must have engines that meet 2010 emissions standards. Lighter trucks (those with a gross vehicle weight rating of 14,001 to 26,000 pounds) must adhere to a similar schedule, and will all be replaced by 2020.

**C. Local Plans, Policies, and Regulations**

**1. SCAQMD Air Quality Management Plan**

Under existing conditions, the NAAQS and CAAQS are exceeded in most parts of the SCAB. In response, and in conformance with California Health & Safety Code § 40702 *et seq.* and the California CAA, the SCAQMD adopted an Air Quality Management Plan (AQMP) to plan for the improvement of regional air quality. AQMPs are updated regularly in order to more effectively reduce emissions and accommodate growth. Each version of the plan is an update of the previous plan and has a 20-year horizon with a revised baseline. The SCAQMD's most recent iteration of the AQMP was adopted in March 2017. The *Final 2016 Air Quality Management Plan (AQMP)* incorporates the latest scientific and technological information and local and regional land development plans, including the Southern California Association of Governments (SCAG) *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)*. The *Final 2016 AQMP* is based on current emissions modeling data, recent motor vehicle emissions information, and demographic data/projections provided by SCAG. The air quality pollutant levels projected in the *Final 2016 AQMP* are based on the assumption that buildout of the region will occur in accordance with local general plans and specific plans, and in accordance with growth projections identified by SCAG in its *2016 RTP/SCS*.

**2. Applicable SCAQMD Rules**

The SCAQMD Rules that are currently applicable during construction activity for this Project include, but are not limited to: Rule 1113 (Architectural Coatings); Rule 431.2 (Low Sulfur Fuel); Rule 403 (Fugitive Dust); and Rule 1186/1186.1 (Street Sweepers) (Urban Crossroads, 2018a, p. 5).

**4.2.3 METHODOLOGY FOR CALCULATING PROJECT-RELATED AIR QUALITY IMPACTS**

The California Emissions Estimator Model (CalEEMod), version 2016.3.2, was used to calculate all Project-related air pollutant emissions (with the exception of the Project operational-related localized emissions and diesel particulate matter emissions, refer to Subsection 4.2.3B, below). The CalEEMod is a statewide land use emission computer model developed for the California Air Pollution Officers Association (CAPCOA) in collaboration with the California Air Districts, including the SCAQMD, that provides a uniform platform to quantify potential criteria pollutant emissions associated with construction and operation of land development projects. (Urban Crossroads, 2018a, p. 36)

**A. Methodology for Calculating Project Construction Emissions**

**1. Regional Pollutant Emissions**

The Project's construction activities are expected to begin in May 2018 and would occur over six phases before ending in June 2019. The seven phases of construction are: 1) site preparation; 2) grading; 3) building construction; 4) paving; 5) architectural coating; and 6) construction workers commuting. Table 3-1 of *Technical Appendix B1* lists the expected duration of each phase of Project construction and represents a "worst-case" analysis scenario. Should construction occur any time later than the respective dates assumed in the Project analysis, the emission factors for construction equipment will decrease as time passes due to emission regulations becoming more stringent (Urban Crossroads, 2018a, p. 36). EIR Table 3-1, *Construction Equipment Assumptions*, in Section 3.0, *Project Description*, previously listed the pieces of heavy equipment



expected to be used during each phase of Project construction. The information presented in the tables referenced above are based on information provided by the Project Applicant and the experience and technical expertise of the Project air quality consultant (Urban Crossroads). The assumptions listed in both tables were input into the CalEEMod to calculate Project-related construction emissions. (Urban Crossroads, 2018a, pp. 36-38)

Refer to Section 3.4 of *Technical Appendix B1* for more detail on the methodology utilized to calculate the Project's estimated construction-related regional pollutant emissions.

## **2. Localized Pollutant Emissions**

Project-related localized pollutant emissions were calculated in accordance with the SCAQMD's *Final Localized Significance Threshold Methodology*. The localized pollutant emissions analysis relies on the same assumptions used to calculate construction-related regional pollutant emissions, as described above. Pursuant to the SCAQMD's *Final Localized Significance Threshold Methodology*, the analysis of Project construction-related localized pollutant emissions included the following process (Urban Crossroads, 2018a, pp. 45-46):

- The CalEEMod was utilized to determine the maximum daily on-site emissions that would occur during construction activity.
- The SCAQMD's Fact Sheet for Applying CalEEMod to LSTs was used to determine the maximum Project site acreage that would be actively disturbed based on the construction equipment fleet and equipment hours as estimated in the CalEEMod. (Based on the SCAQMD's methodology, the Project is estimated to disturb 3.5 acres per day during peak construction activities.)
- Because the Project is expected to disturb less than five acres per day during peak construction activities, the SCAQMD's screening look-up tables were utilized to determine localized pollutant concentration levels at sensitive receptor locations – defined as a place where an individual who might have respiratory difficulties could remain for 24 hours – near the Project site.

The SCAQMD's *Final Localized Significance Threshold Methodology* indicates that off-site mobile emissions from development projects should be excluded from localized emissions analyses. Therefore, for purposes of calculating the Project's construction-related localized pollutant emissions, only emissions included in the CalEEMod on-site emissions outputs were considered. (Urban Crossroads, 2018a, p. 46)

Refer to Section 3.6 of *Technical Appendix B1* for more detail on the methodology utilized to calculate Project construction-related localized pollutant emissions.

## **B. Methodology for Calculating Project Operational Emissions**

### **1. Regional Pollutant Emissions**

The Project's operational-related regional pollutant emissions analysis quantifies air pollutant emissions from mobile sources, on-site equipment sources, area sources (e.g., architectural coatings, landscape maintenance equipment), and energy sources.

Mobile source emissions account for approximately 92 percent, by weight, of the Project's operational emissions. Mobile source emissions are the product of the number of vehicle trips generated by the Project, the composition of the Project's vehicle fleet (percentage of passenger cars, light-heavy-duty trucks, medium-



heavy-duty trucks, and heavy-heavy duty trucks), and the number of miles driven by Project vehicles (Urban Crossroads, 2018a, pp. 40-41). The Project's average number of vehicle trips and vehicle fleet mix were calculated using the SCAQMD's recommended methodology, as described in detail in EIR Subsection 4.11, *Transportation and Traffic*. The SCAQMD's recommended one-way vehicle trip length – 16.6 miles for passenger cars and 61 miles for all truck classifications – was used for the mobile source operational emissions analysis. (Urban Crossroads, 2018a, p. 43)

The Project proposes to solely use indoor and outdoor cargo-handling equipment (including yard trucks, hostlers, yard goats, pallet jacks, forklifts, and other on-site equipment) that are powered by non-diesel engines. Accordingly, the operational analysis does not include any tailpipe emissions from on-site equipment use. (Urban Crossroads, 2018a, pp. 43-44)

The estimated area source emissions and energy source emissions analyses for the Project rely on default inputs within the CalEEMod (Urban Crossroads, 2018a, p. 40).

Refer to Section 3.5 of *Technical Appendix B1* for detailed information on the methodology utilized to calculate the estimated Project operational-related regional pollutant emissions.

## **2. Localized Pollutant Emissions**

The LST analysis includes on-site sources only; however, the CalEEMod model outputs do not separate on-site and off-site emissions from mobile sources. In an effort to establish a maximum potential impact scenario for analytic purposes, the emissions shown on Table 3-9 of *Technical Appendix B1* represent all on-site Project-related stationary (area) sources and five percent (5%) of the Project-related mobile sources. Considering that the weighted trip length used in CalEEMod for the Project is approximately 16.6 miles for passenger cars and 61.0 miles for trucks, 5% of this total would represent an on-site travel distance of approximately 0.83-mile (4,383 feet) for each passenger car and approximately 3.05 miles (16,104 feet) for each truck. For context, given that the Project site is only 12.0 acres in size, each automobile would need to take two (2) laps around the proposed warehouse building and each truck would need to take seven (7) laps around the building, respectively, for the assumed on-site travel distances to be met. Accordingly, the 5% assumption is conservative and would tend to overstate the actual impact of on-site vehicle movement. (Urban Crossroads, 2018a, p. 49)

## **3. Diesel Particulate Matter Emissions**

Project-related vehicle diesel particulate matter (DPM) emissions were calculated using emission factors for PM<sub>10</sub> generated with EMFAC 2014. Refer to Section 2.2 of *Technical Appendix B2* for a detailed description of the model inputs and equations used in the estimation of the Project-related DPM emissions. (Urban Crossroads, 2018b, pp. 6-10)

The potential health risks of Project-related DPM emissions were quantified in accordance with the guidelines in the SCAQMD's "Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis." Pursuant to SCAQMD's recommendations, emissions were modeled using the American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) software program. Refer to Section 2.3 of *Technical Appendix B2* for a detailed description of the model inputs and equations used in the calculation of average particulate concentrations associated with operations at the Project site. (Urban Crossroads, 2018b, pp. 10-13)





Excessive health risks associated with exposure to DPM emissions are defined in terms of the probability of developing cancer or adverse, chronic non-cancer health effects as a result of exposure to DPM emissions at a given concentration. The cancer and non-cancer risk probabilities are determined through a series of equations to calculate unit risk factor, cancer potency factor, and chronic daily intake. The equations and input factors utilized in the Project analysis were obtained from Office of Environmental Health Hazard Assessment (OEHHA). Refer to Section 2.4 of *Technical Appendix B2* for a detailed description of the variable inputs and equations used in the calculations of receptor population health risks associated with Project operations. (Urban Crossroads, 2018b, pp. 12-14)

In the analysis of potential DPM effects, potential cancer and non-cancer risks were calculated for the maximally exposed individual receptor (MEIR), maximally exposed individual worker (MEIW), and maximally exposed individual school child (MEISC), receptors located within a 1,320-foot radius of the Project site and the Project's primary truck route. CARB and SCAQMD emissions models indicate that 80 percent of DPM particles settle out of the air within 1,000 feet from the emissions source. Accordingly, the 1,320-foot distance used in the Project's analysis provides a conservative study area that captures the geographic area subject to the maximum potential effect from Project-related DPM emissions. (Urban Crossroads, 2018b, p. 22) The MEIR is located immediately adjacent to the east of the Project site, the MEIW is located immediately adjacent to the Project site's western boundary, and the MEISC occurs at the Creekside Elementary School (located approximately 2,177 feet north of the Project site). (Urban Crossroads, 2018b, p. 16)

#### **4.2.4 BASIS FOR DETERMINING SIGNIFICANCE**

The proposed Project would result in a significant impact to air quality if the Project or any Project-related component would:

- a. *Conflict with or obstruct implementation of the applicable air quality plan;*
- b. *Violate any air quality standard or contribute substantially to an existing or projected air quality violation;*
- c. *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);*
- d. *Expose sensitive receptors to substantial pollutant concentrations; or*
- e. *Create objectionable odors affecting a substantial number of people.*

The above-listed thresholds are derived directly from Appendix G to the CEQA Guidelines and address the typical, adverse effects that development projects could have on regional and local air quality. The specific criteria described below are utilized to evaluate the significance of potential air quality impacts are based on applicable local regulations and relevant federal and State performance standards.

The Project would result in a significant impact under Threshold "a" if the Project was deemed to conflict with the SCAQMD 2016 AQMP. As defined in the SCAQMD CEQA Air Quality Handbook, a Project would conflict with the AQMP if either of the following conditions were to occur (Urban Crossroads, 2018a, p. 53):

- The Project would increase the frequency or severity of existing NAAQS and/or CAAQS violations, cause or contribute to new air quality violations, or delay the attainment of interim air quality standards; or
- The Project would exceed the 2016 AQMP’s future year buildout assumptions.

For evaluation under Thresholds “b” and “c”, the Project would result in a significant direct and cumulatively considerable impact if the Project’s construction or operational activities exceed one or more of the SCAQMD’s “Regional Thresholds” for criteria pollutant emissions. The “Regional Thresholds” established by SCAQMD for criteria pollutants are summarized in Table 4.2-4, *SCAQMD Maximum Daily Emissions Thresholds*. (Urban Crossroads, 2018a, p. 35).

**Table 4.2-4 SCAQMD Maximum Daily Emissions Thresholds**

<b>Pollutant</b>	<b>Construction</b>	<b>Operations</b>
<b>Regional Thresholds</b>		
NOx	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
PM2.5	55 lbs/day	55 lbs/day
SOx	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
<b>Localized Thresholds</b>		
NOx	256 lbs/day (site preparation) 222 lbs/day (grading)	307 lbs/day
CO	1,803 lbs/day (site preparation) 1,485 lbs/day (grading)	2,280 lbs/day
PM10	33 lbs/day (site preparation) 26 lbs/day (grading)	11 lbs/day
PM2.5	8 lbs/day (site preparation) 7 lbs/day (grading)	3 lbs/day

Source: (Urban Crossroads, 2018a, Table 3-1)

For evaluation under Threshold “d,” the Project would result in a significant impact if any of the following were to occur (Urban Crossroads, 2018a, p. 35; Urban Crossroads, 2018b, p. 3):

- The Project’s localized criteria pollutant emissions would exceed one or more of the “Localized Thresholds” listed in Table 4.2-4;
- The Project would cause or contribute to a CO “Hot Spot;” and/or
- The Project’s toxic air contaminant emissions, like DPM, would expose sensitive receptor populations to an incremental cancer risk of greater than 10 in one million; and/or result in a non-carcinogenic health risk rating (“Acute Hazard Index”) greater than 1.0.

[Note: The SCAQMD’s cancer risk threshold (10 in one million), corresponds to the potential that up to 10 persons, out of one million equally exposed people, would develop cancer if exposed continuously to a development project’s levels of toxic air contaminants over a specified duration of



time. This risk would be an excess cancer that is in addition to any cancer risk borne by a person not exposed to these air toxics. To put this risk in perspective, the risk of dying from accidental drowning is 1,000 in a million which is 100 times more likely than the SCAQMD's carcinogenic risk threshold. (Urban Crossroads, 2018b, pp. 13-14)]

For Threshold "e," a significant impact would occur if the Project's construction and/or operational activities generate an odor nuisance pursuant to SCAQMD Rule 402 (SCAQMD, 2015b).

#### **4.2.5 IMPACT ANALYSIS**

***Threshold a: Would the Project conflict with or obstruct implementation of the applicable air quality plan?***

The SCAQMD 2016 AQMP, which is the applicable air quality plan for the Project area, estimates long-term air quality conditions for the SCAB. The SCAQMD has established criteria for determining consistency with the 2016 AQMP. These criteria are defined in Chapter 12, Sections 12.2 and 12.3 of the SCAQMD's CEQA Air Quality Handbook and are discussed below.

- *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 or the interim emissions reductions specified in the AQMP.*

Consistency Criterion No. 1 refers to violations of the NAAQS and CAAQS. Violations of the NAAQS and/or CAAQS would occur if the Project were to exceed the SCAQMD's localized emissions thresholds. As disclosed under the analysis for Threshold "d," below, the Project would not exceed the SCAQMD localized emissions thresholds during construction or long-term operation and, by extension, would not result in violations of the NAAQS or CAAQS. Accordingly, localized criteria pollutant emissions resulting from the Project's construction and operation would neither contribute substantially to an existing or potential future violation nor delay the attainment of applicable air quality standards. (Urban Crossroads, 2018a, pp. 49-50)

- *Consistency Criterion No. 2: The proposed project will not exceed the assumptions in the AQMP based on the years of project buildout phase.*

The air quality conditions presented in the 2016 AQMP are based on the growth forecasts identified by SCAG in its 2016-2040 RTP/SCS. The 2016-2040 RTP/SCS anticipates that development in the various incorporated and unincorporated areas within the SCAB will occur in accordance with the adopted general plans for these areas. As such, development projects that propose to increase the intensity and/or use on an individual property may result in increased stationary area source emissions and/or vehicle source emissions when compared to the 2016 AQMP assumptions. If a development project does not exceed the growth projections in the applicable local general plan, then the project is considered to be consistent with the growth assumptions in the AQMP.

As described in EIR Section 2.0, *Environmental Setting*, the Project site is designated for "Business Park/Light Industrial (BP/LI)" land uses by the City of Moreno Valley General Plan. The land uses proposed by the Project are consistent with the BP/LI General Plan Land Use Designation and the Project does not propose to change the General Plan Land Use Designation for the Project site.



Accordingly, the Project would not exceed the growth projections in the City of Moreno Valley General Plan and the Project is considered to be consistent with the growth assumptions used in the 2016 AQMP.

Although the 2016-2040 RTP/SCS growth projections that the 2016 AQMP relies upon do not account for local zoning, the Project does include a Change of Zone request to change the Project site’s zoning designation from “Business Park” (including a portion of the site that has a “Mixed Use” overlay) to “Light Industrial.” The City of Moreno Valley Zoning Ordinance allows similar land uses and identical development standards (e.g., building intensity) between the respective land use categories; therefore, the Project’s zone change would not substantively or substantially diverge from the growth assumptions used in the 2016 AQMP.

In summary, because the proposed Project satisfies both of the aforementioned criteria for determining consistency with the AQMP, the Project is deemed consistent with the 2016 AQMP. As such, the Project would not conflict with or result in the obstruction of the applicable AQMP and a less-than-significant impact would occur.

**Threshold b:** *Would the Project violate any air quality standard or contribute substantially to an existing or projected air quality violation?*

**Threshold c:** *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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?*

**A. Construction Emissions Impact Analysis**

The Project’s peak construction-related emissions are summarized in Table 4.2-5, *Peak Construction Emissions Summary*. Detailed air model outputs are presented in Appendix 3.1 of *Technical Appendix B1*.

As shown in Table 4.2-5, the Project’s peak construction-related emissions of NO<sub>x</sub>, CO, SO<sub>x</sub>, and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) would not exceed the applicable SCAQMD regional thresholds. Accordingly, the Project would not emit substantial concentrations of these pollutants during construction and would not contribute to an existing or projected air quality violation, on a direct or cumulatively-considerable basis. Impacts associated with construction-related emissions of NO<sub>x</sub>, CO, SO<sub>x</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> would be less than significant and mitigation is not required.

**Table 4.2-5 Peak Construction Emissions Summary**

Year	Emissions (pounds per day)					
	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
2018	6.16	71.68	26.15	0.07	23.51	13.08
2019	122.09	44.94	24.91	0.07	3.36	2.14
<b>Maximum Daily Emissions</b>	<b>122.09</b>	<b>71.68</b>	<b>26.15</b>	<b>0.07</b>	<b>23.51</b>	<b>13.08</b>
SCAQMD Regional Threshold	75	100	550	150	150	55
<b>Threshold Exceeded?</b>	<b>YES</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>

Source: (Urban Crossroads, 2018a, Table 3-4)

Notwithstanding the conclusions above, the Project’s construction-related emissions of VOCs would exceed the applicable SCAQMD regional threshold. VOC is a precursor for ozone, a pollutant for which the SCAB

does not attain federal (NAAQS) or State (CAAQS) standards (Urban Crossroads, 2018a, p. 20). Accordingly, the Project’s daily VOC emissions during construction would violate the SCAQMD regional threshold for this pollutant and would result in a considerable net increase of a criteria pollutant for which the Project region is in nonattainment. This impact is significant and mitigation is required.

**B. Operational Emissions Impact Analysis**

The Project’s operational emissions are presented in Table 4.2-6, *Peak Operational Emissions Summary*. Detailed air model outputs are presented in Appendix 3.1 of *Technical Appendix B1*.

**Table 4.2-6 Peak Operational Emissions Summary**

Operational Activities – Summer Scenario	Emissions (pounds per day)					
	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Area Source	5.86	2.50e-04	0.03	0.00	1.00e-04	1.00E-04
Energy Source	0.02	0.14	0.12	8.60E-04	0.01	0.01
Mobile (Trucks)	3.16	86.06	24.08	0.29	9.74	3.18
Mobile (Passenger Cars)	0.43	0.65	9.32	0.03	3.46	0.93
On-Site Equipment	0.24	2.77	1.39	3.94E-03	0.12	0.11
<b>Total Maximum Daily Emissions</b>	<b>9.70</b>	<b>89.61</b>	<b>34.94</b>	<b>0.33</b>	<b>13.34</b>	<b>4.24</b>
SCAQMD Regional Threshold	55	55	550	150	150	55
<b>Threshold Exceeded?</b>	<b>NO</b>	<b>YES</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>
Operational Activities – Winter Scenario	Emissions (pounds per day)					
	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Area Source	5.86	2.50E-04	0.03	0.00	1.00E-04	1.00E-04
Energy Source	0.02	0.14	0.12	8.60E-04	0.01	0.01
Mobile (Trucks)	3.18	88.85	24.41	0.29	9.74	3.18
Mobile (Passenger Cars)	0.39	0.70	8.29	0.03	3.46	0.93
On-Site Equipment	0.24	2.77	1.39	3.94E-03	0.12	0.11
<b>Total Maximum Daily Emissions</b>	<b>9.69</b>	<b>92.47</b>	<b>34.24</b>	<b>0.33</b>	<b>13.34</b>	<b>4.24</b>
SCAQMD Regional Threshold	55	55	550	150	150	55
<b>Threshold Exceeded?</b>	<b>NO</b>	<b>YES</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>

Source: (Urban Crossroads, 2018a, Table 3-6)

As shown in Table 4.2-6, the Project’s peak operational-related emissions of VOCs, CO, SO<sub>x</sub>, and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) would not exceed the applicable SCAQMD regional thresholds. Accordingly, the Project would not emit substantial concentrations of these pollutants during long-term operational activities and would not contribute to an existing or projected air quality violation, on a direct or cumulatively-considerable basis. Impacts associated with operational-related emissions of VOCs, CO, SO<sub>x</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> would be less than significant and mitigation is not required.

However, as shown in Table 4.2-6, the Project’s operational NO<sub>x</sub> emissions would exceed the applicable SCAQMD regional threshold. NO<sub>x</sub> is a precursor for ozone, a pollutant for which the SCAB does not attain federal (NAAQS) or State (CAAQS) standards (Urban Crossroads, 2018a, p. 20). Accordingly, the Project’s daily NO<sub>x</sub> emissions during long-term operation would violate the SCAQMD regional threshold for this pollutant and would result in a considerable net increase of a criteria pollutant for which the Project region is in nonattainment. This impact is significant and mitigation is required.

**Threshold d: Would the Project expose sensitive receptors to substantial pollutant concentrations?**

**A. Localized Criteria Pollutant Analysis**

**1. Construction Analysis**

Table 4.2-7, *Peak Construction Localized Emissions Summary*, summarizes the Project’s localized criteria pollutant emissions during peak construction activities.

**Table 4.2-7 Peak Construction Localized Emissions Summary**

On-Site Site Preparation Emissions	Emissions (pounds per day)			
	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Maximum Daily Emissions</b>	<b>71.60</b>	<b>23.73</b>	<b>10.99</b>	<b>6.83</b>
SCAQMD Localized Threshold	256	1,803	33	8
<b>Threshold Exceeded?</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>
On-Site Grading Emissions	Emissions (pounds per day)			
	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Maximum Daily Emissions</b>	<b>48.23</b>	<b>17.52</b>	<b>5.13</b>	<b>3.18</b>
SCAQMD Localized Threshold	222	1,485	26	7
<b>Threshold Exceeded?</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>

Source: (Urban Crossroads, 2018a, Table 3-8)

As shown in Table 4.2-7, the Project’s localized NO<sub>x</sub>, CO, and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) emissions would not exceed applicable SCAQMD thresholds during construction. Accordingly, Project construction would not expose any sensitive receptors to substantial criteria pollutant concentrations. Impacts would be less than significant and no mitigation would be required.

**2. Operational Analysis**

Table 4.2-8, *Peak Operational Localized Emissions Summary*, summarizes the Project’s localized criteria emissions during peak operational activities.

**Table 4.2-8 Peak Operational Localized Emissions Summary**

Peak Operational Emissions	Emissions (pounds per day)			
	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>Maximum Daily Emissions</b>	<b>4.62</b>	<b>1.89</b>	<b>0.02</b>	<b>0.68</b>
SCAQMD Localized Threshold	203	1,733	4	2
<b>Threshold Exceeded?</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>

Source: (Urban Crossroads, 2018a, Table 3-9)

As shown in Table 4.2-8, the Project would not exceed the applicable SCAQMD thresholds for localized NO<sub>x</sub>, CO, and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) emissions during long-term operation. Accordingly, Project operation would not expose any sensitive receptors to substantial criteria pollutant concentrations. Impacts would be less than significant and no mitigation is required.

**B. CO Hot Spot Impact Analysis**

A CO “hot spot” is an isolated geographic area where localized concentrations of CO exceeds the CAAQS (i.e., one-hour standard of 20 parts per million or the eight-hour standard of 9 parts per million). A Project-specific CO “hot spot” analysis was not performed because CO attainment was thoroughly analyzed as part of SCAQMD’s 2003 AQMP and the 1992 Federal Attainment for Carbon Monoxide (1992 CO Plan). As



identified in the SCAQMD's 2003 AQMP and the 1992 CO Plan, peak CO concentrations in the SCAB were the byproduct of unusual meteorological and topographical conditions and were not the result of traffic congestion. For example, the CO "hot spot" analysis performed for the 2003 AQMP recorded a CO concentration of 9.3 parts per million (8-hour) at the Long Beach Boulevard/Imperial Highway intersection in Los Angeles County; however, only a small portion of the recorded CO concentrations (0.7 parts per million) were attributable to traffic congestion at the intersection. The vast majority of the recorded CO concentrations at the Long Beach Boulevard/Imperial Highway intersection (8.6 parts per million) were attributable to ambient air concentrations. With the addition of Project traffic, the busiest intersections in the Project site vicinity would not experience peak congestion levels comparable to the Long Beach Boulevard/Imperial Highway intersection; furthermore, ambient CO concentrations in the Project site vicinity were most recently recorded at 1.4 parts per million. Based on existing ambient CO concentrations and the lack of any unusual meteorological and/or topographical conditions in the Project site vicinity, the Project is not expected to cause or contribute to a CO "hot spot." (Urban Crossroads, 2018a, pp. 19, 50-51) Impacts would be less than significant and mitigation is not required.

### **C. Toxic Air Contaminant Emissions Impact Analysis**

Based on the typical operations of high-cube warehouse buildings, operation of a warehouse building on the Project site would not generate stationary sources of toxic air contaminants. However, the Project's operational activities would generate/attract diesel-fueled trucks. Diesel-fueled trucks produce DPM, which is a toxic air contaminant and is known to be associated with health hazards – including cancer. Project-related DPM health risks are summarized below. Detailed air dispersion model outputs and risk calculations are presented in Appendix 2.1 of *Technical Appendix B2*.

At the MEIR, the maximum cancer risk attributable to the Project's DPM emissions is calculated to be 1.77 in one million (presuming the resident(s) at this property would stay at their home 24 hours per day, seven (7) days per week, 365 days per year, for 70 years). A cancer risk of 1.77 in one million attributable to the Project would not exceed the SCAQMD cancer risk threshold of 10 in one million. At this same location, the non-cancer health risk index attributable to the proposed Project would be 0.0007, which would not exceed the SCAQMD non-cancer health risk index of 1.0. (Urban Crossroads, 2018b, p. 16) Accordingly, long-term operations at the Project site would not directly cause or contribute in a cumulatively considerable manner to the exposure of residential receptors to substantial DPM emissions. Therefore, the Project would result in a less-than-significant impact and no mitigation is required.

At the MEIW, the maximum cancer risk attributable to the proposed Project's DPM emissions is calculated to be 0.78 in one million, which would not exceed the SCAQMD cancer risk threshold of 10 in one million. At this same location, the non-cancer health risk index attributable to the proposed Project would be 0.002, which would not exceed the SCAQMD non-cancer health risk index of 1.0. (Urban Crossroads, 2018b, p. 16) Accordingly, long-term operations at the Project site would not directly cause or contribute in a cumulatively considerable manner to the exposure of nearby workers to substantial DPM emissions. Therefore, the Project would result in a less-than-significant impact and no mitigation is required.

At the MEISC, the maximum cancer risk attributable to the proposed Project's DPM emissions is calculated to be 0.07 in one million, which would not exceed the SCAQMD cancer risk threshold of 10 in one million. At this same location, the non-cancer health risk index attributable to the proposed Project would be 0.0001, which would not exceed the SCAQMD non-cancer health risk index of 1.0. (Urban Crossroads, 2018b, p. 16) Accordingly, long-term operations at the Project site would not directly cause or contribute in a cumulatively-



considerable manner to the exposure of nearby school children to substantial DPM emissions. Therefore, the Project would result in a less-than-significant impact and no mitigation is required.

***Threshold e: Would the Project create objectionable odors affecting a substantial number of people?***

The Project could produce odors during proposed construction activities resulting from construction equipment exhaust, application of asphalt, and/or the application of architectural coatings; however, standard construction practices would minimize the odor emissions and their associated impacts. Furthermore, any odors emitted during construction would be temporary, short-term, and intermittent in nature, and would cease upon the completion of the respective phase of construction. In addition, construction activities on the Project site would be required to comply with SCAQMD Rule 402, which prohibits the discharge of odorous emissions that would create a public nuisance. (Urban Crossroads, 2018a, pp. 1-2) Accordingly, the proposed Project would not create objectionable odors affecting a substantial number of people during construction, and short-term impacts would be less than significant.

During long-term operation, the proposed Project would include warehouse distribution land uses, which are not typically associated with objectionable odors. The temporary storage of refuse associated with the proposed Project's long-term operational use could be a potential source of odor; however, Project-generated refuse is required to be stored in covered containers and removed at regular intervals in compliance with the City's solid waste regulations, thereby precluding any significant odor impact. Furthermore, the proposed Project would be required to comply with SCAQMD Rule 402, which prohibits the discharge of odorous emissions that would create a public nuisance, during long-term operation. (Urban Crossroads, 2018a, pp. 1-2) As such, long-term operation of the proposed Project would not create objectionable odors affecting a substantial number of people.

#### **4.2.6 CUMULATIVE IMPACT ANALYSIS**

As described under the analysis for Threshold "a," the Project site would be developed with a land use that is consistent with the City of Moreno Valley General Plan and therefore within the scope of air quality considerations reflected in SCAQMD's *Final 2016 AQMP*. Accordingly, there is no potential for the Project to contribute to a cumulatively considerable impact under this Threshold.

Based on SCAQMD guidance, any direct exceedance of a regional or localized threshold also is considered to be a cumulatively-considerable effect, while air pollutant emissions below applicable regional and/or localized thresholds are not considered cumulatively-considerable. As discussed in the preceding analysis, the Project would exceed the SCAQMD regional thresholds for VOC emissions during construction and NO<sub>x</sub> emissions during long-term operation. Therefore, the Project's regional emissions of VOCs (during construction) and NO<sub>x</sub> (during operation) would be cumulatively-considerable and mitigation would be required. All other Project construction- and operational-related regional and localized emissions, including DPM emissions, would not exceed the applicable SCAQMD thresholds and, therefore, are not considered cumulatively-considerable.

As indicated in the analysis of Threshold "e," above, there are no Project components that would expose a substantial number of sensitive receptors to objectionable odors. The areas surrounding the Project site are developed with residential industrial, and commercial land uses, and there are no known sources of offensive odors in these areas. Because the Project would not create objectionable odors and there are no sources of objectionable odors in the areas immediately surrounding the Project site, there is no potential for odors from the Project site to commingle with odors from nearby development projects and expose nearby sensitive





receptors to substantial, offensive odors. Accordingly, the Project would have a less-than-significant cumulative impact.

#### **4.2.7 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION**

Threshold a: Less-than-Significant Impact. The Project would be consistent with the growth projections contained in the 2016 AQMP.

Thresholds b and c: Significant Direct and Cumulatively-Considerable Impact. The Project would exceed the applicable SCAQMD regional thresholds for VOC emissions during construction and NO<sub>x</sub> emissions during long-term operation. As such, Project-related emissions would violate SCAQMD air quality standards and contribute to the non-attainment of a criteria pollutant (i.e., VOC and ozone, and NO<sub>x</sub> and ozone), which is a significant direct and cumulatively-considerable impact.

Threshold d: Less-than-Significant Impact. The Project's localized criteria pollution emissions during construction and operation would not exceed the applicable SCAQMD thresholds. The Project also would not expose sensitive receptors to toxic air contaminants (i.e., DPM) that exceed the applicable SCAQMD carcinogenic and non-carcinogenic risk thresholds. Lastly, the Project would not cause or contribute to the formation of a CO "hot spot."

Threshold e: Less-than-Significant Impact. The Project would not produce unusual or substantial construction-related odors. Odors associated with long-term operation of the Project would be minimal and less than significant. The Project would comply with SCAQMD Rule 402, which prohibits the discharge of odorous emissions that would create a public nuisance.

#### **4.2.8 MITIGATION**

The following mitigation measure would reduce the Project's construction-related VOC emissions.

MM 4.2-1 Prior to building permit issuance, the City of Moreno Valley shall verify that a note is provided on all building plans specifying that compliance with SCAQMD Rule 1113 is mandatory during application of all architectural coatings. Project contractors shall be required to comply with the note and maintain written records of such compliance that can be inspected by the City of Moreno Valley upon request. This note also shall indicate that only "low-volatile organic compound" paint products (no more than 50 gram/liter of VOC) and/or High Pressure Low Volume (HPLV) applications shall be used. All other architectural coatings shall comply with the VOC limits prescribed by SCAQMD Rule 1113.

Although Project's construction-related particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) emissions would be less than significant, the following mitigation measures would minimize the Project's construction-related particulate matter emissions.

MM 4.2-2 The Project shall comply with the provisions of South Coast Air Quality Management District Rule 403, "Fugitive Dust." Rule 403 requires implementation of best available dust control measures during construction activities that generate fugitive dust, such as earth moving, grading, and equipment travel on unpaved roads. Prior to grading permit issuance, the City of Moreno Valley shall verify that the following notes are specified on the grading plan. Project construction contractors shall be required to ensure compliance with the notes and permit periodic inspection of the construction site by City of Moreno Valley staff or its designee to



confirm compliance. These notes shall also be specified in bid documents issued to prospective construction contractors.

- a. During grading and ground-disturbing construction activities, the construction contractor shall ensure that all unpaved roads, active soil stockpiles, and areas undergoing active ground disturbance within the Project site are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas by water truck, sprinkler system, or other comparable means, shall occur in the mid-morning, afternoon, and after work is done for the day. The contractor or builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite.
- b. Temporary signs shall be installed on the construction site along all unpaved roads indicating a maximum speed limit of 15 miles per hour (MPH). The signs shall be installed before construction activities commence and remain in place for the duration of construction activities that include vehicle activities on unpaved roads.
- c. Gravel pads must be installed at all access points to prevent tracking of mud onto public roads.
- d. Install and maintain trackout control devices in effective condition at all access points where paved and unpaved access or travel routes intersect (eg. Install wheel shakers, wheel washers, and limit site access.)
- e. When materials are transported off-site, all material shall be covered or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.
- f. All street frontages adjacent to the construction site shall be swept at least once a day using SCAQMD Rule 1186 certified street sweepers utilizing reclaimed water trucks if visible soil materials are carried to adjacent streets.
- g. Post a publicly visible sign with the telephone number and person to contact regarding dust complaints. This person shall respond and initiate corrective action within 24 hours.
- h. Any vegetative cover to be utilized onsite shall be planted as soon as possible to reduce the disturbed area subject to wind erosion. Irrigation systems required for these plants shall be installed as soon as possible to maintain good ground cover and to minimize wind erosion of the soil.
- i. Any on-site stock piles of debris, dirt, or other dusty material shall be covered or watered as necessary to minimize fugitive dust pursuant to SCAQMD Rule 403.
- j. A high wind response plan shall be formulated and implemented for enhanced dust control if winds are forecast to exceed 25 mph in any upcoming 24-hour period.

MM 4.2-3

The Project shall comply with the provisions of South Coast Air Quality Management District Rule 1186 “PM10 Emissions from Paved and Unpaved Roads and Livestock Operations” and Rule 1186.1, “Less-Polluting Street Sweepers” by complying with the following requirements. To ensure and enforce compliance with these requirements, prior to grading and building permit issuance, the City of Moreno Valley shall verify that the following notes are included on the grading and building plans. Project construction contractors shall be required to ensure compliance with the notes and permit periodic inspection of the construction site by City of



Moreno Valley staff or its designee to confirm compliance. The notes also shall be specified in bid documents issued to prospective construction contractors.

- a. If visible dirt or accumulated dust is carried onto paved roads during construction, the contractor shall remove such dirt and dust at the end of each work day by street cleaning.
- b. Street sweepers shall be certified by the South Coast Air Quality Management District as meeting the Rule 1186 sweeper certification procedures and requirements for PM<sub>10</sub>-efficient sweepers. All street sweepers having a gross vehicle weight of 14,000 pounds or more shall be powered with alternative (non-diesel) fuel or otherwise comply with South Coast Air Quality Management District Rule 1186.1.

Although the Project's construction emissions of NO<sub>x</sub> would be less than significant, the following mitigation measure would minimize the Project's construction-related NO<sub>x</sub> emissions.

- MM 4.2-4 The Project shall comply with California Code of Regulations Title 13, Division 3, Chapter 1, Article 4.5, Section 2025, "Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and Other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles" and California Code of Regulations Title 13, Division 3, Chapter 10, Article 1, Section 2485, "Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling" by complying with the following requirements. To ensure and enforce compliance with these requirements and thereby limit the release of diesel particulate matter, oxides of nitrogen, and other criteria pollutants into the atmosphere from the burning of fuel, prior to grading permit and building permit issuance, the City of Moreno Valley shall verify that the following notes are included on the grading and building plans. Project construction contractors shall be required to ensure compliance with the notes and permit periodic inspection of the construction site by City of Moreno Valley staff or its designee to confirm compliance. These notes also shall be specified in bid documents issued to prospective construction contractors.
- a. Temporary signs shall be placed on the construction site at all construction vehicle entry points and at all loading, unloading, and equipment staging areas indicating that heavy duty trucks and diesel-powered construction equipment are prohibited from idling for more than three (3) minutes. The signs shall be installed before construction activities commence and remain in place during the duration of construction activities at all loading, unloading, and equipment staging areas.

Although the Project's construction emissions of SO<sub>x</sub> would be less than significant, the following mitigation measure would minimize the Project's construction-related SO<sub>x</sub> emissions.

- MM 4.2-5 The Project shall comply with the provisions of SCAQMD Rule 431.2, "Sulfur Content of Liquid Fuels" by complying with the following requirement. To ensure and enforce compliance with this requirement and thereby limit the release of sulfur dioxide (SO<sub>x</sub>) into the atmosphere from the burning of fuel, prior to grading and building permit issuance, the City of Moreno Valley shall verify that the following note is included on the grading and building plans. Project contractors shall be required to ensure compliance with this note and permit periodic inspection of the construction site by City of Moreno Valley staff or its designee to confirm compliance. This note also shall be specified in bid documents issued to prospective construction contractors.



- a. All liquid fuels shall have a sulfur content of not more than 0.05 percent by weight, except as provided for by South Coast Air Quality Management District Rule 431.2.

The following mitigation measures would reduce the Project's operational-related NO<sub>x</sub> emissions and the contributions of this pollutant to the SCAB's non-attainment status for ozone.

- MM 4.2-6 Legible, durable, weather-proof signs shall be placed at truck access gates, loading docks, and truck parking areas that identify applicable California Air Resources Board (CARB) anti-idling regulations. At a minimum, each sign shall include: 1) instructions for truck drivers to shut off engines when not in use; 2) instructions for drivers of diesel trucks to restrict idling to no more than three (3) minutes once the vehicle is stopped, the transmission is set to "neutral" or "park," and the parking brake is engaged; and 3) telephone numbers of the building facilities manager and the CARB to report violations. Prior to the issuance of an occupancy permit, the City of Moreno Valley shall conduct a site inspection to ensure that the signs are in place.
- MM 4.2-7 Prior to the issuance of a building permit, the Project Applicant shall provide documentation to the City of Moreno Valley demonstrating that the Project is designed to meet the mandatory California Energy Code Title 24, Part 6 standards in effect at the time of building permit application submittal and includes the energy efficiency design features listed below at a minimum.
- a. Solar or light-emitting diodes (LEDs) lights shall be installed for outdoor lighting;
  - b. Any yard trucks used on-site shall be powered by natural gas or electricity;
  - c. Service equipment used on the Project site, such as forklifts, shall be electric;
  - d. Preferential parking locations for carpool, vanpool, EVs and CNG vehicles;
  - e. The building's roof shall be designed and constructed to accommodate the potential, future construction of maximally-sized photovoltaic (PV) solar arrays taking into consideration limitations imposed by other rooftop equipment, roof warranties, building and fire code requirements, and other physical or legal limitations. The building shall include an electrical system and other infrastructure sufficiently-sized to accommodate the potential installation of maximally-sized PV arrays in the future. The electrical system and infrastructure must be clearly labeled with noticeable and permanent signage which informs future occupants/owners of the existence of this infrastructure.
- MM 4.2-8 Prior to the issuance of a building permit and/or tenant improvement project for any loading dock spaces utilizing refrigerated storage shall provide an electrical hookup for refrigeration units on delivery trucks. As a condition of occupancy permits, trucks incapable of utilizing the electrical hookup for powering refrigeration shall be prohibited from accessing the site.
- MM 4.2-9 The building plans shall specify that all fixtures installed in restrooms and employee break areas shall be U.S. EPA Certified WaterSense or equivalent. The City of Moreno Valley shall verify this information is provided on the Project's building plans prior to issuance of building permits and shall conduct an inspection prior to issuance of an occupancy permit to ensure the required fixtures are installed.



MM 4.2-10 Prior to the issuance of permits that would allow the installation of landscaping, the City of Moreno Valley shall review and approve landscaping plans for the site that requires: 1) a plant palette emphasizing drought-tolerant plants; 2) use of water-efficient irrigation techniques; and 3) sufficient shade trees are provided so that at least 50% of the automobile parking areas will be shaded within 15 years after Project construction is complete (excluding the truck courts where trees cannot be planted due to interference with truck maneuvering). The City of Moreno Valley shall inspect for adherence to these requirements after landscaping installation.

**4.2.9 SIGNIFICANCE OF IMPACTS AFTER MITIGATION**

Thresholds b and c: Less-than-Significant Impact (Construction), Significant and Unavoidable Direct and Cumulative Impact (Operation). Mitigation Measure (MM) 4.2-1 would require the Project to utilize only “Low-Volatile Organic Compounds” paint products and/or High Pressure Low Volume (HPLV) applications for all architectural coating. As summarized in Table 4.2-9, *Project Construction Emissions Summary (With Mitigation)*, implementation of MM 4.2-1 would reduce the Project’s construction-related VOC emissions to below the SCAQMD’s regional significance threshold. Accordingly, with implementation of MM 4.2-1, the Project’s construction activities would not violate or contribute substantially to an existing or projected air quality violation, and construction-related impacts associated with VOC emissions would be reduced to less than significant.

**Table 4.2-9 Project Construction Emissions Summary (With Mitigation)**

Year	Emissions (pounds per day)					
	VOC	NOx	CO	SOx	PM10	PM2.5
2018	6.16	71.68	26.15	0.07	11.19	6.88
2019	61.28	44.94	24.91	0.07	3.36	2.14
<b>Maximum Daily Emissions</b>	<b>61.28</b>	<b>71.68</b>	<b>26.15</b>	<b>0.07</b>	<b>11.19</b>	<b>6.88</b>
SCAQMD Regional Threshold	75	100	550	150	150	55
<b>Threshold Exceeded?</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>

Source: (Urban Crossroads, 2018a, Table 3-5)

MM 4.2-6 through MM 4.2-10 would require the Project to incorporate design features that will reduce the Project’s overall demand for energy resources and would reduce the Project’s operational NOx emissions (NOx is created during the generation of certain types of energy resources). However, mobile source emissions account for approximately 92 percent, by weight, of the Project’s total operational NOx emissions. Mobile source emissions are regulated by standards imposed by federal and State agencies, not local governments. The types of vehicle engines and the types of fuel used by trucking companies and vehicle operators that may access the Project site are well beyond the direct control of the City of Moreno Valley. No other mitigation measures are available that are feasible for the Project Applicant to implement and the City of Moreno Valley to enforce that have a proportional nexus to the Project’s level of impact. As such, it is concluded that the Project’s long-term emissions of NOx would exceed SCAQMD air quality standards on a daily basis. In addition, the Project’s long-term emissions of NOx would cumulatively contribute to an existing air quality violation in the SCAB (i.e., ozone concentrations), as well as cumulatively contribute to the net increase of a criteria pollutant for which the SCAB is non-attainment (i.e., federal and State ozone concentrations). Accordingly, the Project’s long-term emissions of NOx are concluded to result in a significant and unavoidable impact on both a direct and cumulatively-considerable basis.



### **4.3 BIOLOGICAL RESOURCES**

This Subsection assesses the potential for the Project to impact sensitive biological resources. The analysis in this Subsection is based, primarily, on information contained in a site-specific technical report prepared by Alden Environmental, Inc. (hereafter, “Alden”) titled, “General Biological Resources Assessment for the Brodiaea Commerce Center Project,” and dated November 6, 2017. The technical report is included as *Technical Appendix C* to this EIR (Alden, 2017).

Alden conducted a site-specific evaluation of biological resources present or potentially present on the Project site. The biological resources evaluation included the review of relevant literature, field surveys, and a geographic information system (GIS)-based analysis of vegetation communities. The field study performed by Alden in 2017 included: 1) a general reconnaissance survey and vegetation mapping; 2) a general biological survey; 3) a jurisdictional waters and wetlands evaluation; 4) habitat assessments for special-status plants and wildlife species; and 5) a focused survey for burrowing owl (Alden, 2017, pp. 1-3). Refer to *Technical Appendix C* for detailed descriptions of the survey dates, scope of study, and research and survey methodologies used for the biological resources assessment.

#### **4.3.1 EXISTING CONDITIONS**

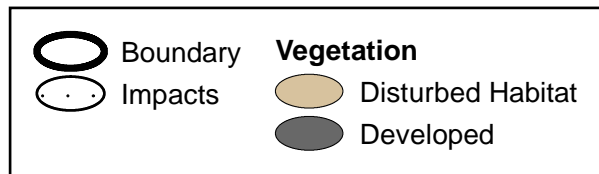
The entire Project site is either developed or disturbed. The Project site is bordered on the north by a fallow field and north of that field is Alessandro Boulevard. The Heacock Channel, a man-made, concrete-lined drainage channel, forms the eastern boundary of the Project site. The Project site is bordered on the south by Brodiaea Avenue and fallow fields on the west. The Project site is relatively flat and contains sparse vegetation dominated by tilled, non-native plant species. (Alden, 2017, pp. 4, 7)

##### **A. Vegetation Communities**

Based on the pedestrian survey conducted by Alden, the entire Project site consists of disturbed/developed vegetation, primarily non-native grasses and exotic forb species. The perimeter of the Project site and a cross-section through its middle is periodically disced so that approximately half of the Project site is regularly disturbed. The remainder of the site supports brome grasses (primarily *Bromus rubens* sp.) and many other weedy species including Russian thistle (*Salsola tragus*), vinegar weed (*Trichostema lanceolatum*), doveweed (*Croton setiger*), sinknet (*Oncosiphon piluliferum*) and tumbleweed (*Amaranthus albus*). Native plants occurring on the Project site include Rancher’s fiddleneck (*Amsinckia intermedia*), smooth tarplant (*Centromedia pungens* ssp. *laevis*), Jimson weed (*Datura wrightii*), and sand aster (*Corethrogyne filaginifolia*). The vegetation communities observed within the Project site are illustrated on Figure 4.3-1, *Existing Vegetation Map*. None of the vegetation communities present on the Project site are considered a special-status or sensitive natural vegetation community. (Alden, 2017, p. 4, Appendix A)

##### **B. Special-Status Plants**

One special-status plant species, the smooth tarplant (*Centromedia pungens* ssp. *laevis*), was observed on the Project site. This species is not listed as threatened or endangered; however, it is considered a California Native Plant Society (CNPS) List 1B.1 and a Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Group 3 species. (Alden, 2017, p. 5)



Source: Alden Environmental, Inc. (11-06-2017)

Figure 4.3-1



NOT TO SCALE



**EXISTING VEGETATION MAP**



**C. Special-Status Animals**

One special-status animal species, the California horned lark (*Eremophila apestria actia*), was observed on the Project site. This species is considered to be adequately conserved under the MSHCP, and is not listed as threatened or endangered either by the State or federal government. No other sensitive species were observed on the Project site. (Alden, 2017, p. 5) All animal species observed by Alden within the Project site are listed in Appendix C of *Technical Appendix C*.

The entire Project site is located within the MSHCP burrowing owl (*Athene cunicularia*) survey area. The burrowing owl is classified by the MSHCP as a Covered Species not adequately conserved by the MSHCP. No burrowing owls were observed during the focused surveys conducted on the Project site in August 2017; however, the Project site contains suitable habitat for burrowing owls. (Alden, 2017, p. 5)

**D. Nesting Birds**

No nests were observed on the Project site. The Project site is disturbed and does not support substantial tree or shrub species that would provide potential nesting location for tree nesting bird species. Therefore, the potential for birds to nest on the Project site is considered to be low. (Alden, 2017, p. 5)

**E. Jurisdictional Waters and Wetlands**

The Project site does not support any drainages, water courses, vernal pools, or wetland habitats that would be under the jurisdiction of the U.S. Army Corps of Engineers (ACOE), California Department of Fish and Wildlife (CDFW), and/or the Regional Water Quality Control Board (RWQCB). The concrete-lined Heacock Channel – a man-made storm drain ditch – borders the Project site on the east. This Channel does not support any riparian or wetland plant species. (Alden, 2017, p. 5)

**4.3.2 REGULATORY SETTING**

The Project site is subject to State of California (hereafter, “State”) and federal regulations associated with a number of regulatory programs. These programs often overlap and were developed to protect natural resources, including: State and federally listed plants and animals; aquatic resources including rivers and creeks, ephemeral streambeds, wetlands, and areas of riparian habitat; other special-status species which are not listed as threatened or endangered by the State or federal governments; and other special-status vegetation communities. Provided below is an overview of the federal, State, and regional laws, regulations, and requirements that are applicable to the property.

**A. Federal Regulations**

**1. Endangered Species Act (ESA)**

The purpose of the federal Endangered Species Act (ESA) is to protect and recover imperiled species and the ecosystems upon which they depend. It is administered by the U.S. Fish and Wildlife Service (USFWS) and the Commerce Department’s National Marine Fisheries Service (NMFS). The USFWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine wildlife such as whales and anadromous fish such as salmon. Under the ESA, species may be listed as either endangered or threatened. “Endangered” means a species is in danger of extinction throughout all or a significant portion of its range. “Threatened” means a species is likely to become endangered within the foreseeable future. All species of plants and animals, except pest insects, are eligible for listing as endangered or threatened. (USFWS, 2013)





The ESA makes it unlawful for a person to take a listed animal without a permit. Take is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct.” Through regulations, the term “harm” is defined as “an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.” Listed plants are not protected from take, although it is illegal to collect or maliciously harm them on federal land. Protection from commercial trade and the effects of federal actions do apply for plants. (USFWS, 2013)

Section 7 of the ESA requires federal agencies to use their legal authorities to promote the conservation purposes of the ESA and to consult with the USFWS and NMFS, as appropriate, to ensure that effects of actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of listed species. During consultation, the “action” agency receives a “biological opinion” or concurrence letter addressing the proposed action. In the relatively few cases in which the USFWS or NMFS makes a jeopardy determination, the agency offers “reasonable and prudent alternatives” about how the proposed action could be modified to avoid jeopardy. It is extremely rare that a project ends up being withdrawn or terminated because of jeopardy to a listed species. (USFWS, 2013)

Section 10 of the ESA may be used by landowners including private citizens, corporations, tribes, states, and counties who want to develop property inhabited by listed species. Landowners may receive a permit to take such species incidental to otherwise legal activities, provided they have developed an approved habitat conservation plan (HCP). HCPs include an assessment of the likely impacts on the species from the proposed action, the steps that the permit holder will take to avoid, minimize, and mitigate the impacts, and the funding available to carry out the steps. HCPs may benefit not only landowners but also species by securing and managing important habitat and by addressing economic development with a focus on species conservation. (USFWS, 2013)

## **2. *Clean Water Act Section 401***

Clean Water Act (CWA) § 401 water quality certification provides states and authorized tribes with an effective tool to help protect water quality, by providing them an opportunity to address the aquatic resource impacts of federally-issued permits and licenses. Under § 401, a federal agency cannot issue a permit or license for an activity that may result in a discharge to waters of the U.S. until the state or tribe where the discharge would originate has granted or waived § 401 certification. The central feature of CWA § 401 is the State or tribe’s ability to grant, grant with conditions, deny, or waive certification. Granting certification, with or without conditions, allows the federal permit or license to be issued consistent with any conditions of the certification. Denying certification prohibits the federal permit or license from being issued. Waiver allows the permit or license to be issued without state or tribal comment. States and tribes make their decisions to deny, certify, or condition permits or licenses based in part on the proposed project’s compliance with Environmental Protection Agency (EPA)-approved water quality standards. In addition, states and tribes consider whether the activity leading to the discharge will comply with any applicable effluent limitations guidelines, new source performance standards, toxic pollutant restrictions, and other appropriate requirements of state or tribal law. (EPA, 2010, p. 1)

Many states and tribes rely on § 401 certification to ensure that discharges of dredge or fill material into a water of the U.S. do not cause unacceptable environmental impacts and, more generally, as their primary regulatory tool for protecting wetlands and other aquatic resources. However, § 401 is limited in scope and application to situations involving federally-permitted or licensed activities that may result in a discharge to a



water of the U.S. If a federal permit or license is not required, or would authorize impacts only to waters that are not waters of the U.S., the activity is not subject to the CWA § 401. (EPA, 2010, p. 2)

### **3. *Clean Water Act Section 404***

Section 404 of the CWA establishes a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Wetlands subject to Clean Water Act Section 404 are defined as “areas that are inundated or saturated by surface or ground water 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.” Activities in waters of the United States regulated under this program include fill for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports) and mining projects. Section 404 requires a permit before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from Section 404 regulation (e.g. certain farming and forestry activities). (EPA, n.d.)

The basic premise of the program is that no discharge of dredged or fill material may be permitted if: (1) a practicable alternative exists that is less damaging to the aquatic environment; or (2) the nation’s waters would be significantly degraded. Applications for permits must, to the extent practicable: (1) demonstrate steps have been taken to avoid wetland impacts; (2) demonstrate that potential impacts on wetlands have been minimized; and (3) provide compensation for any remaining unavoidable impacts. Proposed activities are regulated through a permit review process. (EPA, n.d.)

An individual permit is required for potentially significant impacts. Individual permits are reviewed by the U.S. Army Corps of Engineers (ACOE), which evaluates applications under a public interest review, as well as the environmental criteria set forth in the CWA Section 404(b)(1) Guidelines. However, for most discharges that will have only minimal adverse effects, a general permit may be suitable. General permits are issued on a nationwide, regional, or state basis for particular categories of activities. The general permit process eliminates individual review and allows certain activities to proceed with little or no delay, provided that the general or specific conditions for the general permit are met. States also have a role in Section 404 decisions, through state program general permits, water quality certification, or program assumption. (EPA, n.d.)

### **4. *Migratory Bird Treaty Act (16 USC Section 703-712)***

The Migratory Bird Treaty Act (MBTA) makes it illegal for anyone to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid permit issued pursuant to federal regulations. The migratory bird species protected by the MBTA are listed in 50 CFR 10.13. The USFWS has statutory authority and responsibility for enforcing the MBTA (16 U.S.C. 703-712). The MBTA implements Conventions between the United States and four countries (Canada, Mexico, Japan, and Russia) for the protection of migratory birds. (USFWS, 2015)

#### **B. *State Regulations***

##### **1. *California Endangered Species Act (CESA)***

The California Endangered Species Act (CESA) states that all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved. The California Department of Fish and Wildlife (CDFW) works with interested



persons, agencies, and organizations to protect and preserve such sensitive resources and their habitats. CESA prohibits the take of any species of wildlife designated by the California Fish and Game Commission as endangered, threatened, or candidate species. CDFW may authorize the take of any such species if certain conditions are met. (CDFW, 2017a)

Section 2081 subdivision (b) of the California Fish and Game Code (CFGF) allows CDFW to authorize take of species listed as endangered, threatened, candidate, or a rare plant, if that take is incidental to otherwise lawful activities and if certain conditions are met. These authorizations are commonly referred to as incidental take permits (ITPs). (CDFW, 2017a)

If a species is listed by both the federal ESA and CESA, CFGF Section 2080.1 allows an applicant who has obtained a federal incidental take statement (federal Section 7 consultation) or a federal incidental take permit (federal Section 10(a)(1)(B)) to request that the Director of CDFW find the federal documents consistent with CESA. If the federal documents are found to be consistent with CESA, a consistency determination (CD) is issued and no further authorization or approval is necessary under CESA. (CDFW, 2017a)

A Safe Harbor Agreement (SHA) authorizes incidental take of a species listed as endangered, threatened, candidate, or a rare plant, if implementation of the agreement is reasonably expected to provide a net conservation benefit to the species, among other provisions. SHAs are intended to encourage landowners to voluntarily manage their lands to benefit CESA-listed species. California SHAs are analogous to the federal safe harbor agreement program and CDFW has the authority to issue a consistency determination based on a federal safe harbor agreement. (CDFW, 2017a)

## **2. *Natural Community Conservation Planning Act (NCCP)***

CDFW's Natural Community Conservation Planning (NCCP) program takes a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity. The NCCP program began in 1991 as a cooperative effort to protect habitats and species. It is broader in its orientation and objectives than the California and Federal Endangered Species Acts, as these laws are designed to identify and protect individual species that have already declined in number significantly. (CDFW, 2017b)

An NCCP identifies and provides for the regional protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity. Working with landowners, environmental organizations, and other interested parties, a local agency oversees the numerous activities that compose the development of an NCCP. CDFW and the U.S. Fish and Wildlife Service provide the necessary support, direction, and guidance to NCCP participants. (CDFW, 2017b)

## **3. *California Fish and Game Code, Section 1600, et seq.***

CFGF § 1602 requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following: (1) substantially divert or obstruct the natural flow of any river, stream, or lake; (2) substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or (3) deposit debris, waste or other materials that could pass into any river, stream, or lake. The CFGF indicates that "any river, stream or lake" includes those that are episodic (they are dry for periods of time) as well as those that are perennial (they flow year-round). This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water. (CDFW, 2017c)



CDFW requires a Lake and Streambed Alteration (LSA) Agreement when it determines that the activity, as described in a complete LSA Notification, may substantially adversely affect existing fish or wildlife resources. An LSA Agreement includes measures necessary to protect existing fish and wildlife resources. CDFW may suggest ways to modify a project that would eliminate or reduce harmful impacts to fish and wildlife resources. Before issuing an LSA Agreement, CDFW must comply with CEQA. (CDFW, 2017c)

#### **4. *Native Plant Protection Act (NPPA) of 1977***

The Native Plant Protection Act (NPPA) was enacted in 1977 and allows the Fish and Game Commission to designate plants as rare or endangered. There are 64 species, subspecies, and varieties of plants that are protected as rare under the NPPA. The NPPA prohibits take of endangered or rare native plants, but includes some exceptions for agricultural and nursery operations; emergencies; and after properly notifying CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations. (CDFW, 2017d)

#### **5. *Unlawful Take or Destruction of Nests or Eggs (CFGC Sections 3503.5-3513)***

Section 3503.5 of the CFGC specifically protects birds of prey, stating: “It is unlawful to take, possess, or destroy any . . . [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.”

Section 3513 of the CFGC duplicates the federal protection of migratory birds, stating: “It is unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act 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 Migratory Bird Treaty Act.”

#### **6. *Porter Cologne Water Quality Act***

The Porter-Cologne Act is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution. The Porter-Cologne Act established nine Regional Water Boards (based on hydrogeologic barriers) in California and the State Water Board, which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The State Water Board provides program guidance and oversight, allocates funds, and reviews Regional Water Boards decisions. In addition, the State Water Board allocates rights to the use of surface water. The Regional Water Boards have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The State Water Board and Regional Water Boards have numerous Non-Point Source (NPS)-related responsibilities, including monitoring and assessment, planning, financial assistance, and management. (SWRCB, 2014)

The Regional Water Boards regulate discharges under the Porter-Cologne Act primarily through issuance of National Pollutant Discharge Elimination System (NPDES) permits for point source discharges and waste discharge requirements (WDRs) for NPS discharges. Anyone discharging or proposing to discharge materials that could affect water quality (other than to a community sanitary sewer system regulated by an NPDES permit) must file a report of waste discharge. The SWRCB and the RWQCBs can make their own investigations or may require dischargers to carry out water quality investigations and report on water quality issues. If a USACOE § 404 is required, then a Regional Water Board § 401 permit also is required. (SWRCB, 2014)



### **C. Local Regulations**

#### **1. Western Riverside County MSHCP**

The Western Riverside County MSHCP is a comprehensive, multi-jurisdictional Habitat Conservation Plan (HCP) focusing on conservation of species and their habitats in Western Riverside County. The Western Riverside County MSHCP was adopted on June 17, 2003, and an Implementing Agreement (IA) was executed between the USFWS, CDFW, and participating entities (including the City of Moreno Valley). Rather than focusing on one species at a time, implementation of the Western Riverside County MSHCP Section 10 Permit preserves native vegetation and meet the habitat needs of multiple species.

The Project site is located within the Reche Canyon/Badlands Area Plan of the Western Riverside County MSHCP but is not located within a Cell Group, Criteria Cell, or Sub-Unit and is not targeted for conservation. The Project site is located within the MSHCP Burrowing Owl Survey Area but is not located within the Narrow Endemic Plan Species Survey Area (NEPSSA), the Criteria Area Plant Species Survey Area (CAPSSA), or the MSHCP Mammal and Amphibian Survey Areas. (RCTLMA, 2014)

#### **2. Stephen's Kangaroo Rat Habitat Conservation Plan**

The Stephens' Kangaroo Rat HCP is a comprehensive, multi-jurisdictional HCP focusing on the conservation of the endangered Stephens' Kangaroo Rat and its habitat. The Stephens' Kangaroo Rat HCP was adopted in August 1990 and an Implementing Agreement (IA) was executed between the USFWS, CDFW, and participating entities (including the City of Moreno Valley). The Stephens' Kangaroo Rat HCP provides for the permanent establishment, mitigation, and monitoring of a reserve network for the Stephens' Kangaroo Rat. The Project site is not located within the Stephens' Kangaroo Rat survey area but is located within the Stephens' Kangaroo Rat mitigation fee area. (RCTLMA, 2014)

### **4.3.3 BASIS FOR DETERMINING SIGNIFICANCE**

Environmental impacts to biological resources are assessed using impact significance thresholds criteria, which reflect the policy statement contained in CEQA § 21001(c) of the Public Resources Code. Accordingly, the State Legislature has established it to be the policy of the State of California to:

*“Prevent the elimination of fish or wildlife species due to man’s activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities...”*

In the development of thresholds of significance for impacts to biological resources, CEQA provides guidance primarily in § 15065, Mandatory Findings of Significance, and the CEQA Guidelines, Appendix G, Environmental Checklist Form. CEQA Guidelines § 15065(a) states that a project may have a significant effect where:

*“The project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or wildlife community, reduce the number or restrict the range of an endangered, rare, or threatened species ...”*



Therefore, for the purpose of analysis in this EIR, the proposed Project would result in a significant impact to biological resources if the Project or any Project-related component 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 substantially 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. Wildlife Service;*
- c. *Have a substantial adverse effect on federally-protected wetlands as defined by Section 404 of the Clean Water Act (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 resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites;*
- e. *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or*
- f. *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, other approved local, regional, or state habitat conservation plan.*

#### **4.3.4 IMPACT 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 Wildlife or U. S. Fish and Wildlife Service?*

##### **A. Impacts to Special-Status Plants**

One special-status plant species, smooth tarplant (*Centromadia pungens* ssp. *laevis*), was detected on the Project site during field surveys conducted in 2017. This species is not listed as threatened or endangered; however, it is considered a CNPS List 1B.1 species, which means that the species is rare in California. The smooth tarplant also is listed as a MSHCP Group 3 species, which requires conservation within the CASSA (where specific objectives are met). However, the Project site is not located within the CASSA; therefore, the MSHCP does not consider the loss of smooth tarplant individuals on the Project site to be deleterious to the regional sustainability of the species. Accordingly, the Project would not have a significant impact on the smooth tarplant. No other special-status plant species were observed or anticipated to occur on the Project site due to the disturbed nature of the property and lack of natural plant communities thereon. (Alden, 2017, p. 5) Impacts to special-status plant species would be less than significant, and mitigation is not required.

##### **B. Impacts to Special-Status Animals**

As discussed in Subsection 4.3.1C, one special-status animal species was observed on the Project site during biological field surveys conducted in 2017: the California horned lark (*Eremophila alpestris actia*). This species is classified as a Special Animal in the State of California and is considered to be adequately conserved under the MSHCP. This species is not listed as threatened or endangered either by the State or federal



government. Accordingly, impacts to the California horned lark would be considered less than significant and no mitigation is required.

The burrowing owl is classified by the MSHCP as a Covered Species not adequately conserved by the MSHCP. Although no burrowing owl individuals or signs of burrowing owl use were observed on the Project site by Alden during field surveys conducted in August 2017, the property contains suitable habitat for the species (Alden, 2017, p. 5). Accordingly, it is possible that the species could migrate onto the property prior to Project construction. If burrowing owls are present on the Project site at the time grading activities commence, the species would be impacted and the Project's impact to the species would be significant; thus, mitigation is required.

**C. Indirect Impacts to Special-Status Biological Resources**

Development projects located adjacent to natural open spaces have the potential to result in indirect effects to biological resources such as light pollution, noise pollution, non-native/ornamental plant invasion, etc. The Project site and the areas immediately surrounding the property are heavily disturbed (or already developed), dominated by non-native species, and do not have a high potential to support sensitive or special-status biological resources (Alden, 2017, p. 5). Due to the lack of natural, undisturbed habitat surrounding the Project site, the Project would not result in indirect impacts to special-status biological resources. Accordingly, the Project would result in less-than-significant indirect impacts to special-status biological resources.

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

None of the habitat types within the Project site are considered riparian habitats, nor are these habitats identified as sensitive natural communities in local or regional plans, policies, or regulations, or by the CDFW or the USFWS. In order to accommodate run-on water that flows onto the Project site from the north under existing conditions, a drainage swale would be installed along the Project site's northern boundary to convey flows from the off-site property to the north to the Heacock Channel. A storm drain outlet would be installed in the sidewall of the existing Heacock Channel that abuts the Project site on the east. The Heacock Channel is not considered a riparian or sensitive natural community because it is a man-made drainage channel that is lined with concrete and does not support any riparian or wetland plant species. (Alden, 2017, pp. 4-5) Accordingly, the Project has no potential to result in a substantial adverse effect to any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS. No impact would occur and mitigation is not required.

***Threshold c: Would the Project have a substantial adverse effect on federally-protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?***

The Project site does not contain any protected wetland or aquatic resources, including, but not limited to, natural drainages or water courses, wetland habitat, marsh, vernal pools, or coastal resources (Alden, 2017, pp. 4, 6-7). In order to accommodate run-on water that flows onto the Project site from the north under existing conditions, a drainage swale would be installed along the Project site's northern boundary to convey flows from the off-site property to the north to the Heacock Channel and a storm drain outlet would be installed within the concrete sidewall of the existing Heacock Channel. As mentioned in Threshold "b," above, the



Heacock Channel segment located adjacent to the Project site is concrete-lined and does not support any riparian or wetland plant species; therefore, the proposed storm drain outlet would not cause an adverse effect on any protected wetland or aquatic resources. Accordingly, the Project would not result in a substantial adverse effect on federally-protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means. Impacts would be less than significant and mitigation is not 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 migratory wildlife corridors, or impede the use of native wildlife nursery sites?***

The Project site does not contain natural, surface drainage or ponding features. Additionally, there are no water bodies on or adjacent to the Project site that could support fish. Therefore, there is no potential for the Project to interfere with the movement of native resident migratory fish. The Project site does not serve as a corridor nor is it connected to an established corridor, and there are no native wildlife nurseries on or adjacent to the site. Therefore, there is no potential for the Project to impede the use of a native wildlife nursery site. (Alden, 2017, p. 5) Based on the foregoing information, the Project would result in no impact to any native resident or migratory fish, established wildlife corridors, or native wildlife nursery sites.

The Project does not support tree or shrub species that would provide substantial potential nesting locations for nesting birds, including migratory bird species. Moreover, the routine discing of the Project site reduces the potential to support ground-nesting bird species. Therefore, the potential for birds to nest on the Project site is considered to be low. (Alden, 2017, p. 5) Furthermore, impacts to nesting migratory birds are prohibited under the MBTA and California Fish and Game Code and mandatory compliance with State law would reduce any potential impact to below a level of significance. The Project's potential to impact nesting birds is less than significant.

***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 of Moreno Valley Municipal Code contains provisions for the protection of the Stephens' Kangaroo Rat pursuant to the Stephens' Kangaroo Rat HCP (refer to Title 8, Chapter 8.60 of the Municipal Code). The Project site is not located within an identified reserve area for the Stephens' Kangaroo Rat and the species has a low to moderate potential to occur on the Project site. In addition, the species was not observed during biological surveys of the Project site. (Alden, 2017, Appendix C) Accordingly, the Project is exempt from the focused survey requirements for the Stephens' Kangaroo Rat established by the City's Municipal Code. The Project Applicant is required to contribute a local development impact and mitigation fee, which requires a fee payment to assist the City in implementing the habitat conservation plan for the Stephens' Kangaroo Rat. With mandatory compliance with standard regulatory requirements (i.e., development impact and mitigation fee payment), the proposed Project would not conflict with any City policies or ordinances related to the protection of the Stephens' Kangaroo Rat.

The City of Moreno Valley Municipal Code also contains provisions for the collection of mitigation fees to further the implementation of the Western Riverside County MSHCP (refer to Title 3, Chapter 3.48 of the Municipal Code). The Project Applicant is required to contribute a local mitigation fee, which requires a fee payment to assist the City in implementing the Western Riverside County MSHCP reserve system (including the acquisition, management, and long-term maintenance of sensitive habitat areas). With mandatory compliance with standard regulatory requirements (i.e., mitigation fee payment), the Project would not conflict





with any City policies or ordinances related to the mitigation fee program associated with Western Riverside County MSHCP.

The City of Moreno Valley does not have any additional policies or ordinances in place to protect biological resources that are applicable to the Project.

***Threshold f: Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?***

The following analysis evaluates the Project's compliance with the Western Riverside County MSHCP's Reserve Assembly Requirements as well as other applicable MSHCP requirements pursuant to the following sections of the MSHCP: Section 6.1.2, *Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools*; Section 6.1.3, *Protection of Narrow Endemic Plant Species*; Section 6.1.4, *Guidelines Pertaining to the Urban/Wildland Interface*; and Section 6.3.2, *Additional Survey Needs and Procedures*.

**Project Relation to Reserve Assembly**

The Project site occurs within the overall Plan Area of the Western Riverside County MSHCP; but, the Project site does not occur within a Western Riverside County MSHCP Criteria Area nor is it located within any Criteria Cell. As such, the Project is not required to set aside conservation lands pursuant to the Western Riverside County MSHCP, and the Project is not subject to the MSHCP's Habitat Evaluation and Acquisition Negotiation Strategy (HANS) process nor Joint Project Review (JPR). Accordingly, the Project would not conflict with the Western Riverside County MSHCP Reserve Assembly requirements and no impact would occur. (Alden, 2017, p. 6)

**Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools**

The Project site does not contain any riparian/riverine areas or vernal pools. In order to accommodate run-on water that flows onto the Project site from the north under existing conditions, a drainage swale would be installed along the Project site's northern boundary to convey flows from the off-site property to the north to the Heacock Channel. At the terminus of the swale, a storm drain outlet would be installed in the Heacock Channel, a concrete-lined channel that abuts the Project site on the east. The Heacock Channel is an underground pipe north of Alessandro Boulevard and transitions to an above-ground, concrete-lined channel approximately 130 feet south of Alessandro Boulevard and remains above ground for approximately 1,000 feet along the eastern boundary of the Project site. The channel is piped under Brodiaea Avenue and emerges again as an above-ground channel, concrete-lined channel on the south side of Brodiaea Avenue. No riparian/riverine habitat or water-dependent vegetation occurs along the segment of the Channel that abuts the Project site, and none is observable using Google Earth in an upstream or downstream direction. The MSHCP only requires focused surveys for sensitive riparian species when suitable riparian habitat would be affected. Because no suitable riparian habitat exists on the Project site or within the segment of the Heacock Channel that would be affected by installation of the storm drain outlet proposed by the Project, no sensitive riparian species surveys are required. Accordingly, the Project would not conflict with *Section 6.1.2* of the Western Riverside County MSHCP. (Alden, 2017, pp. 6-7)



**Protection of Narrow Endemic Plants**

The Project is not located within the Narrow Endemic Plant Species Survey Area (NEPSSA) and is not subject to focused surveys for special-status plants. The Project would not conflict with *Section 6.1.3* of the Western Riverside County MSHCP. (Alden, 2017, p. 6)

**Guidelines Pertaining to Urban/Wildland Interface**

The Western Riverside County MSHCP Urban/Wildland Interface Guidelines are intended to address indirect effects associated with locating development in proximity to the MSHCP Conservation Area, including Public/Quasi-Public lands. As the Western Riverside County MSHCP Conservation Area is assembled, development is expected to occur adjacent to the Conservation Area and edge effects with the potential to adversely affect biological resources within the Conservation Area are required to be evaluated. The Project site is not adjacent to any MSHCP conservation areas. As such, the Project has no potential to result in substantial adverse indirect effects in proximity to a MSHCP Conservation Area that supports natural and/or sensitive biological resources. The proposed Project, would not conflict with *Section 6.1.4* of the Western Riverside County MSHCP. (Alden, 2017, p. 6)

**Additional Needs Survey and Procedures**

Western Riverside County MSHCP *Section 6.3.2* identifies that in addition to the Narrow Endemic Plant Species addressed in *Section 6.1.3*, additional surveys may be needed for other certain plant and wildlife species in conjunction with MSHCP implementation in order to achieve full coverage for these species. Within areas of suitable habitat, focused surveys are required for additional plant species if a project site occurs within a designated CASSA, or occurs within a special wildlife species survey area (i.e., burrowing owl, amphibians, and mammals).

The Project site is not located within a CASSA but is located within the Burrowing Owl Survey Area. Alden conducted a focused survey for the burrowing owl in 2017 in accordance with the Western Riverside County MSHCP Burrowing Owl Survey Requirements. As discussed above under Threshold (a), Alden did not observe any burrowing owls or signs of the species' use of the property (i.e., scat, tracks, pellets, or feathers) during field surveys conducted in 2017. However, the species is migratory and could migrate onto the property prior to ground-disturbing construction activities. (Alden, 2017, p. 5) Therefore, if the species is present on the Project site at the time that grading commences, impacts would occur. This EIR recommends a pre-construction survey for the species to determine if it is present within 30 days of construction activity, and if the survey is positive, this EIR recommends additional mitigation (refer to Subsection 4.3.7) to ensure Project consistency with *Section 6.3.2* of the Western Riverside County MSHCP.

**4.3.5 CUMULATIVE IMPACT ANALYSIS**

This cumulative impact analysis for biological resources considers development of the Project site in conjunction with other development projects in the vicinity of the Project site as well as full General Plan buildout in the City of Moreno Valley and other jurisdictions in the region within the boundaries of the Western Riverside County MSHCP.

As indicated under the discussion and analysis of Threshold "a," the biological field surveys conducted on the Project site in 2017 identified one special-status plant species, smooth tarplant. However, because the Project site is not located within the CASSA for the smooth tarplant, MSHCP does not require the species to be conserved on the Project site. Therefore, development of the Project site would not impact the regional



sustainability of any special-status plant species and there is no potential for development on the Project site to contribute to a cumulative impact to special-status plant species.

Also, as discussed under the analysis of Threshold “a,” the Project site does not contain productive foraging or nesting habitat for special-status wildlife species with the potential to utilize the Project site (with the exception of the western burrowing owl). The Project site contains potentially suitable habitat for the burrowing owl. Although the burrowing owl species was not observed on the Project site during field surveys conducted in 2017, there is the potential for this species to migrate onto the site and occupy the property prior to the initiation of grading activities. The burrowing owl is commonly found within the Project vicinity; as such, it is reasonable to conclude that impacts to the burrowing owl habitat would occur in conjunction with development of other properties throughout Riverside County. Thus, implementation of the Project has the potential to contribute to a cumulatively-considerable impact to the burrowing owl.

The Project would not impact any riparian or sensitive natural communities; therefore, there is no potential for Project-related development to contribute to a cumulatively-considerable impact to this resource.

The Project would not impact any federally-protected wetlands. Accordingly, the Project has no potential to contribute to a cumulatively-considerable impact to federally-protected wetlands.

The Project site does not contain any potential nesting habitat to support nesting birds protected by federal and State regulations. However, a wide range of habitat and vegetation types have the potential to support nesting birds; therefore, it is likely that other development projects within the cumulative study area may impact nesting birds. Project-related development – like all other development activities in the cumulative study area – would be required to comply with State law to preclude impacts to nesting birds. Mandatory compliance with State law would ensure that cumulative considerable impacts to nesting birds would be less than significant.

The Project site would not conflict with any local policies or ordinances protecting biological resources. Other development projects in the cumulative study area would be required to comply with applicable local policies and/or ordinances related to the protection of biological resources as a standard condition of review/approval. Because the Project and cumulative development would be prohibited from violating applicable, local policies or ordinances related to the protection of biological resources, a cumulatively-considerable impact would not occur.

The Project site is subject to the Western Riverside County MSHCP and its survey requirements for the burrowing owl. As previously discussed in Thresholds “a” and “f,” the Project site contains habitat suitable for the burrowing owl. Therefore, the Project has the potential to conflict with *Section 6.3.2* of the Western Riverside County MSHCP, and a cumulatively-considerable impact would occur prior to mitigation.

#### **4.3.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION**

Threshold a: Significant Direct and Cumulatively-Considerable Impact. No sensitive vegetation communities, special-status plant species, or special-status wildlife species are located on the Project site. However, there is a potential that the western burrowing owl could migrate onto the property before Project-related construction activities commence and, in this event, impacts to the burrowing owl would be significant on a direct and cumulatively-considerable basis. Project-related development would have no substantial impact, either directly or through habitat modifications, on any other candidate, sensitive, or special-status plant or wildlife species.



Threshold b: No Impact. Neither the Project site nor the adjacent segment of the concrete-lined Heacock Channel that would be affected by the Project contain riparian and/or other sensitive natural habitats; therefore, implementation of the Project would have no impact on riparian or other sensitive habitats as defined by the CDFW or USFWS.

Threshold c: Less-than-Significant Impact. The Project proposes to install a storm drain outlet that would connect to the concrete-lined Heacock Channel. No federally-protected wetlands are located within this segment of the Heacock Channel or on the Project site. Impacts to federally-protected wetlands would be less than significant.

Threshold d: Less-than-Significant Impact. There is no potential for the Project or Project-related development to interfere with the movement of fish or impede the use of a native wildlife nursery site. The Project site also does not contain habitat that has the potential to support nesting birds. Impacts to wildlife movement would be less than significant.

Threshold e: No Impact. Implementation of the Project site would not conflict with any local policies or ordinances protecting biological resources.

Threshold f: Significant Direct and Cumulatively-Considerable Impact. The Project site is subject to the Western Riverside County MSHCP and its survey requirements for the western burrowing owl. Although the Project is compliant with all MSHCP provisions and although burrowing owl is absent from the Project site under existing conditions, the Project site contains habitat suitable for the species. If the species migrates onto the Project site is present on the property at the time a grading permit is issued, impacts would be significant.

#### **4.3.7 MITIGATION**

The following mitigation measures address the potential for Project-related development to impact the western burrowing owl.

- MM 4.3-1 Within 30 days prior to grading, a qualified biologist shall conduct a survey of suitable habitat on site and make a determination regarding the presence or absence of the burrowing owl. The determination shall be documented in a report and shall be submitted, reviewed, and accepted by the City of Moreno Valley prior to the issuance of a grading permit and subject to the following provisions:
- a. In the event that the pre-construction survey identifies no burrowing owls on the property a grading permit may be issued without restriction.
  - b. In the event that the pre-construction survey identifies the presence of at least one individual but less than three (3) mating pairs of burrowing owl, then prior to the issuance of a grading permit and prior to the commencement of ground-disturbing activities on the property, the qualified biologist shall passively or actively relocate any burrowing owls. Passive relocation, including the required use of one-way doors to exclude owls from the site and the collapsing of burrows, will occur if the biologist determines that the proximity and availability of alternate habitat is suitable for successful passive relocation. Passive relocation shall follow CDFW relocation protocol and shall only occur between September 15 and February 1. If proximate alternate habitat is not present as determined



by the biologist, active relocation shall follow CDFW relocation protocol. The biologist shall confirm in writing that the species has fledged the site or been relocated prior to the issuance of a grading permit.

- c. In the event that the pre-construction survey identifies the presence of three (3) or more mating pairs of burrowing owl, the requirements of MSCHP Species-Specific Conservation Objectives 5 for the burrowing owl shall be followed. Objective 5 states that if the site (including adjacent areas) supports three (3) or more pairs of burrowing owls and supports greater than 35 acres of suitable habitat, at least 90 percent of the area with long-term conservation value and burrowing owl pairs will be conserved onsite until it is demonstrated that Objectives 1-4 have been met. A grading permit shall be issued, either:
  - i. Upon approval and implementation of a property-specific Determination of Biologically Superior Preservation (DBESP) report for the burrowing owl by the CDFW; or
  - ii. A determination by the biologist that the site is part of an area supporting less than 35 acres of suitable Habitat, and upon passive or active relocation of the species following accepted CDFW protocols. Passive relocation, including the required use of one-way doors to exclude owls from the site and the collapsing of burrows, will occur if the biologist determines that the proximity and availability of alternate habitat is suitable for successful passive relocation. Passive relocation shall follow CDFW relocation protocol and shall only occur between September 15 and February 1. If proximate alternate habitat is not present as determined by the biologist, active relocation shall follow CDFW relocation protocol. The biologist shall confirm in writing that the species has fledged the site or been relocated prior to the issuance of a grading permit.

Although the Project's impacts to nesting or migratory birds is determined to be less than significant, the following mitigation measure would apply to ensure compliance with the federal Migratory Bird Treaty Act (MBTA).

MM 4.3-2 As a condition of approval for all grading permits, vegetation clearing shall be prohibited unless a nesting bird survey is completed in accordance with the following requirements.

- a. A migratory nesting bird survey of the Project's impact footprint shall be conducted by a qualified biologist within three (3) days prior to initiating vegetation clearing or ground disturbance.
- b. A copy of the nesting bird survey results report shall be provided to the City of Moreno Valley. If the survey identifies the presence of active nests, then the qualified biologist shall provide the City of Moreno Valley with a copy of maps showing the location of all nests and an appropriate buffer zone around each nest sufficient to protect the nest from direct and indirect impact. The size and location of all buffer zones, if required, shall be subject to review and approval by the City of Moreno Valley and shall be no less than a 150-foot radius around the nest for non-raptors and a 300-foot radius around the nest for raptors. The nests and buffer zones shall be field checked weekly by a qualified biological monitor. The approved buffer zone shall be marked in the field with construction fencing,



within which no vegetation clearing or ground disturbance shall occur until the qualified biologist verifies that the nests are no longer occupied and the juvenile birds can survive independently from the nests.

#### 4.3.8 SIGNIFICANCE OF IMPACTS AFTER MITIGATION

Threshold a: Less-than-Significant Impact with Mitigation Incorporated. Implementation of MM 4.3-1 would ensure that pre-construction surveys are conducted for the burrowing owl to determine the presence or absence of the species on the Project site. If present, the mitigation measure provides performance criteria that requires avoidance and/or relocation of burrowing owls in accordance with MSHCP protocol. With implementation of the required mitigation, potential direct and cumulatively-considerable impacts to the burrowing owl would be reduced to below a level of significance.

Threshold f: Less-than-Significant with Mitigation Incorporated. Implementation of MM 4.3-1 would ensure that pre-construction surveys are conducted to determine the presence or absence of the burrowing owl on the Project site. If present, the mitigation measure provides performance criteria that requires avoidance and/or relocation of burrowing owls in accordance with MSHCP protocol. With implementation of the required mitigation, potential direct and cumulatively-considerable impacts to the burrowing owl would be reduced to below a level of significance. Thus, the Project would not conflict with *Section 6.3.2* of the Western Riverside County MSHCP.



## 4.4 CULTURAL RESOURCES & TRIBAL CULTURAL RESOURCES

The analysis in this Subsection is based, in part, on two site-specific cultural resources assessment reports prepared by Brian F. Smith and Associates, Inc. (hereafter, “BFSA”). The referenced BFSA reports include the following: 1) “Phase I Cultural Resources Survey for the Brodiaea Commerce Center Project,” dated September 26, 2017 (BFSA, 2017a), which is included as *Technical Appendix D1* to this EIR; and 2) “Paleontological Resource and Monitoring Assessment, Brodiaea Commerce Center Project, City of Moreno Valley, Riverside County, California,” dated September 14, 2017 (BFSA, 2017b), which is included as *Technical Appendix D2* to this EIR. Information used to support the analysis in this Subsection also was obtained from the Cultural and Paleontological Resources section of the certified Final Program EIR prepared for the City of Moreno Valley General Plan (SCH No. 2000091075), dated July 2006 (City of Moreno Valley, 2006).

Refer to Section 7.0, *References*, for a complete list of reference sources. Confidential information has been redacted from *Technical Appendices D1 and D2* for purposes of public review. In addition, much of the written and oral communication between Native American tribes, the City of Moreno Valley, and BSFA is considered confidential in respect to places that have tribal cultural significance (Gov. Code § 65352.4), and although relied upon in part to inform the preparation of this EIR Subsection, those communications are treated as confidential and are not available for public review. Under existing law, environmental documents must not include information about the location of archeological sites or sacred lands or any other information that is exempt from public disclosure pursuant to the Public Records Act (Cal. Code Regs. § 15120(d)).

### 4.4.1 EXISTING CONDITIONS

#### A. Historical Resources

BFSA conducted a records search with the Eastern Information Center (EIC) at the University of Riverside (UCR) on September 20, 2017. The records search included a review of all available cultural resource survey and excavation reports and site records for the area within a one-mile radius of the Project site. The records search identified 32 cultural resource studies that were previously conducted within a one-mile radius of the Project site, including one previous survey that covered a small portion of the southwest corner of the Project site. The results of the previous study as well as seven additional previous studies that provided overviews of historic resources in the general Project vicinity, indicated that there were no historic resources on the Project site. The records search also identified 38 historic resource sites that had been previously recorded within a one-mile radius of the Project site, primarily composed of World War II-era resources at the March Air Reserve Base, as summarized in Table 4.4-1, *Prehistoric and Historic Resources in Project Vicinity*. None of the historic resources listed in Table 4.4-1 are located – or were previously located – on the Project site. (BFSA, 2017a, p. 5.0-1)

In addition, the EIC reported that one (1) historic district (March Field Historic District) that included the Project site and 32 additional contributing properties was listed on the National Register of Historic Places. However, March Air Reserve Base is located approximately 1.0 mile southwest of the Project site and neither the historic district nor any of the 32 contributing properties are mapped within or adjacent to the Project site. BFSA consulted research library and historic aerial photographs for historical information of the Project site. The aerial photographs indicated that the property has historically been used for agriculture and does not appear to have ever been affiliated with the March Air Reserve Base. The aerial photographs and the USGS maps reviewed by the EIC indicated that no structures have ever been located on the Project site. (BFSA, 2017a, p. 5.0-2)



**Table 4.4-1 Prehistoric and Historic Resources in Project Vicinity**

<b>Site</b>	<b>Description</b>
P-33-017967	Prehistoric isolated mano fragment
P-33-009191	March Field Historic District
P-33-009203, P-33-009211, P-33-009214, P-33-009215, P-33-009216, P-33-009217, P-33-009226, P-33-009236, P-33-009237, P-33-009238, P-33-009289, P-33-009291, P-33-009295, P-33-009297, P-33-009298, P-33-009299, P-33-009300, P-33-009301, P-33-009302, P-33-009303, P-33-009304, P-33-009305, P-33-009306, P-33-009307, P-33-009308, P-33-009309, P-33-009310, P-33-009311, P-33-009313, P-33-009315, P-33-009325, P-33-009326, and P-33-009334	Historic March Air Reserve Base WWII-era military buildings (March Field Historic District contributing building)
P-33-009444	Historic March Air Reserve Base WWII-era Stone Drainage Canal (March Field Historic District contributing structure)
P-33-017971 and P-33-017972	Historic March Air Reserve Base ancillary building
P-33-018039	Historic former March Air Reserve Base main entrance/security checkpoint

Source: (BFSA, 2017a, Table 5.1-1)

Lastly, BFSA conducted a pedestrian survey of the Project site on September 7, 2017. The pedestrian survey covered the entire Project site, with BFSA archaeologists walking parallel, linear transects spaces approximately ten meters apart. Approximately 85 percent of the ground surface was visible during the pedestrian survey. The pedestrian survey indicated that the entirety of the Project site has been disturbed by historic agricultural use, vegetation clearing, discing, and the development of the surrounding area. Modern trash and building material consisting of gravel, asphalt, and concrete fragments were noted throughout the Project site, and piles of building material were noted along the southern boundary of the Project site along Brodiaea Avenue. No historic resources were found on the Project site. (BFSA, 2017a, p. 5.0-3)

***B. Archaeological Resources***

The Project site is adjacent to the Heacock Channel, which likely would have been a natural, intermittent source of water prehistorically. However, the Project site does not contain bedrock outcrops or other landforms that are typically associated with prehistoric use areas. Given the valley setting and lack of exposed bedrock outcrops on the Project site, predictive modeling would suggest that if prehistoric sites are present within the Project site, they would likely be isolated artifacts, artifact scatters, or specialized resource processing loci that would have developed as a result of prehistoric resource extraction practices. (BFSA, 2017a, p. 5.0-3)

As discussed in Subsection 4.4.1A above, BFSA conducted a pedestrian survey and records search of the Project site. No prehistoric archaeological resources were identified on the Project site during the pedestrian survey. The records search identified 32 cultural resource studies that were previously conducted within a one-mile radius of the Project site, including one previous study that covered a small portion of the southwest corner of the Project site. The results of the previous studies indicated that no prehistoric resources had been previously discovered on the Project site and only one (1) prehistoric isolate, a mano fragment, had been recorded within one-mile of the Project site. (BFSA, 2017a, pp. 5.0-1 - 5.0-2) BFSA also conducted a Sacred





Lands File (SLF) search with the California Native American Heritage Commission (NAHC) to determine if any recorded Native American sacred sites or locations of religious or ceremonial importance are present within one mile of the Project site. The search results did not identify any known Native American cultural resources on the Project site or within a one-mile radius of the site. (BFSA, 2017a, pp. 5.0-1 - 5.0-3)

### **C. Paleontological Resources**

According to the City of Moreno Valley General Plan Final EIR, the City contains sedimentary rock units with potential to contain significant nonrenewable paleontological (fossil) resources. These sedimentary units are referred to as the Mt. Eden Formation and the San Timoteo Formation. The Mt. Eden Formation is described as being primarily reddish sandstone and dark green and brown clay with local reddish fanglomerate and conglomerate. Fossilized fauna within the Mt. Eden Formation include cricetine rodent, horse and proboscidean (extinct animals related to elephants). The San Timoteo Formation is a widespread deposit of sands, gravels, and clays that extends northward from the foothills of the San Jacinto Mountains for a distance of nearly 20 miles. The San Timoteo Formation contains fossils of land animals and plant species, and represents sediments deposited from about 3.5 to 0.7 million years ago during late- Pleistocene to middle-Pleistocene time. (City of Moreno Valley, 2006, p. 5.10-10)

According to the Moreno Valley General Plan Final EIR, the Project site is located in an area that is characterized as having a “Low” potential for containing important fossils because the area is covered with young alluvial soils. These young sediments overlie fossiliferous sedimentary units of the Mt. Eden Formation and the San Timoteo Formation; however, the Moreno Valley General Plan Final EIR concluded that excavation to depths normal for development projects generally would not penetrate recent alluvial sediments to encounter fossiliferous deposits. Areas within the City that are thought to have the greatest potential for encountering paleontological resources occur in the hills in the east end of the City, in an area known as the “Badlands.” The Project site is not located in this portion of the City. (City of Moreno Valley, 2006, pp. 5.10-11, 5.10-15)

Notwithstanding the information presented above, BFSA examined geologic maps and reviewed relevant geological and paleontological literature to determine which geologic units are present within the Project site. The Project site is underlain by lower Pleistocene (1.8 million – 200,000 to 300,000 years ago) very old alluvial fan deposits, which, contrary to the determination in the Moreno Valley General Plan Final EIR, are considered to have a “medium” potential to contain significant paleontological resources. Similar Pleistocene-age sediments throughout the lowland (valley) areas of western Riverside County and the Inland Empire have been reported to yield significant fossils of extinct terrestrial mammals from the last Ice Age, including mammoths, mastodons, giant ground sloths, dire wolves, short-faced bears, saber-toothed cats, large and small horses, camels, and bison. (BFSA, 2017b, pp. 1-2)

BFSA also conducted a pedestrian field survey of the Project site on September 7, 2017, to determine the status and extent of previously recorded paleontological resources within the Project site and surrounding area. No paleontological resources were observed on the Project site during the field survey. (BFSA, 2017b, p. 2)

## **4.4.2 APPLICABLE ENVIRONMENTAL PLANS, POLICIES, AND REGULATIONS**

### **A. Federal Plans, Policies, and Regulations**

#### **1. National Historic Preservation Act**

The National Historic Preservation Act of 1966 (NHPA) was passed primarily to acknowledge the importance of protecting our nation’s heritage. While Congress recognized that national goals for historic preservation



could best be achieved by supporting the drive, enthusiasm, and wishes of local citizens and communities, it understood that the federal government must set an example through enlightened policies and practices. In the words of the Act, the federal government's role would be to "provide leadership" for preservation, "contribute to" and "give maximum encouragement" to preservation, and "foster conditions under which our modern society and our prehistoric and historic resources can exist in productive harmony." (ACHP, 2002)

Section 106 of the NHPA granted legal status to historic preservation in federal planning, decision-making, and project execution. Section 106 requires all federal agencies to take into account the effects of their actions on historic properties, and provide the Advisory Council on Historic Preservation (ACHP) with a reasonable opportunity to comment on those actions and the manner in which federal agencies are taking historic properties into account in their decisions. (ACHP, 2002)

## **2. *National Register of Historic Places (NRHP)***

The National Register of Historic Places is the official list of the nation's historic places worthy of preservation. Authorized by the National Historic Preservation Act of 1966, the National Park Service's (NPS's) National Register of Historic Places (NRHP) is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America's historic and archeological resources. (NPS, n.d.)

To be considered eligible, a property must meet the National Register Criteria for Evaluation. This involves examining the property's age, integrity, and significance, as follows:

- Age and Integrity. Is the property old enough to be considered historic (generally at least 50 years old) and does it still look much the way it did in the past?
- Significance. Is the property associated with events, activities, or developments that were important in the past? With the lives of people who were important in the past? With significant architectural history, landscape history, or engineering achievements? Does it have the potential to yield information through archeological investigation about our past? (NPS, n.d.)

Nominations can be submitted to a State Historic Preservation Office (SHPO) from property owners, historical societies, preservation organizations, governmental agencies, and other individuals or groups. The SHPO notifies affected property owners and local governments and solicits public comment. If the owner (or a majority of owners for a district nomination) objects, the property cannot be listed but may be forwarded to the National Park Service (NPS) for a Determination of Eligibility (DOE). Listing in the National Register of Historic Places provides formal recognition of a property's historical, architectural, or archeological significance based on national standards used by every state. (NPS, n.d.)

Under federal law, the listing of a property in the National Register places no restrictions on what a non-federal owner may do with their property up to and including destruction, unless the property is involved in a project that receives federal assistance, usually funding or licensing/permitting. National Register listing does not lead to public acquisition or require public access. (NPS, n.d.)

## **3. *Native American Graves Protection and Repatriation Act (NAGPRA)***

The Native American Graves Protection and Repatriation Act (NAGPRA; Public Law 101-601; 25 U.S.C. 3001-3013) describes the rights of Native American lineal descendants, Indian tribes, and Native Hawaiian organizations with respect to the treatment, repatriation, and disposition of Native American human remains,



funerary objects, sacred objects, and objects of cultural patrimony, referred to collectively in the statute as cultural items, with which they can show a relationship of lineal descent or cultural affiliation. (NPS, 2016b)

One major purpose of this statute is to require that federal agencies and museums receiving federal funds inventory holdings of Native American human remains and funerary objects and provide written summaries of other cultural items. The second major purpose of the statute is to provide greater protection for Native American burial sites and more careful control over the removal of Native American human remains, funerary objects, sacred objects, and items of cultural patrimony on federal and tribal lands. Other provisions of NAGPRA: (1) stipulate that illegal trafficking in human remains and cultural items may result in criminal penalties; (2) authorizes the Secretary of the Interior to administer a grants program to assist museums and Indian Tribes in complying with certain requirements of the statute; (3) requires the Secretary of the Interior to establish a Review Committee to provide advice and assistance in carrying out key provisions of the statute; authorizes the Secretary of the Interior to penalize museums that fail to comply with the statute; and, (5) directs the Secretary to develop regulations in consultation with this Review Committee. (NPS, 2016b)

## ***B. State Plans, Policies, and Regulations***

### ***1. California Administrative Code, Title 14, Section 4308***

Section 4308, Archaeological Features, of Title 14 of the California Administrative Code provides that: “No person shall remove, injure, disfigure, deface, or destroy any object of archaeological, or historical interest or value.”

### ***2. California Code of Regulations Title 14, Section 1427***

California Code of Regulations Title 14, Section 1427 provides that: “No person shall collect or remove any object or thing of archeological or historical interest or value, nor shall any person injure, disfigure, deface or destroy the physical site, location or context in which the object or thing of archeological or historical interest or value is found.”

### ***3. California Register of Historic Resources***

The State Historical Resources Commission has designed this program for use by state and local agencies, private groups, and citizens to identify, evaluate, register, and protect California's historical resources. The Register is the authoritative guide to the state's significant historical and archeological resources. The California Register program encourages public recognition and protection of resources of architectural, historical, archeological, and cultural significance; identifies historical resources for state and local planning purposes; determines eligibility for state historic preservation grant funding; and affords certain protections under CEQA. (OHP, n.d.)

In order for a resource to be included on the Register of Historic Resources, the resources must meet one of the following criteria:

- Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States (Criterion 1).
- Associated with the lives of persons important to local, California or national history (Criterion 2).
- Embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of a master or possesses high artistic values (Criterion 3).



- Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation (Criterion 4). (OHP, n.d.)

For resources included on the Register of Historic Resources, environmental review may be required under CEQA if a property listed on the Register is threatened by a project. Additionally, local building inspectors must grant code alternatives provided under State Historical Building Code. Further, the local assessor may enter into contract with property owner for property tax reduction pursuant to the Mills Act. (OHP, n.d.)

#### **4. *Traditional Tribal Cultural Places Act (Senate Bill 18, “SB 18”)***

Senate Bill 18 (SB 18) requires local (city and county) governments to consult with California Native American tribes to aid in the protection of traditional tribal cultural places (“cultural places”) through local land use planning. SB 18 also requires the Governor’s Office of Planning and Research (OPR) to include in the General Plan Guidelines advice to local governments for how to conduct these consultations. (OPR, 2005)

The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places. The purpose of involving tribes at these early planning stages is to allow consideration of cultural places in the context of broad local land use policy, before individual site-specific, project-level land use decisions are made by a local government. (OPR, 2005)

SB 18 requires local governments to consult with tribes prior to making certain planning decisions and to provide notice to tribes at certain key points in the planning process. These consultation and notice requirements apply to adoption and amendment of both general plans (defined in Government Code § 65300 *et seq.*) and specific plans (defined in Government Code § 65450 *et seq.*). Although SB 18 does not specifically mention consultation or notice requirements for adoption or amendment of specific plans, existing state planning law requires local governments to use the same processes for adoption and amendment of specific plans as for general plans (see Government Code § 65453). Therefore, where SB 18 requires consultation and/or notice for a general plan adoption or amendment, the requirement extends also to a specific plan adoption or amendment. (OPR, 2005)

Because the proposed Project does not propose to adopt or amend a general plan or specific plan, or designate land as open space, the proposed Project would not be subject to SB 18.

#### **5. *Assembly Bill 52 (AB 52)***

The legislature added new requirements for development projects regarding tribal cultural resources in Assembly Bill 52 (AB 52). By including tribal cultural resources early in the CEQA process, the legislature intended to ensure that local and Tribal governments, public agencies, and project proponents would have information available, early in the project planning process, to identify and address potential adverse impacts to tribal cultural resources. By taking this proactive approach, the legislature also intended to reduce the potential for delay and conflicts in the environmental review process. (OPR, 2015)

The Public Resources Code now establishes that “[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment.” (Pub. Resources Code, § 21084.2.) To help determine whether a project may have such an effect, the Public Resources Code requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. That consultation must take place prior to the determination of whether a negative declaration,



mitigated negative declaration, or environmental impact report is required for a project. (Pub. Resources Code, § 21080.3.1.) (OPR, 2015)

If a lead agency determines that a project may cause a substantial adverse change to tribal cultural resources, the lead agency must consider measures to mitigate that impact. Public Resources Code § 20184.3 (b)(2) provides examples of mitigation measures that lead agencies may consider to avoid or minimize impacts to tribal cultural resources. These rules apply to projects that have a notice of preparation for an environmental impact report or negative declaration or mitigated negative declaration filed on or after July 1, 2015. (OPR, 2015)

According to CEQA Statute § 21074.

- (a) *“Tribal cultural resources” are either of the following:*
  - (1) *Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:*
    - (A) *Included or determined to be eligible for inclusion in the California Register of Historical Resources.*
    - (B) *Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.*
  - (2) *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. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.*
- (b) *A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.*
- (c) *A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a “nonunique archaeological resource” as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).*

## **6. State Health and Safety Code**

California Health and Safety Code (HSC) § 7050.5(b) requires that excavation and disturbance activities must cease “In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery...” until the coroner can determine regarding the circumstances, manner, and cause of any death. The coroner is then required to make recommendations concerning the treatment and disposition of the human remains. Further, this section of the code makes it a misdemeanor to intentionally disturb, mutilate or remove interred human remains. Section (§) 7051 specifies that the removal of human remains from “internment or a place of storage while awaiting internment” with the intent to sell them or to dissect them with “malice or wantonness” is a public offense punishable by imprisonment in a state prison. Lastly, HSC §§ 8010-8011 establish the California Native American Graves Protection and Repatriation Act consistent with the federal



law addressing the same. The Act stresses that “all California Indian human remains and cultural items are to be treated with dignity and respect.” It encourages voluntary disclosure and return of remains and cultural items by publicly funded agencies and museums in California. It also outlines the need for aiding California Indian tribes, including non-federally recognized tribes, in filing repatriation claims.

### **7. California Code of Regulations Section 15064.5**

The California Code of Regulations, Title 14, Chapter 3, § 15064.5 (the State CEQA Guidelines) establishes the procedure for determining the significance of impacts to archeological and historical resources, as well as classifying the type of resource. Cultural resources are aspects of the environment that require identification and assessment for potential significance. The evaluation of cultural resources under CEQA is based upon the definitions of resources provided in CEQA Guidelines § 15064.5, as follows:

- A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4850 et seq.).
- A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4852) including the following:
  - Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
  - Is associated with the lives of persons important in our past;
  - 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; or
  - Has yielded, or may be likely to yield, information important in prehistory or history.
- The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1.



### **4.4.3 BASIS FOR DETERMINING SIGNIFICANCE**

The proposed Project would result in a significant impact to cultural resources if the Project or any Project-related component would:

- a. *Cause a substantial adverse change in the significance of a historical resource as defined in California Code of Regulations, Section 15064.5;*
- b. *Cause a substantial adverse change in the significance of an archaeological resource as defined in California Code of Regulations, Section 15064.5;*
- c. *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or*
- d. *Disturb any human remains, including those interred outside of formal cemeteries.*

The proposed Project also would cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 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:

- e. *Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k); or*
- f. *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 the subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*

The above-listed thresholds are derived directly from Appendix G to the CEQA Guidelines and address the typical, adverse effects that development projects could have on cultural and/or tribal cultural resources.

### **4.4.4 IMPACT ANALYSIS**

***Threshold a: Would the Project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?***

As described under Subsection 4.4.1A, no historic resources were observed on the Project site during a pedestrian survey conducted by BFSA. In addition, according to a records search conducted by Urban Crossroads with the EIC, no historic resources had been previously recorded on the Project site. (BFSA, 2017a, p. 5.0-2) The EIC did identify the Project site within a historic district (March Field Historic District, P-33-009191); however, this is believed to be a mapping error because the Project site is located 1.0-mile northeast of March Air Reserve Base, none of the other 32 contributing properties to the historic district are located within or adjacent to the Project site, and, based on historic aerial photography, no structures have ever been developed on the Project site (BFSA, 2017a, p. 5.0-3). Based on the foregoing information, the Project would not result in a substantial adverse change to any historic resource as defined by California Code of Regulations § 15064.5. No impact would occur.



***Threshold b: Would the Project cause a substantial adverse change in the significance of an archaeological resource as defined in California Code of Regulations, Section 15064.5?***

Based on archival research conducted by BFSA, one (1) prehistoric isolate was identified within a one-mile radius of the Project site; however, the prehistoric resource is not located within or adjacent to the Project site (BFSA, 2017a, p. 5.0-3). Additionally, no prehistoric archaeological resources were observed on the Project site during a pedestrian survey of the property (BFSA, 2017a, p. 5.0-3).

The Project site is adjacent to the Heacock Channel which, prehistorically, likely would have been a natural intermittent source of water. But, the Project site does not contain bedrock outcrops or other landforms that are typically associated with prehistoric tribal use area. Also, given the valley setting and lack of exposed bedrock outcrops within the Project site, predictive modeling suggests that if prehistoric archaeological resources sites were to be present within the Project site, they would be confined to isolated artifacts, artifact scatters, or specialized resource processing loci that would have developed as a result of prehistoric resource extraction practices. (BFSA, 2017a, p. 5.0-3) However, due to the lack of previously discovered prehistoric archaeological resources in the Project vicinity, the historic agricultural use of the Project site (which has resulted in substantial disturbance of on-site soils), and historic development activities abutting the Project site (e.g., construction of the Heacock Channel, construction of Brodiaea Avenue and Heacock Street), the likelihood of discovering buried prehistoric archaeological resources on the Project site is considered low (BFSA, 2017a, p. 5.0-3).

In conclusion, and based on the foregoing information, the Project site would not result in a substantial adverse change in the significance of any known prehistoric archaeological resources, as defined in California Code of Regulations § 15064.5.

***Threshold c: Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?***

Although the Project site does not contain any known unique geologic features and no paleontological resources or sites were observed by BFSA during a field investigation, the Project site is underlain with lower Pleistocene very old alluvial fan deposits that have a medium paleontological sensitivity. Lower Pleistocene very old alluvial fan deposits have contained important fossil deposits elsewhere in southern California. (BFSA, 2017b, p. 2). In an event that the Project's construction activities encroach into previously undisturbed lower Pleistocene very old alluvial fan deposits, the Project could result in impacts to important paleontological resources that may exist below the ground surface *if* they are unearthed *and* not properly treated. Therefore, the Project's potential to directly or indirectly destroy a unique paleontological resource buried beneath the ground surface determined to be a significant impact and mitigation is required.

***Threshold d: Would the Project disturb any human remains, including those interred outside of formal cemeteries?***

The Project site does not contain a cemetery and no known formal cemeteries are located within the immediate site vicinity. Field surveys conducted on the Project site did not identify the presence of any human remains and no human remains are known to exist beneath the surface of the site. (BFSA, 2017a, p. 1.0-1) Nevertheless, the remote potential exists that human remains may be unearthed during grading and excavation activities associated with Project construction.





If human remains are unearthed during Project construction, the construction contractor would be required by law to comply with California Health and Safety Code § 7050.5 “Disturbance of Human Remains.” According to § 7050.5(b) and (c), if human remains are discovered, the County Coroner must be contacted and if the Coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, the Coroner is required to contact the Native American Heritage Commission (NAHC) by telephone within 24 hours. Pursuant to California Public Resources Code § 5097.98, whenever the NAHC receives notification of a discovery of Native American human remains from a county coroner, the NAHC is required to immediately notify those persons it believes to be most likely descended from the deceased Native American. The descendants may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American human remains and may recommend to the owner or the person responsible for the excavation work means for treatment or disposition, with appropriate dignity, of the human remains and any associated grave goods. The descendants shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. According to Public Resources Code § 5097.94(k), the NAHC is authorized to mediate disputes arising between landowners and known descendants relating to the treatment and disposition of Native American human burials, skeletal remains, and items associated with Native American burials. With mandatory compliance to California Health and Safety Code § 7050.5 and Public Resources Code § 5097.98, any potential impacts to human remains, including human remains of Native American ancestry, that may result from development of the Project would be less than significant.

***Threshold e: Would the Project restrict existing religious or sacred uses within the potential impact area?***

BFSA conducted an intensive pedestrian survey and found no prehistoric resources on or near the Project site (BFSA, 2017a, p. 5.0-3) BFSA also conducted a records search with the EIC and the Native American Heritage Commission (NAHC) Sacred Lands File; neither database identified any resources of Native American provenance on or within one-mile of the Project site that is listed or eligible for listing in the California Register of Historical Resources or a local register of historic resources (BFSA, 2017a, pp. 1.0-1, and 5.0-2). Accordingly, the Project would not cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074, and that is listed or eligible for listing in in the California Register of Historical Resources and/or a local register of historical resources as defined in Public Resources Code Section 5020.1(k). No impact would occur.

***Threshold f: Would the Project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074?***

In order to evaluate whether tribal cultural resources are present at the Project site, BFSA conducted a Sacred Lands File (SLF) records search through the Native American Heritage Commission (NAHC). The results of the SLF search are included in *Technical Appendix D1*. The results of the SLF search did not identify any previously identified Native American cultural resources within the Project site boundary (BFSA, 2017a, p. 4.0-2)

Notwithstanding, the Project is subject to compliance with Assembly Bill 52 (AB 52). The primary intent of AB 52 is to establish a consultation process between potentially affected Native American tribes and CEQA lead agencies that aims to identify tribal cultural resources that would potentially be impacted by a proposed project. During the AB 52 consultation process, the City of Moreno Valley was notified by three (3) Native American tribes with traditional use areas that encompasses the Project site that tribal cultural resources had the potential to be uncovered on the Project site during construction. Accordingly, although considered



unlikely, implementation of the Project could cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074. Mitigation would be required.

#### **4.4.5 CUMULATIVE IMPACT ANALYSIS**

The Project's potential contribute to cumulative impacts to historical resources was analyzed in conjunction with other projects located in areas that were once similarly influenced by the historical agricultural industry of the City of Moreno Valley and the region. Record searches and field surveys indicate the absence of significant historical sites and resources on or in the vicinity of the Project site. Accordingly, the Project would not result in a cumulatively-considerable impact to historical sites and resources.

The Project's potential to result in cumulative impacts to archaeological resources also was analyzed in conjunction with other projects located in the traditional use areas of Native American tribes that are affiliated to the Project site. Development activities on the Project site would not impact any known prehistoric archaeological resources and the likelihood of uncovering previously unknown prehistoric archaeological resources during Project construction are low due to the magnitude of disturbance that has occurred on the site due to historic agricultural use. Accordingly, the Project would not contribute to a significant cumulative impact to prehistoric archaeological sites and/or resources.

The Project's potential to result in cumulative impacts to paleontological resources were analyzed in conjunction with other projects located in the region that are underlain by very old alluvial fan deposits. Although development activities on the Project site would not impact any known paleontological resources, the Project site sits atop very old alluvial fan deposits and there is the remote potential that paleontological resources are buried beneath the surface of the Project site and could be impacted during construction. Other development projects in the cumulative study area with similar geologic characteristics as the Project site would have a similar potential to uncover unique paleontological resources. Therefore, the potential for the Project to impact subsurface paleontological resources is a cumulatively-considerable impact for which mitigation is required.

Mandatory compliance with the provisions of California Health and Safety Code § 7050.5 as well as Public Resources Code § 5097 *et. seq.*, would assure that all future development projects within the region treat human remains that may be uncovered during development activities in accordance with prescribed, respectful and appropriate practices, thereby avoiding cumulative impacts.

The Project's potential to result in cumulative impacts to tribal, religious, and cultural resources were analyzed in conjunction with other projects located in the influence areas of the tribes in the region. Three (3) Native American tribes stated that there is potential for tribal cultural resources to be uncovered during construction on the Project site. These Native American tribes have traditional use areas that encompasses the Perris Valley, and other development projects within the Perris Valley would have a similar potential to uncover tribal cultural resources. Therefore, the potential for the Project to impact tribal cultural resources is a cumulatively-considerable impact for which mitigation is required.

#### **4.4.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION**

Threshold a: No Impact. No resources, defined as historically significant, are present on the Project site. Therefore, no historic resources would be altered or destroyed by development on the Project site. No impact would occur.



Threshold b: Less-than-Significant Impact. No known prehistoric resources are present on the Project site and the likelihood of uncovering buried prehistoric resources on the Project site is low due to the magnitude of historic ground disturbance on the Project site (resulting from agricultural operations and development activities).

Threshold c: Significant Direct and Cumulatively-Considerable Impact. The Project would not impact any known paleontological resource or unique geological feature. However, the Project site contains alluvium soils with a high sensitivity for paleontological resources. Accordingly, construction activities on the Project site have the potential to unearth and adversely impact paleontological resource that may be buried beneath the ground surface.

Threshold d: No Impact. In the unlikely event that human remains are discovered on the Project site during future grading or other ground disturbing activities, the Project would be required to comply with the applicable provisions of California Health and Safety Code § 7050.5 and California Public Resources Code § 5097 *et. seq.* Mandatory compliance with State law would ensure that human remains, if encountered, would be appropriately treated and would preclude the potential for significant impacts to human remains.

Threshold e: No Impact. The Project site does not contain any recorded Native American cultural resources; therefore, the Project would not cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources or a local register of historical resources.

Threshold f: Significant Direct and Cumulatively-Considerable Impact. Construction activities on the Project site have the potential, however unlikely, to unearth and adversely impact tribal cultural resources that may be buried beneath the ground surface.

#### **4.4.7 MITIGATION**

The following mitigation measures would reduce the potential for future development on the Project site to impact buried paleontological resources, should they be discovered during future ground-disturbing construction activities.

- MM 4.4-1 The paleontological monitor shall conduct full-time monitoring during grading and excavation operations in undisturbed, very old alluvial fan sediments. The paleontological monitor shall be equipped to salvage fossils if they are unearthed to avoid construction delays and to remove samples of sediments that may contain the remains of small fossil invertebrates and vertebrates. The paleontological monitor shall be empowered to temporarily halt or divert equipment to allow the removal of abundant and large specimens in a timely manner. The significance of the discovered resources shall be determined by the paleontologist. If the resource is significant, Mitigation Measure MM 4.4-2 shall apply. Monitoring may be reduced if the potentially fossiliferous units are not present in the subsurface, or if present, are determined upon exposure and examination by qualified paleontological personnel to have a low potential to contain or yield fossil resources.
- MM 4.4-2 If a significant paleontological resource is discovered on the property, discovered fossils or samples of such fossils shall be collected and identified by a qualified paleontologist. Significant specimens recovered shall be properly recorded, treated, and donated to the Western Science Center Museum, or other repository with permanent retrievable



paleontological storage. Prior to grading permit inspection approval, a qualified paleontologist shall prepare a final report that itemizes any fossils recovered, with maps to accurately record the original location of recovered fossils, and contains evidence that the resources were curated by an established museum repository. The report shall be submitted to the City of Moreno Valley.

The following mitigation measure would reduce impacts to tribal cultural resources that have the potential to be present on the Project site (beneath the ground surface) and discovered during future ground-disturbing construction activities.

MM 4.4-3 Prior to the issuance of a grading permit, the Developer shall retain a professional archaeologist to conduct monitoring of all mass grading and trenching activities. The Project Archaeologist shall have the authority to temporarily redirect earthmoving activities in the event that suspected archaeological resources are unearthed during Project construction. The Project Archaeologist, in consultation with the Consulting Tribe(s), the contractor, and the City, shall develop a Cultural Resources Management Plan (CRMP) in consultation pursuant to the definition in AB 52 to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the project site. A consulting tribe is defined as a tribe that initiated the AB 52 tribal consultation process for the Project, has not opted out of the AB 52 consultation process, and has completed AB 52 consultation with the City as provided for in Cal Pub Res Code Section 21080.3.2(b)(1) of AB52. Details in the Plan shall include:

- a. Project grading and development scheduling;
- b. The Project archeologist and the Consulting Tribes(s) as defined in MM 4.4-3 shall attend the pre-grading meeting with the City, the construction manager and any contractors and will conduct a mandatory Cultural Resources Worker Sensitivity Training to those in attendance. The Training will include a brief review of the cultural sensitivity of the Project and the surrounding area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. All new construction personnel that will conduct earthwork or grading activities that begin work on the Project following the initial Training must take the Cultural Sensitivity Training prior to beginning work and the Project archaeologist and Consulting Tribe(s) shall make themselves available to provide the training on an as-needed basis; and
- c. The protocols and stipulations that the contractor, City, Consulting Tribe(s) and Project archaeologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation.

MM 4.4-4 Prior to the issuance of a grading permit, the Developer shall secure agreements with the Consulting Native American Tribes for tribal monitoring. The Developer is also required to provide a minimum of 30 days advance notice to the tribes of all mass grading and trenching activities. The Native American Tribal Representatives shall have the authority to temporarily halt and redirect earth moving activities in the affected area in the event that suspected



archaeological resources are unearthed. If the Native American Tribal Representatives suspect that an archaeological resource may have been unearthed, the Project Archaeologist or the Tribal Representatives shall immediately redirect grading operations in a 100-foot radius around the find to allow identification and evaluation of the suspected resource. In consultation with the Native American Tribal Representatives, the Project Archaeologist shall evaluate the suspected resource and make a determination of significance pursuant to California Public Resources Code Section 21083.2.

MM 4.4-5 In the event that Native American cultural resources are discovered during the course of grading (inadvertent discoveries), the following procedures shall be carried out for final disposition of the discoveries:

- a. One or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be provided to the City of Moreno Valley Planning Department:
  - i. Preservation-In-Place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving them in the place they were found with no development affecting the integrity of the resources.
  - ii. Onsite reburial of the discovered items as detailed in the treatment plan required pursuant to MM 4.4-3. This shall include measures and provisions to protect the future reburial area from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been completed. No recordation of sacred items is permitted without the written consent of all Consulting Native American Tribal Governments as defined in MM 4.4-3.

MM 4.4-6 The City shall verify that the following note is included on the Grading Plan:

"If any suspected archaeological resources are discovered during ground-disturbing activities and the Project Archaeologist or Native American Tribal Representatives are not present, the construction supervisor is obligated to halt work in a 100-foot radius around the find and call the Project Archaeologist and the Tribal Representatives to the site to assess the significance of the find."

MM 4.4-7 If potential historic or cultural resources are uncovered during excavation or construction activities at the project site, work in the affected area must cease immediately and a qualified person meeting the Secretary of the Interior's standards (36 CFR 61), Tribal Representatives, and all site monitors per the Mitigation Measures, shall be consulted by the City to evaluate the find, and as appropriate recommend alternative measures to avoid, minimize or mitigate negative effects on the historic, or prehistoric resource. Determinations and recommendations by the consultant shall be immediately submitted to the Planning Division for consideration and implemented as deemed appropriate by the Community Development Director, in consultation with the State Historic Preservation Officer (SHPO) and any and all Consulting Native American Tribes as defined in MM 4.4-3 before any further work commences in the affected area.



Although the Project would result in less-than-significant impacts to human remains, the following mitigation measure is required to ensure compliance with California Health and Safety Code § 7050.5 and California Public Resources Code § 5097 *et. seq.*

MM 4.4-8 If human remains are discovered, no further disturbance shall occur in the affected area until the County Coroner has made necessary findings as to origin. If the County Coroner determines that the remains are potentially Native American, the California Native American Heritage Commission shall be notified within 5-days of the published finding to be given a reasonable opportunity to identify the “most likely descendant”. The “most likely descendant” shall then make recommendations and engage in consultations concerning the treatment of the remains (California Public Resources Code 5097.98).

#### 4.4.8 SIGNIFICANCE OF IMPACTS AFTER MITIGATION

Threshold c: Less-than-Significant Impact with Mitigation Incorporated. Mitigation Measures MM 4.4-1 and MM 4.4-2 would ensure the proper identification and subsequent treatment of any paleontological resources that may be encountered during ground-disturbing activities associated with implementation of the proposed Project. Therefore, with implementation of Mitigation Measures MM 4.4-1 and MM 4.4-2, the Project’s potential impact to paleontological resources would be reduced to less-than-significant.

Threshold f: Less-than-Significant Impact with Mitigation Incorporated. Implementation of MM 4.4-3 through MM 4.4-7 would ensure the proper identification and subsequent treatment of any tribal cultural resources that may be encountered during ground-disturbing activities associated with implementation of the proposed Project. With implementation of the required mitigation, the Project’s potential impact to tribal resources would be reduced to less-than-significant.



## **4.5 GEOLOGY AND SOILS**

The following analysis is based, primarily, on two (2) reports prepared for the Project site by NorCal Engineering. The report titled, “Geotechnical Investigation Proposed Warehouse Building Development Northwest Corner Heacock Street and Brodiaea Street, Moreno Valley, California,” dated August 16, 2017, is included as *Technical Appendix E1* to this EIR (NorCal Engineering, 2017a). The report titled, “Soil Infiltration Study – Proposed Warehouse Building Development – Located at the Northwest Corner of Heacock Street and Brodiaea Street, in the City of Moreno Valley, California,” dated August 18, 2017, is included as *Technical Appendix E2* to this EIR (NorCal Engineering, 2017b). Additional sources of information used to support the analysis in this Subsection include the Project’s Water Quality Management Plan (WQMP) (*Technical Appendix H1*) and the Geology and Soils section (Section 5.6) of the certified Final Program EIR prepared for the City of Moreno Valley General Plan (SCH No. 200091075), dated July 2006 (City of Moreno Valley, 2006). Refer to Section 7.0, *References*, for a complete list of reference sources.

### **4.5.1 EXISTING CONDITIONS**

#### **A. Soil**

Two (2) types of soils are located on the Project site, as determined by a soils and geotechnical investigation conducted by Norcal Engineering in 2017.

##### **1. Fill/Disturbed Top Soils**

Fill and disturbed top soils were encountered on the Project site at depths ranging from one (1) to two (2) feet below ground surface. The soils are classified as loose/soft and dry, clayey sand to sandy, clayey silt with some gravel, concrete pieces and roots. (NorCal Engineering, 2017a, p. 4)

##### **2. Native Soils**

Native soils, classified as clayey sand, were encountered beneath the upper fill soils and extend to at least 51.5 feet below the existing ground surface. The soils consist of a mix of medium dense and damp to moist layers of sand, silt, and clay. (NorCal Engineering, 2017a, p. 4, Appendix B)

#### **B. Water**

NorCal Engineering did not observe any surface water on the Project site; however, groundwater was encountered in subsurface borings by NorCal Engineering at a depth of approximately 28 feet below the existing surface (NorCal Engineering, 2017a, pp. 2, 4).

#### **C. Seismic Hazards**

The Project site is located in an area of southern California that is subject to strong ground motions due to seismic events (i.e., earthquakes). The geologic structure of southern California is dominated mainly by northwest-trending faults associated with the San Andreas system. The San Andreas Fault system includes several major branches, such as the San Jacinto and Elsinore faults, as well as numerous minor branches. The San Jacinto Fault (located approximately 5.3 miles to the northeast) is the nearest active fault to the Project site (NorCal Engineering, 2017a, p. 3). An active fault is defined by the California Geological Survey as a fault that has experienced surface displacement within the Holocene Epoch (roughly the last 11,000 years).

Secondary hazards associated with earthquakes include surface rupture, ground failure, unstable soils and slopes. Each of these hazards is briefly described below.



### **1. *Fault Rupture***

Fault rupture can occur along pre-existing, known active fault traces; however, fault rupture also can splay from known active faults or rupture along unidentified fault traces. There are no active or potentially active faults occurring on the Project site and no known faults are mapped trending through or toward the site (NorCal Engineering, 2017a, p. 2; City of Moreno Valley, 2006, Figure 5.6-2). Therefore, the potential for fault rupture on the Project site is nil.

### **2. *Liquefaction***

Liquefaction is a phenomenon in which loose, saturated, relatively cohesion-less soil deposits lose shear strength during strong ground motions, which causes the soil to behave as a viscous liquid. Liquefaction is generally limited to the upper 50 feet of subsurface soils. Research and historical data indicate that loose granular soils of Holocene to late Pleistocene age below a near-surface groundwater table are most susceptible to liquefaction, while the stability of most clayey material is not adversely affected by vibratory motion (Southern California Earthquake Center, 1999, pp. 5-6). Therefore, in order for the potential effects of liquefaction to be manifested at the ground surface, soils generally must be of Holocene to late Pleistocene age, granular, loose to medium dense, relatively saturated near the ground surface and subjected to a sufficient magnitude and duration of ground shaking. Due to the physical properties of the Project site's soils (very dense and sandy) and the lack of shallow groundwater beneath the existing ground surface, NorCal Engineering concluded that the potential for liquefaction at the site is low (NorCal Engineering, 2017a, p. 6).

### **3. *Unstable Soils and Slopes***

The Project site is generally flat and does not contain, nor is it adjacent to any, steep natural or manufactured slopes and there is no evidence of historical landslides or rockfalls on the site (NorCal Engineering, 2017a; Google Earth Pro, 2017). As such, the site is not susceptible to seismically induced landslides and rockfalls.

### **D. *Slope and Soil Instability Hazards***

#### **1. *Soil Erosion***

Erosion is the process by which the upper layers of the ground surface (such as soils) are worn and removed by the movement of water or wind. Soils with characteristics such as low permeability and/or low cohesive strength are more susceptible to erosion than those soils having higher permeability and cohesive strength. Additionally, the slope gradient on which a given soil is located also contributes to the soil's resistance to erosive forces. Because water is able to flow faster down steeper gradients, the steeper the slope on which a given soil is located, the more readily it will erode. According to the City of Moreno Valley General Plan EIR, soils on the Project site and in the surrounding area are susceptible to erosion (City of Moreno Valley, 2006, Figure 5.6-1, p. 5.6-3).

Wind erosion can damage land and natural vegetation by removing soil from one place and depositing it in another. It mostly affects dry, sandy soils in flat, bare areas, but wind erosion may occur wherever soil is loose, dry, and finely granulated. According to the Riverside County General Plan EIR, soils on the Project site and in the surrounding area are moderately susceptible to wind erosion (Riverside County, 2015, p. 4.12-12, Figure 4.12.6). Under existing conditions, the Project site has the potential to contribute windblown soil and sand because portions of the Project site are undeveloped with little or no vegetative cover and loose and dry topsoil conditions.





## **2. *Settlement Potential***

Settlement refers to unequal compression of a soil foundation, shrinkage, or undue loads being applied to a building after its initial construction that affect the soil foundation. According to NorCal Engineering, the settlement potential of soils on the Project site is normal/typical of properties in southern California (NorCal Engineering, 2017a, p. 12).

## **3. *Shrinkage/Subsidence Potential***

Subsidence is a gradual settling or sudden sinking of the ground surface (i.e., loss of elevation). The principal causes of subsidence are aquifer-system compaction, drainage of organic soils, underground mining, and natural compaction. Shrinkage is the reduction in volume in soil as the water content of the soil drops (i.e., loss of volume). Testing conducted by NorCal Engineering on soils collected from the Project site confirmed the low potential for shrinkage/subsidence on the Project site (NorCal Engineering, 2017a, p. 10).

## **4. *Soil Expansion Potential***

Expansive soils are soils that exhibit cyclic shrink and swell patterns in response to variations in moisture content. Soil testing conducted by NorCal Engineering identified the upper soils on the Project site as having “low” potential for soil expansion (NorCal Engineering, 2017a, p. 15).

## **5. *Landslide Potential***

The Project site and immediately surrounding properties are generally flat and contain no steep natural or manufactured slopes (Google Earth Pro, 2017); thus, there is no potential for landslides to occur on or immediately adjacent to the site.

### **4.5.2 APPLICABLE ENVIRONMENTAL PLANS, POLICIES, AND REGULATIONS**

The following is a brief description of the federal, State, and local environmental laws and related regulations governing issues related to geology and soils.

#### ***A. Federal Plans, Policies, and Regulations***

##### **1. *Clean Water Act***

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was substantially reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972. Under the CWA, the Environmental Protection Agency (EPA) has implemented pollution control programs such as setting wastewater standards for industry, and also has set water quality standards for all contaminants in surface waters. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. (EPA, 2017a)



***B. State Plans, Policies, and Regulations***

***1. Alquist-Priolo Earthquake Fault Zoning Act (A-P Act)***

The Alquist-Priolo Earthquake Fault Zoning Act (A-P Act) was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The A-P Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The A-P Act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. (CGS, n.d.)

The A-P 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. ["Earthquake Fault Zones" were called "Special Studies Zones" prior to January 1, 1994.] The maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling new or renewed construction. Local agencies must regulate most development projects within the zones. Projects include all land divisions and most structures for human occupancy. Single family wood-frame and steel-frame dwellings up to two stories not part of a development of four units or more are exempt. However, local agencies can be more restrictive than state law requires. (CGS, n.d.)

Before a project can be permitted, cities and counties must require a geologic investigation to demonstrate that proposed buildings will not be constructed across active faults. An evaluation and written report of a specific site must be prepared by a licensed geologist. If an 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 (generally 50 feet). (CGS, n.d.)

Under existing conditions, there are no active faults on the Project site, and the Project site is not located within any Alquist-Priolo Earthquake Fault Zone (NorCal Engineering, 2017a, p. 2).

***2. Seismic Hazards Mapping Act***

The Seismic Hazards Mapping Act (SHMA) of 1990 (Public Resources Code, Chapter 7.8, § 2690-2699.6) directs the Department of Conservation, California Geological Survey to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. The purpose of the SHMA is to minimize loss of life and property through the identification, evaluation, and mitigation of seismic hazards. (CGS, n.d.)

Staff geologists in the Seismic Hazard Zonation Program gather existing geological, geophysical, and geotechnical data from numerous sources to produce the Seismic Hazard Zone Maps. They integrate and interpret these data regionally in order to evaluate the severity of the seismic hazards and designate as Zones of Required Investigation (ZORI) those areas prone to liquefaction and earthquake-induced landslides. Cities and counties are then required to use the Seismic Hazard Zone Maps in their land use planning and building permit processes. (CGS, n.d.)

The SHMA requires site-specific geotechnical investigations be conducted within the ZORI to identify and evaluate seismic hazards and formulate mitigation measures prior to permitting most developments designed for human occupancy. (CGS, n.d.)

Under existing conditions, the Project site is located in an area with low potential for liquefaction and low potential for earthquake-induced landslides (NorCal Engineering, 2017a, p. 6).



### **3. *Natural Hazards Disclosure Act***

The Natural Hazards Disclosure Act, effective June 1, 1998 (as amended June 9, 1998), requires that sellers of real property and their agents provide prospective buyers with a "Natural Hazard Disclosure Statement" when the property being sold lies within one or more state-mapped hazard areas, including a Seismic Hazard Zone. (CGS, n.d.)

The law requires the State Geologist to establish regulatory zones (Zones of Required Investigation) and to issue appropriate maps (Seismic Hazard Zone maps). These maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling construction and development. Single-family frame dwellings up to two stories not part of a development of four or more units are exempt from the state requirements. However, local agencies can be more restrictive than state law requires. (CGS, n.d.)

Before a development permit can be issued or a subdivision approved, cities and counties must require a site-specific investigation to determine whether a significant hazard exists at the site and, if so, recommend measures to reduce the risk to an acceptable level. The investigation must be performed by state-licensed engineering geologists and/or civil engineers. (CGS, n.d.)

### **4. *Building Earthquake Safety Act***

In 1986, the California Legislature determined that buildings providing essential services should be capable of providing those services to the public after a disaster. Their intent in this regard was defined in legislation known as the Essential Services Buildings Seismic Safety Act of 1986 and includes requirements that such buildings shall be "...designed and constructed to minimize fire hazards and to resist...the forces generated by earthquakes, gravity, and winds." This enabling legislation can be found in the California Health and Safety Code, Chapter 2, § 16000 through 16022. In addition, the California Building Code defines how the intent of the act is to be implemented in Title 24, Part 1 of the California Building Standards Administrative Code, Chapter 4, Articles 1 through 3. (CAB, n.d.)

### **5. *California Building Standards Code (Title 24)***

California Code of Regulations (CCR) Title 24 is reserved for state regulations that govern the design and construction of buildings, associated facilities, and equipment. These regulations are also known as building standards (reference California Health and Safety Code § 18909). Health and Safety Code (state law) § 18902 gives CCR Title 24 the name California Building Standards Code (CBSC). (CBSC, 2016, p. 3)

The CBSC in CCR Title 24 is published by the California Building Standards Commission and it applies to all building occupancies (see Health and Safety Code §§ 18908 and 18938) throughout the State of California. Cities and counties are required by state law to enforce CCR Title 24 (reference Health and Safety Code §§ 17958, 17960, 18938(b), and 18948). Cities and counties may adopt ordinances making more restrictive requirements than provided by CCR Title 24, because of local climatic, geological, or topographical conditions. Such adoptions and a finding of need statement must be filed with the California Building Standards Commission (Reference Health and Safety Code §§ 17958.7 and 18941.5). (CBSC, 2016, pp. 53, 56)

### **6. *Porter-Cologne Water Control Act***

The Porter-Cologne Act is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution.



Pursuant to the Porter-Cologne Act (California Water Code § 13000 *et seq.*), the policy of the State is as follows:

- That the quality of all the waters of the State shall be protected;
- That all activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason; and
- That the State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation. (SWRCB, 2014)

The Porter-Cologne Act established nine Regional Water Boards (based on hydrogeologic barriers) and the State Water Board, which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The State Water Board provides program guidance and oversight, allocates funds, and reviews Regional Water Boards decisions. In addition, the State Water Board allocates rights to the use of surface water. The Regional Water Boards have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The State Water Board and Regional Water Boards have numerous non-point source (NPS) related responsibilities, including monitoring and assessment, planning, financial assistance, and management. (SWRCB, 2014)

The Regional Water Boards regulate discharges under the Porter-Cologne Act primarily through issuance of NPDES permits for point source discharges and waste discharge requirements (WDRs) for NPS discharges. Anyone discharging or proposing to discharge materials that could affect water quality (other than to a community sanitary sewer system regulated by an NPDES permit) must file a report of waste discharge. The Storm Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs) can make their own investigations or may require dischargers to carry out water quality investigations and report on water quality issues. The Porter-Cologne Act provides several options for enforcing WDRs and other orders, including cease and desist orders, cleanup and abatement orders, administrative civil liability orders, civil court actions, and criminal prosecutions. (SWRCB, 2014)

The Porter-Cologne Act also implements many provisions of the Clean Water Act, such as the NPDES permitting program. The Porter-Cologne Act also requires adoption of water quality control plans that contain the guiding policies of water pollution management in California. In addition, regional water quality control plans (basin plans) have been adopted by each of the Regional Water Boards and get updated as necessary and practical. These plans identify the existing and potential beneficial uses of waters of the State and establish water quality objectives to protect these uses. The basin plans also contain implementation, surveillance, and monitoring plans. (SWRCB, 2014) The Project site and vicinity are located in the Santa Ana River Watershed, which is within the purview of the Santa Ana RWQCB. The Santa Ana RWQCB's Santa Ana River Basin Water Quality Control Plan is the governing water quality plan for the region.

### ***C. Local Plans, Policies, and Regulations***

#### ***1. City of Moreno Valley General Plan***

The Safety Element of the City of Moreno Valley General Plan provides information about natural and human-made hazards in Moreno Valley and establishes goals, objectives, and policies to prepare and protect the community from such risks. The Safety Element states that the City shall reduce the risk of geologic hazards to the community by enforcing building codes, requiring the preparation of soils and geologic reports, and using the most current and comprehensive geological hazard mapping available to assist in the evaluation of potential seismic hazards to proposed new development. (City of Moreno Valley, 2006, p. 9-30)



## **2. City of Moreno Valley Building Code**

The City of Moreno Valley Building Code is based on the CBSC and is supplemented with local amendments. The Building Code regulates the construction, alteration, repair, moving, demolition, conversion, occupancy, use, and maintenance of all buildings and structures in the City of Moreno Valley. The Building Code is included in Chapter 8.20 of the City of Moreno Valley Municipal Code. (City of Moreno Valley, 2017)

## **3. City of Moreno Valley Municipal Code**

The City of Moreno Valley Municipal Code (§ 8.21.050) requires development projects to prepare geologic engineering reports to identify site-specific geologic and seismic conditions and provide site-specific recommendations to preclude adverse impacts from unstable soils and strong seismic ground-shaking. These reports shall recommend corrective action to preclude any structural damage/hazards that may be caused by geological hazards or unstable soils. (City of Moreno Valley, 2017)

### **4.5.3 BASIS FOR DETERMINING SIGNIFICANCE**

The proposed Project would result in a significant impact related to geology and soils if the Project or any Project-related component would:

- a. *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:*
  - i. *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;*
  - ii. *Strong seismic ground shaking;*
  - iii. *Seismic-related ground failure, including liquefaction; or*
  - iv. *Landslides.*
- b. *Result in substantial soil erosion or the loss of topsoil;*
- c. *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;*
- d. *Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property; or*
- e. *Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.*

The above-listed thresholds are derived directly from Appendix G to the CEQA Guidelines and address the typical, adverse effects related to geology/soils that could result from development projects.



#### 4.5.4 IMPACT ANALYSIS

**Threshold a:** *Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*

- i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?*
- ii. Strong seismic ground shaking?*
- iii. Seismic-related ground failure, including liquefaction?*
- iv. Landslides?*

##### **A. Rupture of Known Earthquake Fault**

There are no known active or potentially active faults on or trending toward the Project site. According to NorCal Engineering, the Project site is not located within a mapped Alquist-Priolo Earthquake Fault Zone. (NorCal Engineering, 2017a, p. 2) Because there are no known faults located on or trending towards the Project site, there is no potential for the Project to expose people or structures to substantial adverse effects related to ground rupture. No impact would occur.

##### **B. Strong Seismic Ground Shaking**

The Project site is located in a seismically active area of southern California and is expected to experience moderate to severe ground shaking during the lifetime of the Project. This risk is not considered substantially different than the risk to other similar properties in the southern California area. Future development on the Project site will receive a mandatory condition of approval that will require all buildings on the Project site to be constructed in accordance with the California Building Standards Code (CBSC), also known as California Code of Regulations (CCR), Title 24 (Part 2), and the City of Moreno Valley Building Code, which is based on the CBSC with local amendments. The CBSC and City of Moreno Valley Building Code provide standards that must be met to safeguard life or limb, health, property, and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all buildings and structures, and have been specifically tailored for California earthquake conditions. In addition, the CBSC (Chapter 18) and the City of Moreno Valley Municipal Code (§ 8.21.050) require development projects to prepare geologic engineering reports to identify site-specific geologic and seismic conditions and provide site-specific recommendations to preclude adverse effects involving unstable soils and strong seismic ground-shaking, including, but not limited to, recommendations related to ground stabilization, selection of appropriate foundation type and depths, selection of appropriate structural systems. The Project Applicant retained the professional geotechnical firm, Norcal Engineering, to prepare a geologic engineering report for the Project site, which is included as *Technical Appendix E1* to this EIR. In conformance with the Municipal Code, the City will condition the Project to comply with the site-specific ground preparation and construction recommendations contained in the applicable geologic engineering reports. With mandatory compliance with these standard and site-specific design and construction measures, the Project would not expose people or structures to substantial adverse effects, including loss, injury or death, involving seismic ground shaking. Impacts would be less than significant.

##### **C. Seismic-Related Ground Failure**

According to available mapping data, the Project site is not expected to be subjected to a significant risk associated with seismic-related ground failure, including liquefaction (NorCal Engineering, 2017a, p. 6;



Riverside County, 2015, Figure 4.12.3). Regardless, as noted above, the Project will be required to be designed and constructed in accordance with applicable seismic safety guidelines, including the standard requirements of the CBSC and City of Moreno Valley Building Code. Furthermore, and pursuant to Municipal Code § 8.21.050, the Project would be required to comply with the grading and construction recommendations contained within the geologic engineering report for the Project site (see *Technical Appendix E1*), which the City would impose as conditions of approval, to further reduce the risk of seismic-related ground failure due to liquefaction. As such, the Project would not expose people or structures to substantial hazards associated with seismic-related ground failure and/or liquefaction hazards. Impacts would be less than significant.

#### ***D. Landslides***

The Project site is relatively flat, as is the surrounding area. There are no hillsides or steep slopes on the Project site or in the immediate vicinity of the site (Google Earth Pro, 2017). The Project proposes construction of an approximately six (6) to nine (9)-foot-tall retaining wall that will surround the proposed detention basin located in the southwest corner of the Project site. No manufactured slopes would be constructed as part of the Project, with the small exception of small slopes associated with a drainage swale to be installed along the site's northern boundary. The on-site retaining wall would be constructed in accordance with the site-specific recommendations contained within the geologic engineering report for the Project site (as required by the City of Moreno Valley Municipal Code § 8.21.050). Mandatory compliance with the recommendations contained within the Project site's geologic engineering report would ensure that proposed retaining walls are engineered and constructed to maximize stability and preclude safety hazards to on- and off-site areas. Accordingly, the Project would not be exposed to landslide risks, and implementation of the Project site would not pose a landslide risk to surrounding properties. No impact would occur.

***Threshold b: Would the Project result in substantial soil erosion or the loss of topsoil?***

#### ***A. Impact Analysis for Temporary Construction-Related Activities***

Under existing conditions, the Project site is entirely vacant and undeveloped. The Project site is regularly disturbed by routine maintenance activities that subjects soils on-site to erosion (i.e., discing). Development of the Project site would result in grading and construction activities that would further disturb soils on the property. Disturbed soils would be subject to potential erosion during rainfall events or high winds due to the removal of stabilizing vegetation and exposure of these erodible materials to wind and water.

Pursuant to the requirements of the State Water Resources Control Board, the Project will be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for construction activities, including grading. The NPDES permit is required for all development projects that include construction activities, such as clearing, grading, and/or excavation that disturb at least one (1) acre of total land area. The City's Municipal Separate Storm Sewer System (MS4) NPDES Permit requires development projects to prepare and submit to the City for approval a site-specific Storm Water Pollution Prevention Plan (SWPPP). The SWPPP is required to identify a combination of erosion control and sediment control measures (i.e., Best Management Practices) that will reduce or eliminate sediment discharge to surface water from storm water and non-storm water discharges during construction. In addition, the Project will be required to comply with SCAQMD Rule 403, regarding fugitive dust, which would reduce the amount of particulate matter in the air and minimize the potential for wind erosion. With mandatory compliance to the requirements noted in the respective SWPPP, as well as applicable regulatory requirements, the potential for water and/or wind erosion on the Project site during future construction activities would be less than significant and mitigation is not required.



***B. Impact Analysis for Long-Term Operational Activities***

Upon Project build-out, wind and water erosion would be minimized because the areas disturbed during construction would be developed with an industrial warehouse building or landscaping/impervious surfaces and drainage would be captured, controlled, and conveyed via an on-site storm drain system. Accordingly, the amount of erosion that occurs on the Project site would be reduced after implementation of the Project, as compared to existing conditions.

The City's MS4 NPDES Permit requires development projects to prepare and submit to the City for approval a Water Quality Management Plan (WQMP). The WQMP is required to identify an effective combination of erosion control and sediment control measures (i.e., Best Management Practices) to reduce or eliminate sediment discharge to surface water from storm water and non-storm water discharges. A preliminary WQMP also is required to establish a post-construction implementation and maintenance plan to ensure on-going, long-term erosion protection. Compliance with the WQMP will be required as a condition of approval for the Project, as would the long-term maintenance of erosion and sediment control features. The WQMP for the Project site is provided as *Technical Appendix H1* to this EIR. Because the Project will be required to utilize erosion and sediment control measures to preclude substantial, long-term soil erosion and loss of topsoil, the Project would result in less-than-significant impacts related to soil erosion.

***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?***

The Project site is relatively flat and no substantial natural or man-made slopes are located on or adjacent to the Project site (Google Earth Pro, 2017). As mentioned in Threshold "a," the Project proposes construction of an approximately six (6) to nine (9)-foot-tall retaining wall that will surround the proposed detention basin located in the southwest corner of the Project site. The retaining wall is required to be engineered for long-term stability and would be constructed in accordance with the site-specific recommendations contained within the geologic engineering report for the Project site and included as *Technical Appendix E1* to this EIR (as required by the City of Moreno Valley Municipal Code § 8.21.050). Accordingly, the Project would result in less-than-significant impacts associated with landslide hazards.

Based on laboratory testing of subsurface soils from the Project site, NorCal Engineering determined that near-surface soils have potential for shrinkage/subsidence and collapse (NorCal Engineering, 2017a, pp. 10, 12). However, the geologic engineering report for the Project site (*Technical Appendix E1*) indicates that the site's shrinkage/subsidence and settlement potential could be attenuated through the removal of undocumented fill down to competent materials and replacement with properly compacted fill (NorCal Engineering, 2017a, p. 7). The City will condition the Project to comply with the site-specific ground preparation and construction recommendations contained in the Project site's geologic engineering report. Furthermore, according to the soil infiltration study conducted by NorCal Engineering (*Technical Appendix E1*), the Project site would be suitable for stormwater infiltration without increasing the potential of settlement of the proposed warehouse structure (NorCal Engineering, 2017b, p. 5). Based on the foregoing, potential impacts related to soil shrinkage/subsidence and collapse would be less than significant.

Lateral spreading is primarily associated with liquefaction hazards. As noted above under the discussion of Threshold "a," the potential for liquefaction at the Project site is considered low based on the Project site's topography and soil conditions. Accordingly, impacts associated with lateral spreading would not occur.





***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 risks to life or property?***

Based on expansion index testing of soil samples, NorCal Engineering determined that the upper soils on the Project site are low in expansion potential (NorCal Engineering, 2017a, p. 15). Accordingly, the Project site does not contain expansive soil that would create substantial risks to the proposed Project. No impact would occur.

[Note: Threshold (d) is based on Appendix G of the CEQA Guidelines and references Table 18-1-B of the 1994 Uniform Building Code (UBC) which has been superseded by the current building code, the 2013 CBSC. The 2013 CBSC references ASTM D-4829, a standard procedure for testing and evaluating the expansion index (or expansion potential) of soils established by ASTM International, which was formerly known as the American Society for Testing and Materials (ASTM). ASTM D-4829 was used as the standard for evaluating the Project's potential impact related to expansive soils in the above analysis.]

***Threshold e: Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?***

The proposed Project would be required to connect to the City's municipal wastewater system and would not be permitted to use septic tanks or alternative wastewater disposal systems. Accordingly, the Project would result in no impact related to the use of or performance of septic tanks and/or alternative wastewater systems.

#### **4.5.5 CUMULATIVE IMPACT ANALYSIS**

As noted in the foregoing analysis, all potential Project-related impacts related to geology and soils would be precluded through mandatory conformance with the geotechnical recommendations contained within applicable geologic engineering reports and compliance with standard regulatory requirements as part of the Project's design.

With the exception of erosion hazards, potential geologic and soils effects are inherently restricted to the areas proposed for development and would not contribute to cumulative impacts associated with other existing, planned, or proposed development. That is, issues including fault rupture, seismic ground shaking, liquefaction, landslides, and expansive soils would involve effects to (and not from) the proposed development, and are specific to on-site conditions. Accordingly, addressing these potential hazards for the proposed development would involve using measures to conform to existing requirements, and/or site-specific design and construction efforts that have no relationship to, or impact on, off-site areas. Because of the site-specific nature of these potential hazards and the measures to address them, there would be no connection to similar potential issues or cumulative effects to or from other properties.

As discussed under Threshold "b," regulatory requirements would mandate that measures be incorporated into the Project's design during construction and long-term operation to ensure that significant erosion impacts do not occur. Other development projects in the vicinity of the Project site as well as full General Plan buildout in the City of Moreno Valley would be required to comply with similar regulatory requirements as the Project to preclude substantial adverse erosion impacts, such as the need to obtain an NPDES permit and mandatory compliance with the resulting SWPPPs and WQMPs. All development projects in the vicinity of the Project site also would be required to comply with applicable building code ordinances in their governmental jurisdiction, and SCAQMD Rule 403, which would preclude wind-related erosion hazards during construction. Therefore, the Project would result in less-than-significant erosion impacts, and because other projects within the cumulative study area would be subject to similar mandatory regulatory requirements to control erosion



hazards during construction and long-term operation, cumulative impacts associated with wind and water erosion hazards would be less than significant.

#### **4.5.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION**

Threshold a: Less-than-Significant Impact. The Project would not expose people or structures to substantial adverse effects related to liquefaction or fault rupture. As with all properties within the southern California region, the Project site is subject to seismic ground shaking associated with earthquakes. However, mandatory compliance with local and state ordinances and building codes including, but not limited to, the CBSC (Chapter 18) and City of Moreno Valley Municipal Code § 8.21.050, would ensure that the Project minimizes potential hazards related to seismic ground shaking.

Threshold b: Less-than-Significant Impact. The Project would not result in substantial soil erosion or loss of topsoil. The Project Applicant would be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for construction activities and adhere to a Storm Water Pollution Prevention Plan (SWPPP) as well as SCAQMD Rule 403. With mandatory compliance to these regulatory requirements, the potential for water and wind erosion impacts during construction would be less than significant. Following development, wind and water erosion on the Project site would be minimized, as the areas disturbed during construction would be landscaped or covered with impervious surfaces and drainage would be controlled through a storm drain system. Furthermore, the Project is required by law to implement a WQMP during operation, which would preclude substantial erosion impacts in the long-term.

Threshold c: Less-than-Significant Impact. There is no potential for the Project to cause on- or off-site landslides or lateral spreading. Potential hazards associated with unstable soils would be precluded through mandatory adherence to the recommendations contained in the site-specific geologic engineering report.

Threshold d: Less-than-Significant Impact. The Project site contains soils with low susceptibility to expansion. Potential hazards associated with expansive soils would, thus, be less than significant.

Threshold e: No Impact. No septic tanks or alternative wastewater disposal systems are proposed to be installed on the Project site. Accordingly, no impact would occur associated with soil compatibility for wastewater disposal systems.

#### **4.5.7 MITIGATION**

Impacts would be less than significant; therefore, mitigation is not required.



## **4.6 GREENHOUSE GAS EMISSIONS**

The analysis in this Subsection is based on a report prepared by Urban Crossroads, Inc. titled “Brodiaea Commerce Center Greenhouse Gas Analysis,” dated January 19, 2018, and included as *Technical Appendix F* to this EIR (Urban Crossroads, 2018c). The analysis provided in this Subsection assess the Project’s potential to generate greenhouse gas (GHG) emissions that could contribute to Global Climate Change (GCC) and its associated environmental effects.

### **4.6.1 EXISTING CONDITIONS**

#### **A. Introduction to Global Climate Change**

GCC is defined as the change in average meteorological conditions on Earth with respect to temperature, precipitation, and storms. GCC is a controversial environmental issue in the United States and there is much debate within the scientific community about the degree to which GCC is occurring naturally or as a result of human activity. Some data suggests that GCC has occurred over the course of thousands or millions of years, and that these historical changes to Earth’s climate have occurred naturally without human influence, as in the case of an ice age. However, many scientists believe that the climate shift taking place since the industrial revolution (1900) is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of GHGs in planet Earth’s atmosphere, including carbon dioxide, methane, nitrous oxide, and fluorinated gases. (Urban Crossroads, 2018c, p. 7)

An individual land development project is not capable of generating the magnitude of GHG emissions necessary to cause a discernible effect on global climate. However, individual development projects may contribute to GCC by generating GHGs that combine with other regional and global sources of GHGs. (Urban Crossroads, 2018c, p. 7)

#### **B. Greenhouse Gases**

Carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and Nitrous Oxide (N<sub>2</sub>O) emissions are the focus of evaluation in this Subsection because these gases are the primary contributors to GCC resulting from land development projects. Although other substances, such as fluorinated gases, also contribute to GCC, sources of fluorinated gases are not well-defined and no accepted emissions factors or methodology exist to accurately calculate the emissions of these gases. (Urban Crossroads, 2018c, p. 9)

GHGs have varying global warming potential (GWP) values; GWP values represent the potential of a gas to trap heat in the atmosphere. CO<sub>2</sub> is used as the base reference unit for GWP and, therefore, has a GWP of 1. The atmospheric lifetime and GWP of selected GHGs are summarized in Table 4.6-1, *GWP and Atmospheric Lifetime of Select GHGs*. As shown in the Table 4.6-1, GWP ranges from 1 for CO<sub>2</sub> to 22,800 for Sulfur Hexafluoride (SF<sub>6</sub>). (Urban Crossroads, 2018c, p. 9)

Provided below is a description of the various gases that contribute to GCC. For more information about these gases and their associated human health effects, refer to Section 2.4 of *Technical Appendix F* and the reference sources cited therein.

- Water Vapor (H<sub>2</sub>O) is the most abundant and variable GHG in the atmosphere. Changes in the concentration of water vapor in the atmosphere are considered to be a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization.



**Table 4.6-1 GWP and Atmospheric Lifetime of Select GHGs**

<b>Gas</b>	<b>Atmospheric Lifetime (years)</b>	<b>Global Warming Potential (100 year time horizon)</b>
Carbon Dioxide	50-200	1
Methane	12 ± 3	25
Nitrous Oxide	120	298
HFC-23	264	14,800
HFC-134a	14.6	1,430
HFC-152a	1.5	124
Sulfur Hexafluoride (SF <sub>6</sub> )	3,200	22,800

Source: (Urban Crossroads, 2018c, Table 2-2)

As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity rises (in essence, the air is able to ‘hold’ more water when it is warmer), leading to more water vapor in the atmosphere. The higher concentration of water vapor in the atmosphere is then able to absorb more indirect thermal energy radiated from the Earth, further warming the atmosphere and causing the evaporation cycle to perpetuate. This is referred to as a “positive feedback loop.” The extent to which this positive feedback loop will continue is unknown as there are also dynamics that hold the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually also condense into clouds, which are able to reflect incoming solar radiation and thereby allow less energy to reach the Earth’s surface and heat it up. There are no human health effects from water vapor itself; however, certain pollutants can dissolve in water vapor and the water vapor can then act as a pollutant-carrying agent. (Urban Crossroads, 2018c, pp. 9-10)

- Carbon Dioxide (CO<sub>2</sub>) is an odorless and colorless GHG that is emitted from natural and man-made sources. Natural CO<sub>2</sub> sources include: the decomposition of dead organic matter; respiration of bacteria, plants, animals and fungus; evaporation from oceans; and volcanic outgassing. Man-made CO<sub>2</sub> sources include: the burning of coal, oil, natural gas, and wood. Since the industrial revolution began in the mid-1700s, human activities that produce CO<sub>2</sub> have increased dramatically. As an example, prior to the industrial revolution, CO<sub>2</sub> concentrations in the atmosphere were fairly stable at 280 parts per million (ppm). Today, they are around 370 ppm, an increase of more than 30 percent. Exposure to CO<sub>2</sub> in high concentrations can cause adverse human health effects, but outdoor (atmospheric) levels are not high enough to be detrimental to human health. (Urban Crossroads, 2018c, p. 10)
- Methane (CH<sub>4</sub>) absorbs thermal radiation extremely effectively (i.e., retains heat). Over the last 50 years, human activities such as rice cultivation, cattle ranching, natural gas combustion, and coal mining have increased the concentration of methane in the atmosphere. Other man-made sources include fossil-fuel combustion and biomass burning. No human health effects are known to occur from atmospheric exposure to methane; however, methane is an asphyxiant that may displace oxygen in enclosed spaces. (Urban Crossroads, 2018c, pp. 10-11)



- Nitrous Oxide (N<sub>2</sub>O) concentrations began to rise in the atmosphere at the beginning of the industrial revolution. N<sub>2</sub>O can be transported into the stratosphere, be deposited on the Earth's surface, and be converted to other compounds by chemical reaction. N<sub>2</sub>O is produced by microbial processes in soil and water, including reactions that occur in nitrogen-containing fertilizer. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. N<sub>2</sub>O also is used as an aerosol spray propellant, as a preservative in potato chip bags, and in rocket engines and in race cars. Also, known as laughing gas, N<sub>2</sub>O is a colorless GHG that can cause dizziness, euphoria, and hallucinations. In small doses, it is considered harmless; however, heavy and extended use can cause brain damage. (Urban Crossroads, 2018c, p. 11)
- Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in CH<sub>4</sub> or ethane (C<sub>2</sub>H<sub>6</sub>) with chlorine and/or fluorine atoms. CFCs are non-toxic, non-flammable, insoluble and chemically unreactive in the troposphere (the level of air at the Earth's surface). CFCs were first synthesized in 1928 and have no natural source. CFCs were used for refrigerants, aerosol propellants and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and has been extremely successful, so much so that levels of CFCs are now remaining steady or declining. However, due to their long atmospheric lifetime, some of the CFCs will remain in the atmosphere for over 100 years. (Urban Crossroads, 2018c, p. 11)
- Hydrofluorocarbons (HFCs) are synthetic, man-made chemicals that are used as a substitute for CFCs and have one of the highest global warming potential ratings. The HFCs with the largest measured atmospheric abundances are (in order largest to smallest), HFC-23 (CHF<sub>3</sub>), HFC-134a (CF<sub>3</sub>CH<sub>2</sub>F), and HFC-152a (CH<sub>3</sub>CHF<sub>2</sub>). No human health effects are known to result from exposure to HFCs, which are man-made and used for applications such as automobile air conditioners and refrigerants. (Urban Crossroads, 2018c, p. 11)
- Perfluorocarbons (PFCs) are primarily produced for aluminum production and semiconductor manufacture. PFCs have stable molecular structures and do not break down through chemical processes in the lower atmosphere. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF<sub>4</sub>) and hexafluoroethane (C<sub>2</sub>F<sub>6</sub>). No human health effects are known to result from exposure to PFCs. (Urban Crossroads, 2018c, p. 12)
- Sulfur Hexafluoride (SF<sub>6</sub>) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection. In high concentrations in confined areas, the gas presents the hazard of suffocation because it displaces the oxygen needed for breathing. (Urban Crossroads, 2018c, p. 12)

### **C. Greenhouse Gas Emissions Inventory**

#### **1. Global and National**

Worldwide man-made GHG emissions are tracked by the Intergovernmental Panel on Climate Change. Man-made GHG emissions data is available through 2015. In 2015, total GHG emissions was approximately 28,872,564 gigagrams (Gg) of carbon dioxide equivalent (CO<sub>2</sub>e). The United States is reported as the second-largest emitter of GHGs in the world in 2015. (Urban Crossroads, 2018c, p. 7)



The primary man-made GHG emitted in the United States was CO<sub>2</sub>, representing approximately 83 percent of the United States' total GHG emissions. CO<sub>2</sub> emissions from fossil fuel combustion is the largest source of GHG emission in the United States, accounting for 78 percent of the United States' total GHG emissions. (Urban Crossroads, 2018c, pp. 7-8)

## **2. *State of California***

The California Air Resources Board (CARB) compiles GHG inventories for the State of California. Based on 2017 GHG inventory data, California emitted approximately 440.4 million metric tons (MMT) CO<sub>2</sub>e. California is the second-largest emitter of GHGs in the United States. (Urban Crossroads, 2018c, p. 8)

## **3. *Project Site***

Under existing conditions, the Project site is entirely vacant and undeveloped. The Project site is regularly disturbed by routine maintenance activities (i.e., discing). Sources of GHG emissions on-site under existing conditions include the operation of maintenance equipment associated with periodic weed abatement activities. Nominal GHG emissions are generated by the on-site maintenance activities under existing conditions. (Urban Crossroads, 2018c, pp. 38-39)

## **D. *Potential Effects of Climate Change in California***

In February 2006, the California Climate Change Center (CCCC) published a report titled "Scenarios of Climate Change in California: An Overview" (the "Climate Scenarios report") that is generally instructive about effects of climate change in California. The Climate Scenarios report used a range of emissions scenarios developed by the Intergovernmental Panel on Climate Change (IPCC) to project a series of potential warming ranges (i.e., temperature increases) that may occur in California during the 21st century: lower warming range (3.0-5.4°F); medium warming range (5.5-7.8°F); and higher warming range (8.0-10.4°F). (CCCC, 2006, p. 7)

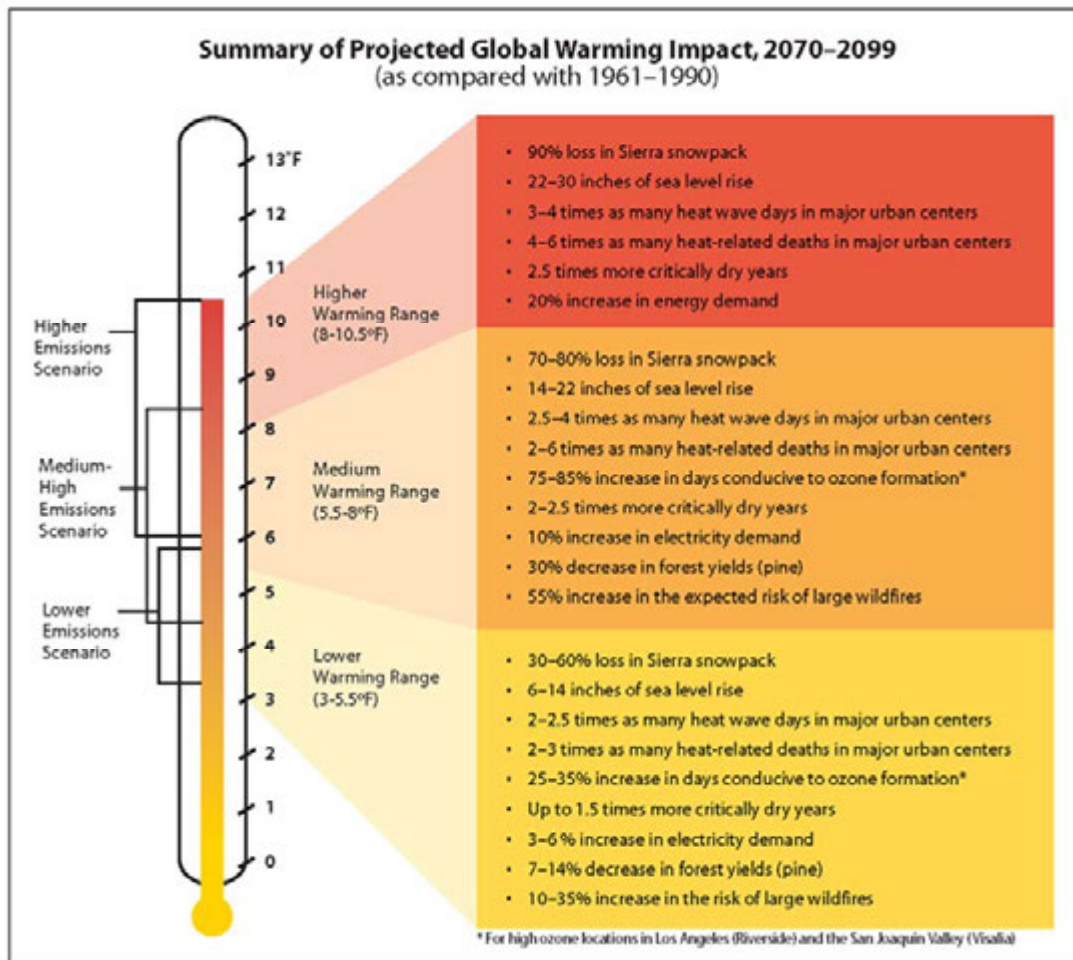
In addition, the California Natural Resources Agency adopted a "California Climate Adaptation Strategy" in 2009. This report details many vulnerabilities arising from climate change with respect to matters such as temperature extremes, sea level rise, wildfires, floods and droughts and precipitation changes, and responds to the Governor's Executive Order (EO) S-13-2008 that called on state agencies to develop California's strategy to identify and prepare for expected climate impacts. (California Natural Resources Agency, 2009, p. 4)

Based on the estimated scenarios presented in the Climate Scenario and California Climate Adaptation Strategy reports, Table 4.6-2, *Summary of Projected Global Warming Impact, 2070-2099*, presents potential impacts of global warming within California. The potential effects of climate change in California are summarized in more detail below and include, but are not limited to, the following:

- Human Health Effects. Climate change can affect the health of Californians by increasing the frequency, duration, and intensity of conditions conducive to air pollution formation, oppressive heat, and wildfires. The primary concern is not the change in average climate, but rather the projected increase in extreme conditions that are responsible for the most serious health consequences. In addition, climate change has the potential to influence asthma symptoms and the incidence of infectious disease. (CCCC, 2006, p. 26)



Table 4.6-2 Summary of Projected Global Warming Impact, 2070-2099



Source: (Urban Crossroads, 2018c, Exhibit 2-A)

- **Water Resource/Supply Effects.** Although most climate model simulations predict relatively moderate changes in precipitation over the 21st century, rising temperatures are expected to lead to diminishing snow accumulation in mountainous watersheds, including the Sierra Nevada. Warmer conditions during the last few decades across the western United States have already produced a shift toward more precipitation falling as rain instead of snow, and snowpacks over the region have been melting earlier in the spring. Delays in snow accumulation and earlier snowmelt can have cascading effects on water supplies, natural ecosystems, and winter recreation. (CCCC, 2006, p. 14)
- **Agriculture Effects.** Agriculture, along with forestry, is the sector of the California economy that is most likely to be affected by a change in climate. California agriculture is a \$68 billion industry. California is the largest agricultural producer in the nation and accounts for 13% of all U.S. agricultural sales, including half of the nation's total fruits and vegetables. Regional analyses of climate trends over agricultural regions of California suggest that climate change is already affecting the agriculture industry. Over the period 1951 to 2000, the growing season has lengthened by about a day per decade, and warming temperatures resulted in an increase of 30 to 70 growing degree days per decade, with much of the increase occurring in the spring. Climate change affects agriculture directly through



increasing temperatures and rising CO<sub>2</sub> concentrations, and indirectly through changes in water availability and pests. (CCCC, 2006, p. 19)

- Forest and Landscape Effects. Climate changes and increased CO<sub>2</sub> concentrations are expected to alter the extent and character of forests and other ecosystems. The distribution of species is expected to shift; the risk of climate-related disturbance such as wildfires, disease, and drought is expected to rise; and forest productivity is projected to increase or decrease – depending on species and region. In California, these ecological changes could have measurable implications for both market (e.g., timber industry, fire suppression and damages costs, public health) and nonmarket (e.g., ecosystem services) values. (CCCC, 2006, p. 22)
- Sea Level Effects. Coastal observations and global model projections indicate that California's open coast and estuaries will experience rising sea levels during the next century. Sea level rise already has affected much of the coast in southern California, Central California, and the San Francisco Bay and estuary. These historical trends, quantified from a small set of California tide gages, have approached 0.08 inches per year (in/yr), which are rates very similar to those estimated for global mean sea level. So far, there is little evidence that the rate of rise has accelerated, and indeed the rate of rise at California tide gages has actually flattened since about 1980. However, projections indicate that substantial sea level rise, even faster than the historical rates, could occur during the next century. Sea level rise projections range from 5.1–24.4 inches (in.) higher than the 2000 sea level for simulations under the lower emissions scenario, from 7.1–29.9 in. for the medium-high emission scenario, and from 8.5–35.2 in. for the higher emissions scenario. (CCCC, 2006, p. 10)

#### **4.6.2 APPLICABLE ENVIRONMENTAL PLANS, POLICIES, AND REGULATIONS**

The following is a brief description of the applicable federal, State, and local environmental laws and related regulations related to GHG emissions.

##### ***A. International Plans, Policies, and Regulations***

###### ***1. Kyoto Protocol***

The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change, which commits its Parties by setting internationally binding emission reduction targets. Recognizing that developed countries are principally responsible for the current high levels of GHG emissions in the atmosphere as a result of more than 150 years of industrial activity, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities." (UNFCCC, n.d.)

The Kyoto Protocol was adopted in Kyoto, Japan, on December 11, 1997 and entered into force on February 16, 2005. The detailed rules for the implementation of the Protocol were adopted at Conference of the Parties (COP) 7 in Marrakesh, Morocco, in 2001, and are referred to as the "Marrakesh Accords." Its first commitment period started in 2008 and ended in 2012. (UNFCCC, n.d.)

On December 8, 2012, In Doha, Qatar, the "Doha Amendment to the Kyoto Protocol" was adopted. The amendment includes:

- New commitments for Annex I Parties to the Kyoto Protocol who agreed to take on commitments in a second commitment period from January 1, 2013 to December 31, 2020;





- A revised list of greenhouse gases (GHG) to be reported on by Parties in the second commitment period; and
- Amendments to several articles of the Kyoto Protocol which specifically referenced issues pertaining to the first commitment period and which needed to be updated for the second commitment period. (UNFCCC, n.d.)

On December 21, 2012, the amendment was circulated by the Secretary-General of the United Nations, acting in his capacity as Depositary, to all Parties to the Kyoto Protocol in accordance with Articles 20 and 21 of the Protocol. (UNFCCC, n.d.)

During the first commitment period, 37 industrialized countries and the European Community committed to reduce GHG emissions to an average of five (5) percent against 1990 levels. During the second commitment period, Parties committed to reduce GHG emissions by at least 18 percent below 1990 levels in the eight-year period from 2013 to 2020; however, the composition of Parties in the second commitment period is different from the first. (UNFCCC, n.d.)

## **2. *The Paris Agreement***

The Paris Agreement builds upon the United Nations Framework Convention on Climate Change and – for the first time – brought all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so. As such, it charts a new course in the global climate effort. (UNFCCC, n.d.)

The Paris Agreement’s central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise the 21st century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. Additionally, the agreement aims to strengthen the ability of countries to deal with the impacts of climate change. To reach these ambitious goals, appropriate financial flows, a new technology framework and an enhanced capacity building framework will be put in place, thus supporting action by developing countries and the most vulnerable countries, in line with their own national objectives. The Agreement also provides for enhanced transparency of action and support through a more robust transparency framework. (UNFCCC, n.d.)

The Paris Agreement requires all Parties to put forward their best efforts through “nationally determined contributions” (NDCs) and to strengthen these efforts in the years ahead. This includes requirements that all Parties report regularly on their emissions and on their implementation efforts. (UNFCCC, n.d.)

In 2018, Parties will take stock of the collective efforts in relation to progress towards the goal set in the Paris Agreement and to inform the preparation of NDCs. There also will be global stock-taking every five years to assess the collective progress towards achieving the purpose of the Agreement and to inform further individual actions by Parties. (UNFCCC, n.d.)

The Paris Agreement entered into force on November 4, 2016, 30 days after the date on which at least 55 Parties to the Convention accounting in total for at least an estimated 55% of the total global greenhouse gas emissions have deposited their instruments of ratification, acceptance, approval, or accession with the Depositary. (UNFCCC, n.d.)



On June 1, 2017, President Donald Trump announced he would begin the process of withdrawing the United States from the Paris Agreement. In accordance with articles within the Paris Agreement, the earliest effective date for the United States' withdrawal from the Agreement is November 4, 2020.

**B. Federal Plans, Policies, and Regulations**

**1. Clean Air Act**

Coinciding with the 2009 meeting of international leaders in Copenhagen, on December 7, 2009, the EPA issued an Endangerment Finding under § 202(a) of the Clean Air Act (CAA), opening the door to federal regulation of GHGs. The Endangerment Finding notes that GHGs threaten public health and welfare and are subject to regulation under the CAA. To date, the EPA has not promulgated regulations on GHG emissions, but it has begun to develop them.

Previously the EPA had not regulated GHGs under the CAA because it asserted that the Act did not authorize it to issue mandatory regulations to address GCC and that such regulation would be unwise without an unequivocally established causal link between GHGs and the increase in global surface air temperatures. In *Massachusetts v. Environmental Protection Agency et al.* (127 S. Ct. 1438 [2007]); however, the U.S. Supreme Court held that GHGs are pollutants under the CAA and directed the EPA to decide whether the gases endangered public health or welfare. The EPA had also not moved aggressively to regulate GHGs because it expected Congress to make progress on GHG legislation, primarily from the standpoint of a cap-and-trade system. However, proposals circulated in both the House of Representative and Senate have been controversial and it may be some time before the U.S. Congress adopts major climate change legislation. The EPA's Endangerment Finding paves the way for federal regulation of GHGs with or without Congress.

**C. State Plans, Policies, and Regulations**

**1. Title 24 Building Energy Standards**

The California Energy Commission (CEC) first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods. The latest revisions (2016 Building Energy Efficiency Standards) became effective on January 1, 2017. The 2016 Building Energy Efficiency Standards are 28 percent more efficient than the previous (2013) Building Energy Efficiency Standards for residential construction and 5 percent more efficient than the previous Standards for non-residential construction. (The 2013 Building Energy Efficiency Standards already were 25 percent more efficient for residential construction and 30 percent more efficient for nonresidential construction than the 2008 Building Energy Efficiency Standards they replaced.)

Part 11 of Title 24 is referred to as the California Green Building Standards Code (CalGreen Code). The purpose of the CalGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality." The CalGreen Code is not intended to substitute or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California



Building Standards Commission (CBSC). Unless otherwise noted in the regulation, all newly constructed buildings in California are subject of the requirements of the CalGreen Code.

## **2. California Assembly Bill No. 1493 (AB 1493)**

AB 1493 required CARB to adopt the nation’s first GHG emission standards for automobiles. On September 24, 2009, CARB adopted amendments to the “Pavley” regulations that reduce GHG emissions in new passenger vehicles from model year 2009 through 2016. These amendments were part of California’s commitment toward a nation-wide program to reduce new passenger vehicle GHGs from 2012 through 2016. CARB’s September amendments cement California’s enforcement of the Pavley rule starting in 2009 while providing vehicle manufacturers with new compliance flexibility. The amendments also prepare California to harmonize its rules with the federal rules for passenger vehicles. (CARB, 2017)

The U.S. EPA granted California the authority to implement GHG emission reduction standards for new passenger cars, pickup trucks, and sport utility vehicles On June 30, 2009. The first California request to implement GHG standards for passenger vehicles, known as a waiver request, was made in December 2005, and was denied by the EPA in March 2008. That decision was based on a finding that California’s request to reduce GHG emissions from passenger vehicles did not meet the CAA requirement of showing that the waiver was needed to meet “compelling and extraordinary conditions.” (CARB, 2017)

CARB’s Board originally approved regulations to reduce GHGs from passenger vehicles in September 2004, with the regulations to take effect in 2009. These regulations were authorized by the 2002 legislation Assembly Bill 1493 (Pavley). (CARB, 2017)

The regulations had been threatened by automaker lawsuits and were stalled by the EPA’s delay in reviewing and then initially denying California’s waiver request. The parties involved entered a May 19, 2009 agreement to resolve these issues. With the granting of the waiver on June 30, 2009, it is expected that the Pavley regulations reduced GHG emissions from California passenger vehicles by about 22 percent in 2012 and about 30 percent in 2016, all while improving fuel efficiency and reducing motorists’ costs. (CARB, 2017)

The CARB has adopted a new approach to passenger vehicles – cars and light trucks – by combining the control of smog-causing pollutants and greenhouse gas 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)

## **3. Executive Order S-3-05**

Executive Order (EO) S-3-05 documents GHG emission reduction goals, creates the Climate Action Team and directs the Secretary of the California EPA to coordinate efforts with meeting the GHG reduction targets with the heads of other state agencies. The EO requires the Secretary to report back to the Governor and Legislature biannually to report: progress toward meeting the GHG goals; GHG impacts to California; and applicable Mitigation and Adaptation Plans. EO S-3-05 goals for GHG emissions reductions include: reducing GHG emissions to 2000 levels by the year 2010; reducing GHG emissions to 1990 levels by the year 2020; and reducing GHG emissions to 80 percent below 1990 levels by 2050. (CCC, n.d.)

## **4. California Assembly Bill 32 – Global Warming Solutions Act of 2006**

In September 2006, Governor Schwarzenegger signed Assembly Bill 32 (AB 32), the California Climate Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020, which



represents a reduction of approximately 15 percent below emissions expected under a “business as usual” scenario. Pursuant to AB 32, the CARB must adopt regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. The full implementation of AB 32 will help mitigate risks associated with climate change, while improving energy efficiency, expanding the use of renewable energy resources, cleaner transportation, and reducing waste. (CARB, 2014) AB 32 specifically required that CARB do the following:

- Prepare and approve a Scoping Plan for achieving the maximum technologically feasible and cost-effective reductions in GHG emissions from sources or categories of sources of GHGs by 2020, and update the Scoping Plan every five years.
- Maintain and continue reductions in emissions of GHG beyond 2020.
- Identify the statewide level of GHG emissions in 1990 to serve as the emissions limit to be achieved by 2020.
- Identify and adopt regulations for discrete early actions that could be enforceable on or before January 1, 2010.
- Adopt a regulation that establishes a system of market-based declining annual aggregate emission limits for sources or categories of sources that emit GHG emissions.
- Convene an Environmental Justice Advisory Committee to advise the Board in developing and updating the Scoping Plan and any other pertinent matter in implementing AB 32.
- Appoint an Economic and Technology Advancement Advisory Committee to provide recommendations for technologies, research, and GHG emission reduction measures. (CARB, 2014)

In November 2007, CARB completed its estimated calculations of Statewide 1990 GHG levels. Net emission 1990 levels were estimated at 427 million metric tons (MMTs) (emission sources by sector were: transportation – 35 percent; electricity generation – 26 percent; industrial – 24 percent; residential – 7 percent; agriculture – 5 percent; and commercial – 3 percent). Accordingly, 427 million metric tons of carbon dioxide equivalent (MMT<sub>CO<sub>2</sub>e</sub>) was established as the emissions limit for 2020. For comparison, CARB’s estimate for baseline GHG emissions was 473 MMT<sub>CO<sub>2</sub>e</sub> for 2000 and without emissions reduction measures 2010 emissions were projected to be 532 MMT<sub>CO<sub>2</sub>e</sub>. “Business as usual” conditions (without the reductions to be implemented by CARB regulations) for 2020 were projected to be 596 MMT<sub>CO<sub>2</sub>e</sub>. (CARB, 2007)

AB 32 required CARB to develop a Scoping Plan which lays out California’s strategy for meeting the goals. The Scoping Plan must be updated every five years. In December 2008, CARB approved the initial Scoping Plan, which included a suite of measures to sharply cut GHG emissions. Table 4.6-3, *Scoping Plan GHG Reduction Measures Towards 2020 Target*, shows the proposed reductions from regulations and programs outlined in the Scoping Plan. While local government operations were not accounted for in achieving the Year 2020 emissions reduction, local land use changes are estimated to result in a reduction of 5 MMT<sub>CO<sub>2</sub>e</sub>, which is approximately 3 percent of the 2020 GHG emissions reduction goal. In recognition of the critical role local governments will play in successful implementation of AB 32, CARB is recommending GHG reduction goals of 15 percent of 2006 levels by 2020 to ensure that municipal and community-wide emissions match the State’s reduction target. According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2 percent through land use planning, resulting in a potential GHG reduction of 2 MMT<sub>CO<sub>2</sub>e</sub> (or approximately 1.2 percent of the GHG reduction target). (CARB, 2014)



**Table 4.6-3 Scoping Plan GHG Reduction Measures Towards 2020 Target**

<i>Recommended Reduction Measures</i>	<i>Reductions Counted toward 2020 Target of 169 MMT CO<sub>2</sub>e</i>	<i>Percentage of Statewide 2020 Target</i>
<b>Cap and Trade Program and Associated Measures</b>		
California Light-Duty Vehicle GHG Standards	31.7	19%
Energy Efficiency	26.3	16%
Renewable Portfolio Standard (33 percent by 2020)	21.3	13%
Low Carbon Fuel Standard	15	9%
Regional Transportation-Related GHG Targets <sup>1</sup>	5	3%
Vehicle Efficiency Measures	4.5	3%
Goods Movement	3.7	2%
Million Solar Roofs	2.1	1%
Medium/Heavy Duty Vehicles	1.4	1%
High Speed Rail	1.0	1%
Industrial Measures	0.3	0%
Additional Reduction Necessary to Achieve Cap	34.4	20%
<b>Total Cap and Trade Program Reductions</b>	<b>146.7</b>	<b>87%</b>
<b>Uncapped Sources/Sectors Measures</b>		
High Global Warming Potential Gas Measures	20.2	12%
Sustainable Forests	5	3%
Industrial Measures (for sources not covered under cap and trade program)	1.1	1%
Recycling and Waste (landfill methane capture)	1	1%
<b>Total Uncapped Sources/Sectors Reductions</b>	<b>27.3</b>	<b>16%</b>
<b>Total Reductions Counted toward 2020 Target</b>	<b>174</b>	<b>100%</b>
<b>Other Recommended Measures – Not Counted toward 2020 Target</b>		
State Government Operations	1.0 to 2.0	1%
Local Government Operations	To Be Determined <sup>2</sup>	NA
Green Buildings	26	15%
Recycling and Waste	9	5%
Water Sector Measures	4.8	3%
Methane Capture at Large Dairies	1	1%
<b>Total Other Recommended Measures – Not Counted toward 2020 Target</b>	<b>42.8</b>	<b>NA</b>

Source: CARB. 2008, MMTons CO<sub>2</sub>e: million metric tons of CO<sub>2</sub>e

<sup>1</sup>Reductions represent an estimate of what may be achieved from local land use changes. It is not the SB 375 regional target.

<sup>2</sup>According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2 percent through land use planning, resulting in a potential GHG reduction of 2 million metric tons of CO<sub>2</sub>e (or approximately 1.2 percent of the GHG reduction target). However, these reductions were not included in the Scoping Plan reductions to achieve the 2020 Target

Overall, CARB determined that achieving the 1990 emission level in 2020 would require a reduction in GHG emissions of approximately 28.5 percent in the absence of new laws and regulations (referred to as "Business-As-Usual" [BAU]). The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team (CAT) early actions and additional GHG reduction measures, identifies additional measures to be pursued as regulations, and outlines the role of the cap-and-trade program.



When the 2020 emissions level projection also was updated to account for implemented regulatory measures, including Pavley (vehicle model-years 2009 - 2016) and the renewable portfolio standard (12% - 20%), the 2020 projection in the BAU condition was reduced further to 507 MTCO<sub>2e</sub>. As a result, based on the updated economic and regulatory data, CARB determined that achieving the 1990 emissions level in 2020 would now only require a reduction of GHG emissions of 80 MTCO<sub>2e</sub>, or approximately 16 percent (down from 28.5 percent), from the BAU condition.

In May 2014, CARB approved the First Update to the Climate Change Scoping Plan (Update), which builds upon the initial Scoping Plan with new strategies and recommendations. The Update highlights California's progress toward meeting the near-term 2020 GHG emission reduction goals, highlights the latest climate change science and provides direction on how to achieve long-term emission reduction goal described in Executive Order S-3-05. The Update recalculates 1990 GHG emissions using new global warming potentials identified in the IPCC Fourth Assessment Report released in 2007. Using those GWPs, the 427 MTCO<sub>2e</sub> 1990 emissions level and 2020 GHG emissions limit identified in the 2008 Scoping Plan would be slightly higher, at 431 MTCO<sub>2e</sub>. Based on the revised 2020 emissions level projection identified in the 2011 Final Supplement and the updated 1990 emissions levels identified in the discussion draft of the First Update, achieving the 1990 emissions level in 2020 would require a reduction of 78 MTCO<sub>2e</sub> (down from 509 MTCO<sub>2e</sub>), or approximately 15.3 percent (down from 28.5 percent), from the BAU condition. (CARB, 2014)

In January 2017, CARB released the draft Second Update to the Scoping Plan, which identifies the State's post-2020 reduction strategy. The Second Update would reflect the 2030 target of a 40 percent reduction below 1990 levels, set by Senate Bill (SB) 32. Key GHG emissions reductions programs that the draft Second Update proposes to build upon include the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, and much cleaner cars, trucks and freight movement, utilizing cleaner, renewable energy, and strategies to reduce methane emissions from agricultural and other wastes. It should be noted the proposed Second Update was under consideration by CARB and was not adopted at the time the NOP for this EIR was published.

#### **5. California Senate Bill No. 1368 (SB 1368)**

In 2006, the State Legislature adopted Senate Bill (SB) 1368 (Perata, Chapter 598, Statutes of 2006), which directs the California Public Utilities Commission (CPUC) to adopt a GHG emission performance standard (EPS) for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than five years from resources that exceed specified emissions criteria. Accordingly, SB 1368 effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. SB 1368 will lead to dramatically lower GHG emissions associated with California energy demand. (CEC, n.d.)

#### **6. Executive Order S-01-07**

Executive Order (EO) S-01-07 is effectively known as the Low Carbon Fuel Standard (LCFS). The Executive Order seeks to reduce the carbon intensity of California's passenger vehicle fuels by at least 10 percent by 2020. The LCFS requires fuel providers in California to ensure that the mix of fuel they sell into the California market meet, on average, a declining standard for GHG emissions measured in CO<sub>2e</sub> grams per unit of fuel energy sold. (CCC, n.d.)



**7. Senate Bill 1078**

Senate Bill (SB) 1078 establishes the California Renewables Portfolio Standard Program, which requires electric utilities and other entities under the jurisdiction of the California Public Utilities Commission to meet 20% of their renewable power by December 31, 2017 for the purposes of increasing the diversity, reliability, public health, and environmental benefits of the energy mix. (CCC, n.d.)

**8. Senate Bill 107**

SB 107 directed California Public Utilities Commission's Renewable Energy Resources Program to increase the amount of renewable electricity (Renewable Portfolio Standard) generated per year, from 17% to an amount that equals at least 20% of the total electricity sold to retail customers in California per year by December 31, 2010. (CCC, n.d.)

**9. Executive Order S-14-08**

On November 17, 2008, Governor Schwarzenegger signed Executive Order S-14-08, revising California's existing Renewable Portfolio Standard (RPS) upward to require all retail sellers of electricity to serve 33% of their load from renewable energy sources by 2020. In order to meet this new goal, a substantial increase in the development of wind, solar, geothermal, and other "RPS eligible" energy projects will be needed. Executive Order S-14-08 seeks to accelerate such development by streamlining the siting, permitting, and procurement processes for renewable energy generation facilities.

**10. Senate Bill 97**

By enacting SB 97 in 2007, California's lawmakers expressly recognized the need to analyze GHGs as a part of the CEQA process. SB 97 required the Governor's Office of Planning and Research (OPR) to develop, and the Natural Resources Agency to adopt, amendments to the CEQA Guidelines addressing the analysis and mitigation of greenhouse gas emissions. (OPR, n.d.) Those CEQA Guidelines amendments clarified several points, including the following:

- Lead agencies must analyze the GHG emissions of proposed projects, and must reach a conclusion regarding the significance of those emissions. (See CEQA Guidelines § 15064.4.)
- When a project's GHG emissions may be significant, lead agencies must consider a range of potential mitigation measures to reduce those emissions. (See CEQA Guidelines § 15126.4(c).)
- Lead agencies must analyze potentially significant impacts associated with placing projects in hazardous locations, including locations potentially affected by climate change. (See CEQA Guidelines § 15126.2(a).)
- Lead agencies may significantly streamline the analysis of GHGs on a project level by using a programmatic GHG emissions reduction plan meeting certain criteria. (See CEQA Guidelines § 15183.5(b).)
- CEQA mandates analysis of a proposed project's potential energy use (including transportation-related energy), sources of energy supply, and ways to reduce energy demand, including through the use of efficient transportation alternatives. (See CEQA Guidelines, Appendix F.) (OPR, n.d.)

The CEQA Guideline amendments do not identify a quantitative threshold of significance for GHG emissions, nor do they prescribe assessment methodologies or specific mitigation measures. Instead, they call for a "good-



faith effort, based on available information, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project.” The amendments encourage lead agencies to consider many factors in performing a CEQA analysis and preserve lead agencies’ discretion to make their own determinations based upon substantial evidence. The amendments also encourage public agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses. The GHG analysis thresholds incorporated into the CEQA Guidelines’ Environmental Checklist (Guidelines Appendix G) are addressed in this EIR. The amendments to the CEQA Guidelines implementing SB 97 became effective on March 18, 2010. (OPR, n.d.)

### **11. Senate Bill 375**

The Sustainable Communities and Climate Protection Act of 2008 (Sustainable Communities Act, SB 375, Chapter 728, Statutes of 2008) supports the State's climate action goals to reduce greenhouse gas (GHG) emissions through coordinated transportation and land use planning with the goal of more sustainable communities. (CARB, 2017b)

Under the Sustainable Communities Act, CARB sets regional targets for GHG emissions reductions from passenger vehicle use. In 2010, CARB established these targets for 2020 and 2035 for each region covered by one of the State's metropolitan planning organizations (MPO). CARB will periodically review and update the targets, as needed. (CARB, 2017b)

Each of California’s MPOs must prepare a "sustainable communities strategy" (SCS) as an integral part of its regional transportation plan (RTP). The SCS contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet its GHG emission reduction targets. Once adopted by the MPO, the RTP/SCS guides the transportation policies and investments for the region. CARB must review the adopted SCS to confirm and accept the MPO's determination that the SCS, if implemented, would meet the regional GHG targets. If the combination of measures in the SCS would not meet the regional targets, the MPO must prepare a separate “alternative planning strategy” (APS) to meet the targets. The APS is not a part of the RTP. (CARB, 2017b)

The Sustainable Communities Act also establishes incentives to encourage local governments and developers to implement the SCS or the APS. Developers can get relief from certain environmental review requirements under CEQA if their new residential and mixed-use projects are consistent with a region’s SCS (or APS) that meets the targets (see Cal. Public Resources Code §§ 21155, 21155.1, 21155.2, 21159.28.). (CARB, 2017b)

### **12. Executive Order B-30-15 & Senate Bill 32**

On April 29, 2015, Governor Brown issued Executive Order B-30-15, which sets a goal to reduce GHG emissions in California to 40 percent below 1990 levels by 2030. The 2030 target serves as a benchmark goal on the way to achieving the GHG reductions goal set by former Governor Schwarzenegger via Executive Order S-3-05 (i.e., 80 percent below 1990 greenhouse gas emissions levels by 2050). (CCC, n.d.)

On September 8, 2016, Governor Jerry Brown signed the Senate Bill (SB) 32 and its companion bill, Assembly Bill (AB) 197. SB 32 requires the state to reduce statewide GHG emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal of 1990 levels by 2020 and provides an intermediate goal to achieving S-3-05, which sets a statewide greenhouse gas reduction target of 80% below 1990 levels by 2050.





At this time, no further analysis is necessary or required by CEQA as it pertains to Executive Order B-30-15 and SB 32 because the Project's horizon (buildout) year would occur in 2019. Pursuant to guidance from the Association of Environmental Professionals (AEP), GHG emissions "...should be identified for the project horizon year and lead agencies should consider the project horizon year when applying a threshold of significance" (AEP, 2016, p. 32). Because the Project's opening year would be 2019, the Project's GHG emissions are instead evaluated against California Assembly Bill 32 (AB 32), which identifies a target to reduce GHG emissions statewide to 1990 levels by 2020. Demonstrating compliance with AB 32's target for 2020 also would show that the Project would not inhibit the State's ability to achieve the 2030 target established by SB 32, as the bulk of the GHG reductions needed by 2030 would occur at the state and regional levels and compliance with the AB 32 threshold would demonstrate that the Project is on trajectory to meet the year 2030 SB 32 emissions target.

**D. Local Plans, Policies, and Regulations**

**1. City of Moreno Valley Climate Action Strategy**

On October 9, 2012, the Moreno Valley City Council approved an Energy Efficiency and Climate Action Strategy and related GHG analysis. The Energy Efficiency and Climate Action Strategy document identifies potential programs and policies to reduce overall City energy consumption and increase the use of renewable energy. The majority of the policies are directed at municipal operations of the City, but the document also contains recommended policies for the community at large (including private development projects). These recommended policies include but are not limited to: energy efficiency, water use reduction, trip reduction, solid waste diversion, and educational policies. The overall goal of the Energy Efficiency and Climate Action Strategy is to ensure that the City is consistent with and would not otherwise conflict with the provisions of AB 32. (City of Moreno Valley, 2012)

**4.6.3 METHODOLOGY FOR ESTIMATING GREENHOUSE GAS EMISSIONS**

The California Emission Estimator Model (CalEEMod), developed by the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA), was used to quantify GHG emissions from Project-related construction and operational activities. The most recent version of CalEEMod available at the time the NOP for this EIR was published was used in the Project analysis (v2016.3.2, released on October 17, 2017). (Urban Crossroads, 2018c, p. 37) Inputs and outputs from the model runs for both Project-related construction and operational activities are provided in Appendix 3.1 of *Technical Appendix F*.

A life-cycle analysis (LCA), which assesses economy-wide GHG emissions from construction (i.e., the processes in manufacturing and transporting all raw materials used in the project development and infrastructure) and operation, was not conducted for the Project due to the lack of scientific consensus on LCA methodology. An LCA depends on emission factors or econometric factors that are not well established for all processes as of the date the NOP for this EIR was published. Additionally, SCAQMD recommends analyzing a project's direct and indirect GHG emissions generated within California in-lieu of an LCA because the life-cycle effects from a project that could occur outside of California might not be very well understood or documented and would be infeasible to mitigate. (Urban Crossroads, 2018c, p. 37)

**A. Methodology for Estimating Project-Related Construction Emissions**

The Project's construction-related GHG emissions were calculated using the same methodology, construction schedule information, and equipment fleet information that were used to calculate construction-related criteria air pollutant emissions, and as previously described in detail in EIR Subsection 4.2, *Air Quality* (Urban



Crossroads, 2018c, p. 37). Refer to EIR Subsection 4.2 and *Technical Appendix F* for a detailed description of the methodology used to calculate the construction GHG emissions of the Project's implementing actions.

In accordance with the SCAQMD recommendations, the Project's construction-related GHG emissions were quantified, amortized over a 30-year period, and then added to the sum of the Project's annual, operational GHG emissions (Urban Crossroads, 2018c, p. 37)

**B. Methodology for Estimating Project-Related Operational Emissions**

The Project's operational GHG emissions were calculated using the same methodology that was used to calculate operational criteria air pollutant emissions, and as previously described in detail in EIR Subsection 4.2, *Air Quality* (Urban Crossroads, 2018c, pp. 38-42). Refer to EIR Subsection 4.2 and *Technical Appendix F* for a detailed description of the methodology used to calculate the Project's operational GHG emissions.

**4.6.4 BASIS FOR DETERMINING SIGNIFICANCE**

In order to assess the significance of a proposed Project's environmental impacts, it is necessary to identify quantitative or qualitative thresholds that, if exceeded, would constitute a finding of significance. As discussed above in Subsection 4.6.1, while estimated Project-related GHG emissions can be calculated, because of the small quantity in proportion to worldwide sources of GHG, the direct impacts of Project-related emissions on GCC and global warming cannot be determined on the basis of available science. There is no evidence at this time that would indicate that the emissions from a project the size of the proposed Project would directly or indirectly affect the global climate.

AB 32 states, in part, that “[g]lobal warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California.” Because global warming is the result of GHG emissions, and GHGs are emitted by innumerable sources worldwide, the proposed Project has no potential to result in a direct impact to GCC; rather, Project-related contributions to GCC, if any, only have potential significance on a cumulative basis. Therefore, the analysis below focuses on the Project's potential to contribute to GCC in a cumulatively considerable manner.

The CEQA Guidelines indicate that a project would result in a significant impact on climate change if a project were to:

- a. *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or*
- b. *Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.*

The above-listed thresholds are derived directly from Appendix G to the CEQA Guidelines and address a development project's potential contribution to GCC. Neither the CEQA Statute nor the CEQA Guidelines prescribe specific methodologies and significance criteria for determining the significance of GHG emissions impacts. The CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate thresholds consistent with the manner in which other impact categories are handled in CEQA. CEQA case law has upheld local agencies' discretion to determine the significance of GHG emissions impacts.

The City of Moreno Valley has not adopted a numerical threshold for determining the significance of GHG emissions; however, the City has discretion to select an appropriate significance criterion used by other



agencies, based on substantial evidence. The SCAQMD adopted a numerical GHG emissions threshold for industrial projects for which SCAQMD is the lead agency. The threshold adopted by SCAQMD, 10,000 metric tons of carbon dioxide equivalent (MTCO<sub>2e</sub>) per year, is a widely accepted threshold used by numerous lead agencies in the South Coast Air Basin (SCAB) and was established based on the recommendations of the California Air Pollution Controls Officers Association (CAPCOA) in a report titled “CEQA and Climate Change” (dated January 2008), which serves as a resource for public agencies as they establish agency procedures for reviewing GHG emissions from projects under CEQA. The CAPCOA report provides three recommendations for evaluating a development project’s GHG emissions. When establishing their significance threshold, SCAQMD selected the CAPCOA non-zero approach which establishes a numerical threshold based on capture of approximately 90 percent of emissions from future development (Approach 2, Threshold 2.5). A 90 percent emission capture rate means that 90 percent of total emissions from all new or modified projects would be subject to evaluation under CEQA. Based on SCAQMD’s research of 1,297 major, industrial source point (i.e., stationary) emission sources in the SCAB, SCAQMD found that source point industrial facilities that generate at least 10,000 MTCO<sub>2e</sub> per year produce approximately 90 percent of the carbon dioxide equivalent emissions in the SCAB per year. As such, SCAQMD established their significance criterion at 10,000 MTCO<sub>2e</sub> as that threshold would capture 90 percent of total emissions from future industrial development in accordance with CAPCOA recommendations. (CAPCOA, 2008, pp. 46-47; SCAQMD, 2008, pp. 3-5)

Based on the foregoing, the City of Moreno Valley selects SCAQMD’s industrial threshold of 10,000 MTCO<sub>2e</sub> as the threshold of significance for the Project’s GHG emissions. If the Project would emit less than 10,000 MTCO<sub>2e</sub> of GHGs per year, the Project would not be considered a substantial GHG emitter. On the other hand, if an industrial project’s GHG emissions would exceed 10,000 MTCO<sub>2e</sub> per year, the project would be considered a substantial source of GHG emissions. The SCAQMD’s industrial threshold was selected by the City because the proposed Project’s operating characteristics, which include one warehouse building with loading bays and a fenced truck court that is expected to house a business(es) that serve mid-stream functions in the goods movement chain between manufacturers and consumers, are characteristic of an industrial land use more so than any other land use type, including commercial and/or residential. Furthermore, evaluating the Project’s GHG emissions against SCAQMD’s industrial threshold will provide a conservative analysis, as SCAQMD only intended their threshold be used to evaluate stationary source GHG emissions, while the analysis presented in this Subsection and *Technical Appendix F* applies the threshold to all of the GHG emissions sources related to the Project (stationary source, mobile source, area source, or other).

#### **4.6.5 IMPACT ANALYSIS**

At the time the GHG emissions impact analysis was performed, the Project proposed to develop a 262,398 s.f. warehouse building. Since that time, minor modifications have been made to the Project’s design in response to comments from City of Moreno Valley staff, which reduced the Project’s building size to 261,807 s.f. The Project’s GHG emissions analysis is based on the original, larger Project proposal and, therefore, represents a conservative projection that overstates the GHG emissions that would be generated by the Project.

***Threshold a: Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?***

The Project’s annual GHG emissions are summarized in Table 4.6-4, *Project Annual GHG Emissions*. As shown in Table 4.6-4, the Project would generate approximately 6,430.54 MTCO<sub>2e</sub> per year. Of the Project’s annual GHG emissions, approximately 5,678.3 MTCO<sub>2e</sub> (88.3%) would be from mobile sources (passenger



**Table 4.6-4 Project Annual GHG Emissions**

Emission Source	Emissions (metric tons per year)			
	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	Total CO <sub>2</sub> e
Annual construction-related emissions amortized over 30 years	26.36	0.01	0.00	26.49
Area	6.51E-03	2.00E-05	0.00	6.95E-03
Energy	225.73	0.01	2.21E-03	226.61
Mobile Sources (Trucks)	495.23	0.01	0.00	495.52
Mobile Sources (Passenger Cars)	5,150.14	0.25	0.00	5,156.29
On-site Equipment	45.97	0.01	0.00	46.34
Waste	50.07	2.96	0.00	124.05
Water Usage	271.00	0.99	0.05	335.24
<b>Total CO<sub>2</sub>e (All Sources)</b>	<b>6,430.54</b>			
<b>Screening Threshold (CO<sub>2</sub>e)</b>	<b>10,000</b>			
<b>Threshold Exceeded?</b>	<b>NO</b>			

Source: (Urban Crossroads, 2018c, Table 3-1)

cars and trucks) and amortized construction equipment emissions, while approximately 752.2 MTCO<sub>2</sub>e (11.7%) would be from all other Project sources combined (construction, area, energy, waste, and water usage). Because the Project’s total annual GHG emissions would not exceed 10,000 MTCO<sub>2</sub>e, the Project would not generate substantial GHG emissions – either directly or indirectly – that would have a significant impact on the environment. Impacts would be less than significant.

**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 would comply with a number of regulations, policies, plans, and policy goals that would further reduce GHG emissions, including the City of Moreno Valley Energy Efficiency and Climate Action Strategy, Title 24 California Building Standards Code (CBSC), Assembly Bill 32 (AB 32), and Senate Bill 32 (SB 32), which are regulations particularly applicable to the Project.

On October 9, 2012, the Moreno Valley City Council approved an Energy Efficiency and Climate Action Strategy and related GHG analysis. The Energy Efficiency and Climate Action Strategy document identifies potential programs and policies to reduce overall City energy consumption and increase the use of renewable energy. The majority of the policies are directed at municipal operations of the City, but the document also contains recommended policies for the community at large (including private development projects). These recommended policies include but are not limited to: energy efficiency, water use reduction, trip reduction, solid waste diversion, and educational policies. The overall goal of the Energy Efficiency and Climate Action Strategy is to ensure that the City is consistent with and would not otherwise conflict with the provisions of AB 32. As demonstrated by the analysis below, the Project would not conflict with the provisions of AB 32 and, therefore, would not obstruct implementation of the components of the City’s Energy Efficiency and Climate Action Strategy that are applicable to the Project.



The Project would include the construction and operation of a warehouse building, which would include contemporary, energy-efficient/energy-conserving design features and operational procedures. Warehouse land uses are not inherently energy-intensive and the total Project energy demands would be comparable to, or less than, other warehouse projects of similar scale and configuration due to the Project's modern construction and requirement to be constructed in accordance with the most recent CBSC (Urban Crossroads, 2018f, p. 1). The CBSC includes the California Energy Code, or Title 24, Part 6 of the California Code of Regulations, also titled The Energy Efficiency Standards for Residential and Nonresidential Buildings. The California Energy Code was established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated approximately every three years to improve energy efficiency by allowing incorporating new energy efficiency technologies and methods. The Project would be required to comply with all applicable provisions of the CBSC. As such, the Project's energy demands would be minimized through design features and operational programs that, in aggregate, would ensure that Project energy efficiencies would comply with – or exceed – incumbent CBSC energy efficiency requirements, thereby minimizing GHG emissions produced during from energy consumption. The Project has no potential to be inconsistent with the mandatory regulations of the CBSC.

As previously discussed in Subsection 4.6.2B, CARB identified measures in its Scoping Plan that would reduce statewide GHG emissions and achieve the emissions reductions goals of AB 32. Thus, projects that are consistent with the CARB Scoping Plan would not conflict with AB 32's mandate to reduce state GHG emissions. Table 4.6-5, *CARB Scoping Plan Consistency*, presents the 39 recommended actions identified by CARB in its Scoping Plan. Of the 39 measures identified, those that would be applicable to the Project consist primarily of actions related to transportation, electricity and natural gas use, green building design, and industrial land uses. A summary of the Project's consistency with the CARB Scoping Plan recommended actions is presented on the following pages and also summarized in Table 4.6-5.

- **Transportation:** Actions T-1, T-2, T-3, and T-4 are related to legislative and public awareness activities required of the State of California and regional planning activities required of metropolitan planning organizations, which are not within the purview of the Project. Actions T-5 and T-6 address operations at ports; because the Project is not located within a port, these actions are not applicable to the Project. Action T-7 requires existing trucks/trailers to be retrofitted with the best available technology and/or CARB-approved technology. The Project would not conflict with this action; however, fleet operators would have the responsibility for demonstrating consistency with this action. Action T-8 requires the creation of a regulatory and/or incentive program to encourage the use of hybrid vehicles and is outside the purview of the Project. Action T-9 addresses a high-speed rail system and is not applicable to the Project. Accordingly, the Project would not conflict with or preclude implementation of the CARB Scoping Plan transportation actions. (Urban Crossroads, 2018c, pp. 32-33)
- **Electricity and Natural Gas & Green Buildings:** Actions E-1, CR-1, and GB-1 target regulatory and building practices to increase energy efficiency. The Project would comply with or surpass the incumbent Title 24 Energy Efficiency standards and would not conflict with these Scoping Plan actions. Actions E-2 and E-3 concern electric utilities and are not applicable to development proposals like the Project. Action E-4 is related to public awareness and incentive programs to promote the use of photovoltaic solar electricity systems. The Project's building is designed to support photovoltaic cells, should they be installed in the future, and the Project would not conflict with Action E-4. Action CR-2 is related to public awareness and incentive programs required of the State of California to promote solar water heaters; this action is not applicable to the Project. Based on the foregoing, the Project would not conflict with or preclude implementation of the CARB Scoping Plan electricity and natural gas or green building actions. (Urban Crossroads, 2018c, p. 34)



**Table 4.6-5 CARB Scoping Plan Consistency**

<b>ID #</b>	<b>Sector</b>	<b>Strategy Name</b>	<b>Applicable to Project?</b>	<b>Will Project Conflict With Implementation?</b>
T-1	Transportation	Pavley I and II – Light-Duty Vehicle GHG Standards	NO	NO
T-2	Transportation	Low Carbon Fuel Standard (Discrete Early Action)	NO	NO
T-3	Transportation	Regional Transportation-Related GHG Targets	NO	NO
T-4	Transportation	Vehicle Efficiency Measures	NO	NO
T-5	Transportation	Ship Electrification at Ports (Discrete Early Action)	NO	NO
T-6	Transportation	Goods-movement Efficiency Measures	NO	NO
T-7	Transportation	Heavy Duty Vehicle Greenhouse Gas Emission Reduction Measure – Aerodynamic Efficiency (Discrete Early Action)	NO	NO
T-8	Transportation	Medium and Heavy-Duty Vehicle Hybridization	NO	NO
T-9	Transportation	High Speed Rail	NO	NO
E-1	Electricity and Natural Gas	Increased Utility Energy efficiency programs More stringent Building and Appliance Standards	YES	NO
E-2	Electricity and Natural Gas	Increase Combined Heat and Power Use by 30,000GWh	NO	NO
E-3	Electricity and Natural Gas	Renewable Portfolio Standard	NO	NO
E-4	Electricity and Natural Gas	Million Solar Roofs	YES	NO
CR-1	Electricity and Natural Gas	Energy Efficiency	YES	NO
CR-2	Electricity and Natural Gas	Solar Water Heating	NO	NO
GB-1	Green Buildings	Green Buildings	YES	NO
W-1	Water	Water Use Efficiency	YES	NO
W-2	Water	Water Recycling	NO	NO
W-3	Water	Water System Energy Efficiency	YES	NO
W-4	Water	Reuse Urban Runoff	NO	NO
W-5	Water	Increase Renewable Energy Production	NO	NO
W-6	Water	Public Goods Charge (Water)	NO	NO
I-1	Industry	Energy Efficiency and Co-benefits Audits for Large Industrial Sources	YES	NO
I-2	Industry	Oil and Gas Extraction GHG Emission Reduction	NO	NO
I-3	Industry	GHG Leak Reduction from Oil and Gas Transmission	NO	NO
I-4	Industry	Refinery Flare Recovery Process Improvements	NO	NO
I-5	Industry	Removal of Methane Exemption from Existing Refinery Regulations	NO	NO
RW-1	Recycling and Waste Management	Landfill Methane Control (Discrete Early Action)	NO	NO
RW-2	Recycling and Waste Management	Additional Reductions in Landfill Methane – Capture Improvements	NO	NO
RW-3	Recycling and Waste Management	High Recycling/Zero Waste	NO	NO
F-1	Forestry	Sustainable Forest Target	NO	NO
H-1	High Global Warming Potential Gases	Motor Vehicle Air Conditioning Systems (Discrete Early Action)	NO	NO
H-2	High Global Warming Potential Gases	SF <sub>6</sub> Limits in Non-Utility and Non-Semiconductor Applications (Discrete Early Action)	NO	NO
H-3	High Global Warming Potential Gases	Reduction in Perfluorocarbons in Semiconductor Manufacturing (Discrete Early Action)	NO	NO
H-4	High Global Warming Potential Gases	Limit High GWP Use in Consumer Products (Discrete Early Action, Adopted June 2008)	NO	NO
H-5	High Global Warming Potential Gases	High GWP Reductions from Mobile Sources	NO	NO
H-6	High Global Warming Potential Gases	High GWP Reductions from Stationary Sources	NO	NO
H-7	High Global Warming Potential Gases	Mitigation Fee on High GWP Gases	NO	NO
A-1	Agriculture	Methane Capture at Large Dairies	NO	NO

Source: (Urban Crossroads, 2018c, Table 2-5)



- Water Use: Only Actions W-1 and W-3 are applicable to development proposals like the Project; however, because the Project would not exceed the audit threshold for these actions, the Project is considered consistent with Actions W-1 and W-3 and no specific action or activity is required of the Project. Based on the foregoing, the Project would not conflict with or preclude implementation of the CARB Scoping Plan water use actions. (Urban Crossroads, 2018c, p. 34)
- Industrial Use: All but one of the CARB Scoping Plan industrial actions are related to oil and gas extraction, refining, and/or transmission and are not applicable to the Project. The Project would not exceed the audit threshold for the one applicable action, Action I-1, and; therefore, is not considered a large emitter of GHGs. Accordingly, the Project would not conflict with Action I-1. Based on the foregoing, the Project would not conflict with or preclude implementation of the CARB Scoping Plan industrial use actions. (Urban Crossroads, 2018c, pp. 34-35)
- Agriculture: The Project does not include agricultural uses and the Project site does not contain agricultural uses under existing conditions. Therefore, Agriculture Action A-1 is not applicable to the Project and the Project would not conflict with or preclude implementation of the CARB Scoping Plan agriculture actions. (Urban Crossroads, 2018c, p. 32)

As demonstrated by the foregoing analysis, the Project would not conflict with or preclude implementation of the CARB Scoping Plan.

In April 2015, Governor Edmund Brown Jr. signed EO B-30-15, which advocated for a statewide GHG-reduction target of 40 percent below year 1990 levels by 2030 and 80 percent below 1990 levels by 2050. In September 2016, Governor Brown signed the Senate Bill (SB) 32. SB 32 formally established a statewide goal to reduce GHG emissions to 40 percent below year 1990 levels by 2030. To date, no statutes or regulations have been adopted to translate the year 2050 GHG reduction goal into comparable, scientifically-based statewide emission reduction targets.

According to research conducted by the Lawrence Berkeley National Laboratory and supported by the CARB, California, under its existing and proposed GHG reduction policies, is on track to meet the years 2020 and 2030 reduction targets established by AB 32 and SB 32, respectively (Urban Crossroads, 2018c, p. 26). As described above, the Project would not conflict with or obstruct implementation of the CARB Scoping Plan; therefore, the Project would not interfere with the State's ability to achieve the year 2030 GHG-reduction target established by SB 32.

Rendering a significance determination for year 2050 GHG emissions relative to EO B-30-15 would be speculative because EO B-30-15 establishes a goal 32 years into the future; no agency with GHG subject matter expertise has adopted regulations to achieve these statewide goals at the project-level; and, available analytical models cannot presently quantify all project-related emissions in those future years. Further, due to the technological shifts anticipated and the unknown parameters of the regulatory framework in 2050, available GHG models and the corresponding technical analyses are subject to limitations for purposes of quantitatively estimating the Project's emissions in 2050. (Urban Crossroads, 2018c, p. 26)

As described on the preceding pages, the Project would not conflict with the State's ability to achieve the State-wide GHG reduction mandates and would be consistent with applicable policies and plans related to GHG emissions reductions. Therefore, the Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and would result in a less-than-significant impact.



#### 4.6.6 CUMULATIVE IMPACT ANALYSIS

GCC occurs as the result of global emissions of GHGs. An individual development project does not have the potential to result in direct and significant GCC-related effects in the absence of cumulative sources of GHGs. The CEQA Guidelines also emphasize that the effects of GHG emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis (See CEQA Guidelines § 15130[f]). Accordingly, the analysis provided in Subsection 4.6.5 reflects a cumulative impact analysis of the GHG emissions related to the Project. As concluded in Subsection 4.6.5, the Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Accordingly, the Project would not result in a cumulatively-considerable impact related to GHG emissions.

#### 4.6.7 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a: Less-than-Significant Impact. The Project is calculated to generate approximately 6,430.54 MTCO<sub>2e</sub> annually, which would not exceed the SCAQMD's industrial significance threshold of 10,000 MTCO<sub>2e</sub>. As such, the Project would not generate substantial GHG emissions – either directly or indirectly – that would have a significant impact on the environment.

Threshold b: Less-than-Significant Impact. The Project would be consistent with applicable regulations, policies, plans, and policy goals that would reduce GHG emissions.

#### 4.6.8 MITIGATION

Impacts would be less than significant; therefore, mitigation is not required.





## **4.7 HAZARDS AND HAZARDOUS MATERIALS**

The information and analysis presented in this Subsection is based, in part, on a technical study that was prepared for the Project site by SCS Engineers (hereafter, “SCS”), titled “Phase I Environmental Site Assessment, 16.37-Acres of Undeveloped Land, Southwest Corner of Alessandro Boulevard and Heacock Street,” dated August 31, 2017, and included as *Technical Appendix G* to this EIR. This Subsection also is based on information contained in the City of Moreno Valley General Plan (City of Moreno Valley, 2016); the City of Moreno Valley General Plan EIR (City of Moreno Valley, 2006); and Google Earth Pro (Google Earth Pro, 2017). Refer to Section 7.0, *References*, for a complete list of reference sources.

For the purposes of this EIR, the term “toxic substance” is defined as a substance that, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may present an unreasonable risk of injury to human health or the environment. Toxic substances include chemical, biological, flammable, explosive, and radioactive substances.

For purposes of this EIR, the term “hazardous material” is defined as a substance that, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may: 1) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, disposed of, or otherwise mismanaged; or 2) cause or contribute to an increase in mortality or an increase in irreversible or incapacitating illness. Hazardous waste is defined in the California Code of Regulations, Title 22, § 66261.3. The defining characteristics of hazardous waste are: ignitability (oxidizers, compressed gases, and extremely flammable liquids and solids), corrosivity (strong acids and bases), reactivity (explosives or generates toxic fumes when exposed to air or water), and toxicity (materials listed by the United States Environmental Protection Agency (USEPA) as capable of inducing systemic damage to humans or animals). Certain wastes are called “Listed Wastes” and are found in the California Code of Regulations, Title 22, §§ 66261.30 through 66261.35. Wastes appear on the lists because of their known hazardous nature or because the processes that generate them are known to produce hazardous wastes (which are often complex mixtures).

### **4.7.1 EXISTING CONDITIONS**

As described in EIR Section 2.0, and illustrated on Figure 2-3, *Aerial Photograph*, the Project site is vacant, undeveloped land. The Project site is routinely maintained (i.e., disced) to remove vegetation from the site to reduce the risk of fire as required by the Moreno Valley Fire Department.

#### **A. Historical Review, Regulatory Records Review, and Field Reconnaissance**

##### **1. Historical Review**

SCS reviewed various sources of information to determine the historical use of the Project site, including historical aerial photographs, historical topographic maps, Environmental Data Resources (EDR)-Sanborn collection of regulatory database records, city directories, historical site occupants, and historical site ownership records. Refer to *Technical Appendix G* of this EIR for a more detailed description of SCS’s research results.

The Project site has consisted of vacant, undeveloped land since at least 1938, with the exception of limited agricultural activities that occurred after 1985 and ceased before 1994. (Agricultural activities are present on the southern half of the Project site in an aerial photograph from 1989 but there are no agricultural activities on the Project site in the 1985 and 1994 aerial photographs, respectively.) Historical records showed no past presence of structures on the Project site. (SCS, 2017, pp. 6-9)



The area surrounding the Project site was undeveloped through the late 1970s. In the late 1970s, high pressure pipelines for water and petroleum were installed to the west and southwest of the Project site. Shopping center buildings to the north and single-family residences to the east of the Project site were developed in the early 1980s. In the early 1990s, another shopping center to the northeast of the Project site was developed. The stormwater drainage course located east of the Project site was channelized with concrete in the early 1990s (i.e., Heacock Channel). (SCS, 2017, pp. 6-9)

## **2. *Regulatory Records Review***

SCS researched federal, State, and local environmental records databases to identify properties within one mile of the Project site with reported environmental issues. A summary of the research results is provided below; a detailed description of the environmental record review results is included in *Technical Appendix G* of this EIR.

The Project site was not identified on any federal, State or local environmental records database. However, the Project site is situated at the furthest northeastern corner of the historic limits of the March Air Force Base (currently known as March Air Reserve Base). Historic activities at March Air Reserve Base have resulted in several instances of contamination at the Base and, in the Project site vicinity, remediation work at the Base is occurring south of Cactus Avenue, approximately 0.75-mile south and southwest of the Project site. Because of the Project site's location (downgradient of the Base) and because no historical base operations were conducted on the Project site, it is unlikely that the March Air Reserve Base negatively contributed to the environmental condition of the Project site. (SCS, 2017, p. 11)

Properties within a one-mile radius of the Project site are listed on a combined 35 federal, State, and/or local hazardous materials-related databases, including 17 listings within an approximately 660-foot radius (0.125-mile) of the Project site (SCS, 2017, Appendix D). Refer to *Technical Appendix G* for a detailed summary of all the hazardous materials sites in proximity to the Project site. None of the hazardous materials database listings for properties near the Project site represent a substantial environmental risk to the Project site (SCS, 2017, pp. 10-12).

## **3. *Field Reconnaissance***

SCS conducted an inspection of the Project site on July 31, 2017. During the site inspection, SCS observed the property to consist of vacant land containing no structures and little or no vegetative cover. No evidence of prior/current storage or handling of hazardous substances was observed on the Project site. Additionally, no evidence of hydraulic/electrical equipment, recognized environmental conditions (RECs), above ground storage tanks (ASTs), underground storage tanks (USTs), water wells, or significant chemical release were observed on the Project site. SCS observed minor trash throughout the Project site; however, none of the observed waste contained hazardous materials. (SCS, 2017, pp. 5-6, 14)

### **B. *Airport Hazards***

The Project site is located within the influence area of March Air Reserve Base. According to the *March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan* (ALUCP), the entire Project site is located within "Compatibility Zone E," which indicates there are no land use or design restrictions for the Project site, with the exception of hazards to flight (ALUC, 2014a, p. 9, Table MA-1). In addition, according to the ALUCP, the Project site is not located within the March Air Reserve Base's Accident Potential Zone, its General Approach/Departure Traffic Pattern (approximately 80% of aircraft overflights estimated to occur



within these limits), or within its Closed Circuit Traffic Pattern Envelope (approximately 80% of large aircraft overflights estimated to occur within these limits) (ALUC, 2014b, Exhibit MA-5). Lastly, according to City of Moreno Valley General Plan FEIR Figure 5.5-3, *City Areas Affected by Aircraft Hazard Zones*, the Project site is not located within an Accident Potential Zone or “Clear Zone” (i.e., high risk areas 3,000 feet from each end of the runway) for the March Air Reserve Base (City of Moreno Valley, 2006, Figure 5.5-3).

### **C. Wildland Fire Hazards**

The Project site is located in an urbanized portion of the City of Moreno Valley and is not located adjacent to any wildlands (Google Earth Pro, 2017). According to the California Department of Forestry and Fire Protection (Cal Fire), the Project site is not located within a high fire hazard severity zone (Cal Fire, 2009).

## **4.7.2 APPLICABLE ENVIRONMENTAL PLANS, POLICIES, AND REGULATIONS**

Hazardous materials and hazardous wastes are regulated by various federal, state, and local regulations to protect public health and the environment. This section summarizes the overall regulatory framework governing hazardous materials management that is applicable to the Project and the Project site.

### **A. Federal Plans, Policies, and Regulations**

#### **1. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Superfund Amendments and Reauthorization Act (SARA)**

The Comprehensive Environmental Response, Compensation, and Liability Act, also known as CERCLA or Superfund, provides a Federal "Superfund" to clean up uncontrolled or abandoned hazardous-waste sites as well as accidents, spills, and other emergency releases of pollutants and contaminants into the environment. Through CERCLA, the Environmental Protection Agency (EPA) was given power to seek out those parties responsible for any release and assure their cooperation in the cleanup. The EPA cleans up orphan sites when potentially responsible parties cannot be identified or located, or when they fail to act. Through various enforcement tools, the EPA obtains private party cleanup through orders, consent decrees, and other small party settlements. The EPA also recovers costs from financially viable individuals and companies once a response action has been completed. (EPA, 2017d)

The EPA is authorized to implement the Act in all 50 states and U.S. territories. Superfund site identification, monitoring, and response activities in states are coordinated through the state environmental protection or waste management agencies. (EPA, 2017d)

The Superfund Amendments and Reauthorization Act (SARA) of 1986 reauthorized CERCLA to continue cleanup activities around the country. Several site-specific amendments, definitions clarifications, and technical requirements were added to the legislation, including additional enforcement authorities. Also, Title III of SARA authorized the Emergency Planning and Community Right-to-Know Act (EPCRA). (EPA, 2017d)

#### **2. Resource Conservation and Recovery Act (RCRA)**

The Resource Conservation and Recovery Act (RCRA) gives the EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. (EPA, 2016a)



The Federal Hazardous and Solid Waste Amendments (HSWA) are the 1984 amendments to RCRA that focused on waste minimization and phasing out land disposal of hazardous waste as well as corrective action for releases. Some of the other mandates of this law include increased enforcement authority for EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program. (EPA, 2016a)

### **3. *Hazardous Materials Transportation Act (HMTA)***

The Hazardous Materials Transportation Act of 1975 (HMTA) empowered the Secretary of Transportation to designate as hazardous material any "particular quantity or form" of a material that "may pose an unreasonable risk to health and safety or property." (OSHA, n.d.)

Hazardous materials regulations are subdivided by function into four basic areas:

- Procedures and/or Policies 49 CFR Parts 101, 106, and 107
- Material Designations 49 CFR Part 172
- Packaging Requirements 49 CFR Parts 173, 178, 179, and 180
- Operational Rules 49 CFR Parts 171, 173, 174, 175, 176, and 177 (OSHA, n.d.)

The HMTA is enforced by use of compliance orders [49 U.S.C. 1808(a)], civil penalties [49 U.S.C. 1809(b)], and injunctive relief (49 U.S.C. 1810). The HMTA (Section 112, 40 U.S.C. 1811) preempts state and local governmental requirements that are inconsistent with the statute, unless that requirement affords an equal or greater level of protection to the public than the HMTA requirement. (OSHA, n.d.)

### **4. *Hazardous Materials Transformation Uniform Safety Act of 1990***

In 1990, Congress enacted the Hazardous Materials Transportation Uniform Safety Act (HMTUSA) to clarify the maze of conflicting state, local, and federal regulations. Like the HMTA, the HMTUSA requires the Secretary of Transportation to promulgate regulations for the safe transport of hazardous material in intrastate, interstate, and foreign commerce. The Secretary also retains authority to designate materials as hazardous when they pose unreasonable risks to health, safety, or property. (OSHA, n.d.)

The statute includes provisions to encourage uniformity among different state and local highway routing regulations, to develop criteria for the issuance of federal permits to motor carriers of hazardous materials, and to regulate the transport of radioactive materials. (OSHA, n.d.)

### **5. *Occupational Safety and Health Act (OSHA)***

Congress passed the Occupational and Safety Health Act (OSHA) to ensure worker and workplace safety. Their goal was to make sure employers provide their workers a place of employment free from recognized hazards to safety and health, such as exposure to toxic chemicals, excessive noise levels, mechanical dangers, heat or cold stress, or unsanitary conditions. (EPA, 2016b)

In order to establish standards for workplace health and safety, the Act also created the National Institute for Occupational Safety and Health (NIOSH) as the research institution for OSHA. OSHA is a division of the



U.S. Department of Labor that oversees the administration of the Act and enforces standards in all 50 states. (EPA, 2016b)

## **6. Toxic Substances Control Act**

The Toxic Substances Control Act of 1976 provides the EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from TSCA, including, among others, food, drugs, cosmetics, and pesticides. The TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon, and lead-based paint. (EPA, 2016c)

Various sections of the TSCA provide authority to:

- Require, under Section 5, pre-manufacture notification for "new chemical substances" before manufacture
- Require, under Section 4, testing of chemicals by manufacturers, importers, and processors where risks or exposures of concern are found
- Issue Significant New Use Rules (SNURs), under Section 5, when it identifies a "significant new use" that could result in exposures to, or releases of, a substance of concern.
- Maintain the TSCA Inventory, under Section 8, which contains more than 83,000 chemicals. As new chemicals are commercially manufactured or imported, they are placed on the list.
- Require those importing or exporting chemicals, under Sections 12(b) and 13, to comply with certification reporting and/or other requirements.
- Require, under Section 8, reporting and record-keeping by persons who manufacture, import, process, and/or distribute chemical substances in commerce.
- Require, under Section 8(e), that any person who manufactures (including imports), processes, or distributes in commerce a chemical substance or mixture and who obtains information which reasonably supports the conclusion that such substance or mixture presents a substantial risk of injury to health or the environment to immediately inform EPA, except where EPA has been adequately informed of such information. EPA screens all TSCA b§8(e) submissions as well as voluntary "For Your Information" (FYI) submissions. The latter are not required by law, but are submitted by industry and public interest groups for a variety of reasons. (EPA, 2016c)

## **B. State Plans, Policies, and Regulations**

### **1. Cal/OSHA and the California State Plan**

Under an agreement with OSHA, since 1973 California has operated an occupational safety and health program in accordance with Section 18 of the federal OSHA. The State of California's Department of Industrial Relations administers the California Occupational Safety and Health Program, commonly referred to as Cal/OSHA. The State of California's Division of Occupational Safety and Health (DOSH) is the principal agency that oversees plan enforcement and consultation. In addition, the California State program has an independent Standards Board responsible for promulgating State safety and health standards, and reviewing variances. It also has an Appeals Board to adjudicate contested citations and the Division of Labor Standards Enforcement to investigate complaints of discriminatory retaliation in the workplace.



Pursuant to 29 CFR 1952.172, the California State Plan applies to all public and private sector places of employment in the state, with the exception of federal employees, the United States Postal Service, private sector employers on Native American lands, maritime activities on the navigable waterways of the United States, private contractors working on land designated as exclusively under federal jurisdiction and employers that require federal security clearances. Cal/OSHA is the only agency in the state authorized to adopt, amend, or repeal occupational safety and health standards or orders. In addition, the Standards Board maintains standards for certain things not covered by federal standards or enforcement, including: elevators, aerial passenger tramways, amusement rides, pressure vessels and mine safety training. The Cal/OSHA enforcement unit conducts inspections of California workplaces in response to a report of an industrial accident, a complaint about an occupational safety and health hazard, or as part of an inspection program targeting industries with high rates of occupational hazards, fatalities, injuries or illnesses.

## **2. *California Hazardous Waste Control Law***

The Hazardous Waste Control Law (HWCL) (Health and Safety Code [HSC], Division 20, Chapter 6.5, Article 2, Section 25100, *et seq.*) is the primary hazardous waste statute in California. The HWCL implements RCRA as a “cradle-to-grave” waste management system in the state. It specifies that generators have the primary duty to determine whether their wastes are hazardous and to ensure its proper management. The HWCL also establishes criteria for the reuse and recycling of hazardous wastes used or reuse as raw materials. The HWCL exceeds federal requirements by mandating source reduction planning and broadening requirements for permitting facilities that treat hazardous waste. It also regulates a number of waste types and waste management activities not covered by federal law (RCRA).

## **3. *California Code of Regulations (CCR), Titles 22 and 26***

A variety of California Code of Regulation (CCR) titles address regulations and requirements for generators of hazardous waste. Title 22 contains detailed compliance requirements for hazardous waste generators, transporters, and facilities for treatment, storage, and disposal. Because California is a fully-authorized state according to RCRA, most regulations (i.e., 40 CFR 260, *et seq.*) have been duplicated and integrated into Title 22. However, because the Department of Toxic Substances Control (DTSC) regulates hazardous waste more stringently than the EPA, the integration of state and federal hazardous waste regulations that make up Title 22 does not contain as many exemptions or exclusions as does 40 CFR 260. As with the HSC, Title 22 also regulates a wider range of waste types and waste management activities than does RCRA. To aid the regulated community, California has compiled hazardous materials, waste, and toxics-related regulations from CCR, Titles 3, 8, 13, 17, 19, 22, 23, 24 and 27 into one consolidated listing: CCR Title 26 (Toxics). However, the hazardous waste regulations are still commonly referred to collectively as “Title 22.”

### **C. *Local Plans, Policies, and Regulations***

The aforementioned federal and State hazardous materials regulations require all businesses that handle more than a specified amount of hazardous materials or extremely hazardous materials to obtain a hazardous materials permit and submit a business plan to its local Certified Unified Program Agency (CUPA). The CUPA also ensures local compliance with all applicable hazardous materials regulations. The CUPA with responsibility for the City of Moreno Valley is the Riverside County Department of Environmental Health (DEH). The Riverside County DEH also manages and oversees 22 programs related to hazardous materials/waste, including programs related to the handling and storage of hazardous materials, hazardous materials remediation, petroleum storage tanks, green waste, solid waste, liquid waste, universal waste and environmental cleanup. The DEH also manages and oversees programs related to emergency response and enforcement, vector control and water quality. (DEH, 2015).



**4.7.3 BASIS FOR DETERMINING SIGNIFICANCE**

The proposed Project would result in a significant impact to hazards and hazardous materials if the Project or any Project-related component would:

- a. *Create significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials;*
- b. *Create a significant to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;*
- c. *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;*
- d. *Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;*
- e. *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;*
- f. *For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area;*
- g. *Impair implementation of or physically interfere with an emergency response plan or emergency evacuation plan; or*
- h. *Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.*

The above-listed thresholds are derived directly from Appendix G to the CEQA Guidelines and address the typical, adverse effects related to hazards and hazardous materials that could result from development projects.

**4.7.4 IMPACT ANALYSIS**

<b>Threshold a:</b>	<i>Would the Project create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?</i>
<b>Threshold b:</b>	<i>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?</i>

**A. Impact Analysis for Existing Site Conditions**

As discussed in Subsection 4.7.1, the Project site contains no evidence of historic or current storage and/or disposal of hazardous materials. Additionally, there is no evidence of RECs, ASTs, USTs, or significant chemical release on the Project site. (SCS, 2017, p. 6)

The Project site has mostly consisted of vacant, undeveloped land since at least 1938. There was a period beginning as early as the mid-1980s and ending as late as the early-1990s when the southern portion of the Project site was used for agricultural activities; however, SCS did not observe any signs of any pesticide use, storage, or mismanagement on the Project site associated with the former agricultural use. Furthermore, the



types of pesticides most commonly associated with adverse human health effects (organochlorides such as DDT and dieldrin) were banned from agricultural use in the early 1970s; therefore, there is no potential any of these pesticides harmful to human health were used on the Project site. Lastly, in SCS's experience it is not uncommon to find trace amounts of pesticides in the soils of former agricultural areas in southern California, but that trace concentrations of pesticides do not represent a hazard to future industrial uses of the Project site and, also, do not represent a hazard to the environment or to people who live near the Project site. (SCS, 2017, p. 9)

As noted in Subsection 4.7.1, high-pressure pipelines for water and petroleum are present in the immediate vicinity of the Project site. Based on the visual inspection and database records reviewed, SCS did not identify any indications of releases from the pipelines in the vicinity of the Project site; therefore, the pipelines would not contribute a negative adverse effect on the Project site. (SCS, 2017, p. 13).

***B. Impact Analysis for Temporary Construction-Related Activities***

Heavy equipment (e.g., dozers, excavators, tractors) would be operated on the Project site during implementation of the Project. This heavy equipment would likely be fueled and maintained by petroleum-based substances such as diesel fuel, gasoline, oil, and hydraulic fluid, which are considered hazardous if improperly stored or handled. In addition, materials such as paints, adhesives, solvents, and other substances typically used in building construction would be located on the Project site during construction. Improper use, storage, or transportation of hazardous materials can result in accidental releases or spills, potentially posing health risks to workers, the public, and the environment. This is a standard risk on all construction sites, and there would be no greater risk for improper handling, transportation, or spills associated with the Project than would occur on any other similar construction site. Construction contractors would be required to comply with all applicable federal, State, and local laws and regulations regarding the transport, use, and storage of hazardous construction-related materials, including but not limited requirements imposed by the EPA, DTSC, and the Santa Ana RWQCB. With mandatory compliance with applicable hazardous materials regulations, the Project would not create significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials during the construction phase. A less-than-significant impact would occur.

***C. Impact Analysis for Long-Term Operation***

The future building user(s) that would occupy the Project site is not yet identified. The type of occupant that is anticipated include general warehousing, industrial, manufacturing, assembly, or similar use types in the proposed building.

It is possible that hazardous materials could be used during the course of a future building user's daily operations. State and federal Community-Right-to-Know laws allow the public access to information about the amounts and types of chemicals that may be used by businesses on the Project site. Laws also are in place that require businesses to plan and prepare for possible chemical emergencies. Any business that occupies the building on the Project site and that handles/stores substantial quantities of hazardous materials (as defined in § 25500 of California Health and Safety Code, Division 20, Chapter 6.95) will require a permit from the County of Riverside, Health Services Agency, Department of Health Hazardous Materials Division in order to register the business as a hazardous materials handler. Such businesses also are required to comply with California's Hazardous Materials Release Response Plans and Inventory Law, which requires immediate reporting to the County of Riverside Fire Department and the State Office of Emergency Services regarding any release or threatened release of a hazardous material, regardless of the amount handled by the business, and to prepare a Hazardous Materials Business Emergency Plan (HMBEP). An HMBEP is a written set of





procedures and information created to help minimize the effects and extent of a release or threatened release of a hazardous material.

If a business that uses or stores hazardous materials occupies the Project site, the business owner and operator would be required to comply with all applicable federal, State, and local regulations to ensure proper use, storage, emission, and disposal of hazardous substances (as described above). With mandatory regulatory compliance, the Project would not pose a significant hazard to the public or the environment through the routine transport, use, storage, emission, or disposal of hazardous materials, nor would the Project increase the potential for accident conditions which could result in the release of hazardous materials into the environment. With mandatory regulatory compliance, potential hazardous materials impacts associated with long-term operation of the Project are regarded as less than significant and no mitigation is required.

***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?***

No existing or proposed schools are located within one-quarter mile of the Project site. The nearest schools to the Project site are Serrano Elementary School, located at 24100 Delphinium Avenue, approximately 0.50-mile southeast of the Project site and Creekside Elementary School, located at 13563 Heacock Street, approximately 0.50-mile north of the Project site (Google Earth Pro, 2017; MVUSD, 2015). Accordingly, the proposed Project has no potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, and/or wastes within one-quarter mile of an existing or proposed school.

As described above under the analysis for Thresholds “a” and “b,” the transport of hazardous substances or materials to-and-from the Project site during construction and long-term operational activities would be required to comply with applicable federal, State, and local regulations to preclude substantial public safety hazards. Accordingly, there would be no potential for existing or proposed schools to be exposed to substantial safety hazards associated with the routine transport of hazardous substances or materials to-and-from the Project site. Thus, no impact would occur and no mitigation is required.

Refer to EIR Subsection 4.2, *Air Quality*, for analysis pertaining to human health risks associated with air pollutant emissions associated with the Project, including risks to the maximally exposed school child located more than one-quarter mile from the Project site. As concluded in EIR Subsection 4.2, *Air Quality*, Project-related health risks would be less than significant.

***Threshold d: Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result would it create a significant hazard to the public or the environment?***

The Project site is not located on any list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (DTSC, 2017; SCS, 2017, p. 10). Accordingly, no impact would occur.

***Threshold e: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?***

The Project site is located approximately 1.0-mile northeast of the March Air Reserve Base. As mentioned previously in Subsection 4.7.1B, the Project site is not located within an “Accident Potential Zone” or “Clear



Zone” (i.e., high risk areas 3,000 feet from each end of the runway) (City of Moreno Valley, 2006, Figure 5.5-3; ALUC, 2010, Exhibit 2-14).

According to the *March Air Reserve Base/Inland Port ALUCP*, the Project site is located in Compatibility Zone E. Within Compatibility Zone E, there are no land use or design restrictions due to potential safety conflicts, with the exception of hazards to flight (such as very tall buildings, flashing lights, etc.). (ALUC, 2014a, Table MA-1) Thus, the light industrial land use proposed by the Project is permitted in Zone E and would not conflict with any of the safety policies or requirements of the *March Air Reserve Base/Inland Port ALUCP*. The warehouse building proposed by the Project would be no greater than 43 feet tall and does not include an air travel component (e.g., runway, helipad); therefore, the Project would not interfere with flight operations at the March ARB.

Based on the foregoing, implementation of the proposed Project would not result in a safety hazard for people living or working on the Project area and impacts would be less than significant.

***Threshold f: For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?***

The Project site is not located within the vicinity of a private airstrip or heliport (Google Earth Pro, 2017). As such, implementation of the Project would have no potential to expose on-site workers to safety hazards associated with a private airfield or an airstrip. Thus, no impact would occur and no mitigation is required.

***Threshold g: Would the Project impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan?***

The Project site does not contain any emergency facilities nor does it serve as an emergency evacuation route. During construction and long-term operation, the proposed Project would be required to maintain adequate emergency access for emergency vehicles. As part of the City’s discretionary review process, the City of Moreno Valley reviewed the Project’s application materials to ensure that appropriate emergency ingress and egress would be available to-and-from the Project site and the Project’s proposed warehouse building. The City determined that the Project would not substantially impede emergency response times in the local area. Accordingly, implementation of the proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan, and no impact would occur.

***Threshold h: Would the Project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?***

No wildlands are located on the Project site and the Project site is largely devoid of vegetation and surrounded on all sides by developed properties, paved roads, and/or maintained sites (Google Earth Pro, 2017). Also, under existing conditions, weed abatement (i.e., discing) occurs on the Project site as required by the Moreno Valley Fire Department to clear vegetative cover and reduce the risks of fires. Lastly, neither Cal Fire nor the City of Moreno Valley consider the Project site to be located in a high fire hazard area (Cal Fire, 2009; City of Moreno Valley, 2006, Figure 5.5-2). Accordingly, the Project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires and no impact would occur.



#### **4.7.5 CUMULATIVE IMPACT ANALYSIS**

As discussed above under Thresholds “a” and “b,” although the future occupant(s) of the Project’s proposed building is not presently known, if the business that uses or stores hazardous materials occupies the Project site, the business owner and operator would be required to comply with all applicable federal, state, and local regulations to ensure proper use, storage, and disposal of hazardous substances. Such uses also would be subject to additional review and permitting requirements by the Moreno Valley Fire Department and Riverside County DEH. Similarly, any other developments in the area proposing the construction of uses with the potential for use, storage, or transport of hazardous materials also would be required to comply with applicable federal, state, and local regulations, and such uses would be subject to additional review and permits from their applicable fire department and Riverside County DEH. Therefore, the potential for release of toxic substances or hazardous materials into the environment, either through accidents or due to routine transport, use, or disposal of such materials, would be reduced to a less-than-cumulatively-significant level. Accordingly, the Project’s potential to contribute to a cumulatively significant hazardous materials impact would be less than significant.

The Project site is not located within one-quarter mile of an existing or planned school; therefore, the Project would not contribute to a cumulatively significant hazards/hazardous materials impact on any public or private schools located within one-quarter mile of the site.

The Project site is not located on the list of hazardous materials sites compiled pursuant to Government Code § 65962.5. In the unlikely event that hazardous materials are encountered beneath the surface of the site during grading or construction, the materials would be handled and disposed of in accordance with regulatory requirements. Therefore, the Project would not contribute to a cumulatively significant hazardous materials impact associated with a listed hazardous materials site.

As discussed above under Threshold “e,” the Project would not introduce any land use to the Project site that would conflict with the March ARB/IPA Land Use Compatibility Plan. As such, cumulatively-considerable impacts associated with airport-related hazards would be less than significant and no mitigation would be required.

The Project site is not located within the vicinity of any private airstrips or helipads. Thus, the Project has no potential to result in cumulatively significant impacts associated with such facilities.

The Project site does not contain any emergency facilities nor does it serve as an emergency evacuation route; thus, there is no potential for the Project to contribute to any cumulative impacts associated with an adopted emergency response plan or emergency evacuation plan.

As discussed above under Threshold “h,” the Project site is not located within or in close proximity to areas identified as being subject to wildland fire hazards. Additionally, as the surrounding area continues to develop, lands that are currently vacant would be developed in a manner consistent with jurisdictional requirements for fire protection, and would generally decrease the fire hazard potential in the local area. As such, within the cumulative context of the Project vicinity, fire hazards are anticipated to decline over time, and the Project’s contribution to cumulative wildfire potential is less than cumulatively-considerable.



#### 4.7.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION

Threshold a and b: Less-than-Significant Impact. During Project construction and operation, mandatory compliance to federal, State, and local regulations would ensure that the proposed Project would not create a significant hazard to the environment due to routine transport, use, disposal, or upset of hazardous materials.

Threshold c: Less-than-Significant Impact. The Project site is not located within one-quarter mile of any existing or proposed school. Accordingly, the Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Impacts to schools located more than one-quarter mile of the Project site would be less than significant.

Threshold d: No Impact. The Project site is not located on any list of hazardous materials sites compiled pursuant to Government Code § 65962.5.

Threshold e: Less-than-Significant Impact. The Project is consistent with the restrictions and requirements of the March ARB/IPA Land Use Compatibility Plan. As such, the Project would not result in an airport safety hazard for people residing or working in the Project area.

Threshold f: No Impact. The Project site is not located within the vicinity of a private airstrip or a helipad. Accordingly, implementation of the Project would have no potential to expose on-site workers to safety hazards associated with a private airfield or an airstrip.

Threshold g: Less-than-Significant Impact. The Project site does not contain any emergency facilities nor does it serve as an emergency evacuation route. During construction and long-term operation, adequate emergency vehicle access is required to be provided. Accordingly, implementation of the Project would not impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan.

Threshold h: No Impact. The Project site is not located in close proximity to wildlands or areas with high fire hazards. Thus, the Project would not expose people or structures to a significant wildfire risk.

#### 4.7.7 MITIGATION

Impacts would be less than significant; therefore, mitigation is not required.



## **4.8 HYDROLOGY AND WATER QUALITY**

Information in this Subsection relies on two technical reports prepared for the Project site by Thienes Engineering, Inc. (hereafter, “Thienes”): 1) “Project Specific Preliminary Water Quality Management Plan,” dated November 16, 2017 (Thienes, 2017a); and 2) “Preliminary Hydrology Calculations for Brodiaea Business Park,” dated December 14, 2017 (Thienes, 2017b). These reports are provided as *Technical Appendices H1 and H2* to this EIR, respectively.

The Project site is located within Santa Ana River watershed and is under the jurisdiction of the Santa Ana Regional Water Quality Control Board (RWQCB). As such, information for this Subsection also was obtained from the Santa Ana RWQCB’s Santa Ana River Basin Water Quality Control Plan (updated June 2011) and the Integrated Regional Water Management Plan (IRWMP) for the Santa Ana River Watershed (also referred to as “One Water One Watershed,” (February 4, 2014) prepared by the Santa Ana Watershed Project Authority (SAWPA). These documents are herein incorporated by reference and are available for public review at the physical locations and website addresses given in EIR Section 7.0, *References*.

### **4.8.1 EXISTING CONDITIONS**

#### **A. Regional Hydrology**

The Project site is located within the Santa Ana River watershed, which drains a 2,650 square-mile area and is the principal surface flow water body within the region. The Santa Ana River rises in Santa Ana Canyon in the southern San Bernardino Mountains and runs southwesterly across San Bernardino, Riverside, and Orange Counties, where it discharges into the Pacific Ocean at the City of Huntington Beach. The total length of the Santa Ana River and its major tributaries is approximately 700 miles. (SAWPA, 2014, Ch. 3, p. 1) The Project site’s location within the Santa Ana River Watershed is depicted on Figure 4.8-1, *Santa Ana Watershed Map*.

#### **B. Site Hydrology**

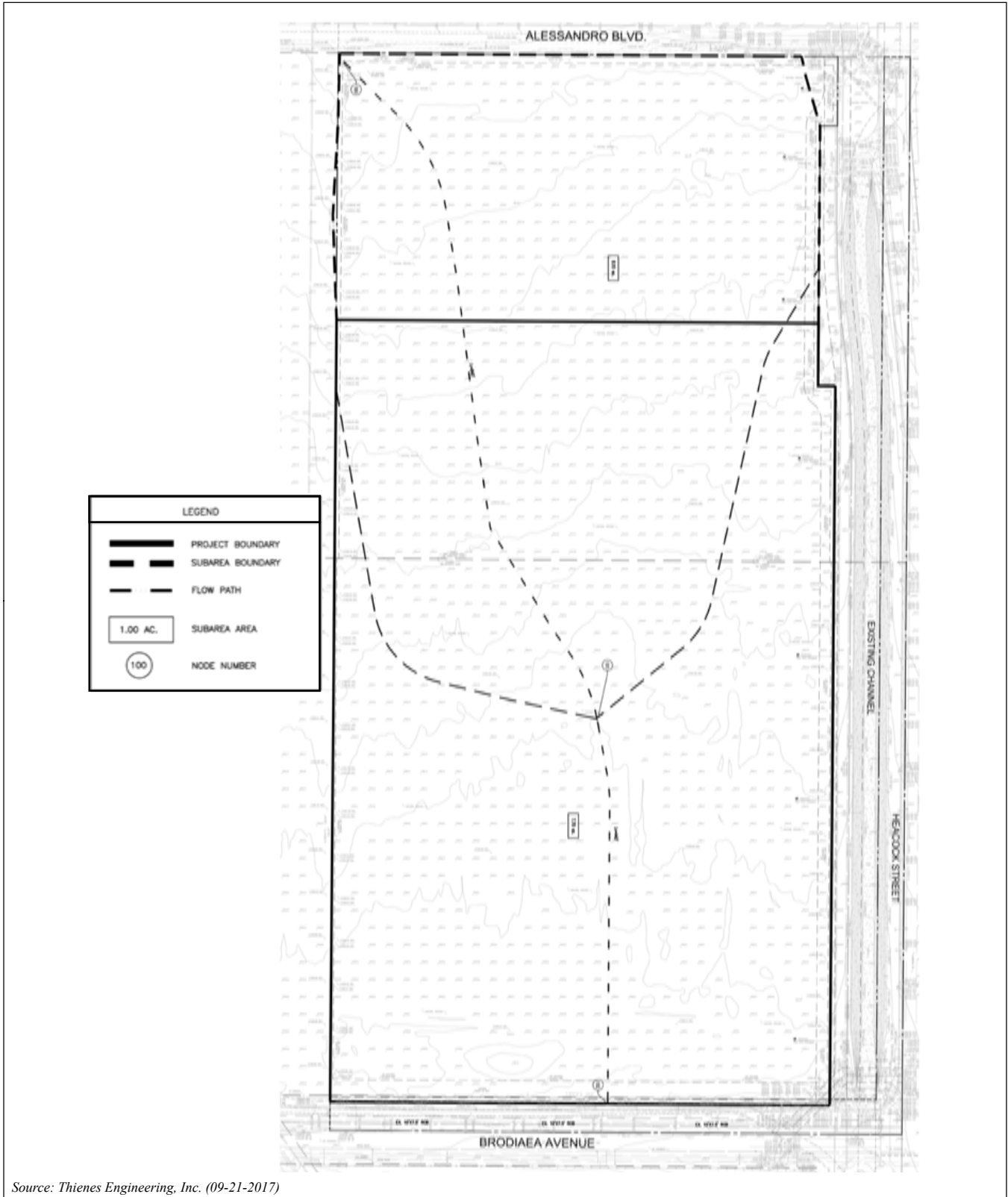
As illustrated on Figure 4.8-2, *Existing Conditions Hydrology Map*, stormwater runoff originating from property north of the Project site flows through the Project site as sheet flow in a north-to-south direction toward Brodiaea Avenue. Runoff traveling through the Project site is intercepted by a valley gutter that runs along the northern edge of Brodiaea Avenue; the valley gutter conveys runoff easterly to a storm drain inlet located adjacent to the southeastern portion of the site. The storm drain inlet discharges to a storm drain line beneath Brodiaea Avenue (Line “F” of the *Sunnymead Master Drainage Plan*, refer to Subsection 4.8.2C), which ties into the Heacock Channel. (Thienes, 2017b)

#### **C. Flooding and Dam Inundation**

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) No. 06065C0761G, dated August 28, 2008, the Project site is not located within a special flood hazard area subject to inundation by the 1-percent annual flood (100-year flood). The entirety of the Project site is located within FEMA Flood Zone X (Unshaded). Flood Zone X (Unshaded) is correlated with areas of minimal flood hazard determined to be outside the 500-year floodplain (also referred to as the 0.2% annual chance floodplain) (FEMA, 2008). The FEMA FIRM for the Project area is depicted on Figure 4.8-3, *FEMA Flood Insurance Map Panel No. 06065C0761G*.

As depicted in Figure 6-4, *Flood Hazards*, of the Moreno Valley General Plan, the Project site is not located within the “Potential Inundation Area due to failure of Lake Perris Dam.” Moreover, the Moreno Valley





Source: Thienes Engineering, Inc. (09-21-2017)

Figure 4.8-2



NOT TO SCALE



**EXISTING CONDITIONS HYDROLOGY MAP**



General Plan Final EIR states that the flood potential within the Project area due to failure of Lake Perris Dam and Pigeon Pass Dam are considered remote. (City of Moreno Valley, 2016, Figure 6-4; City of Moreno Valley, 2006, p. 5.5-4)

***D. Water Quality***

The Federal Water Pollution Control Act Amendment of 1972 (also referred to as the Clean Water Act (CWA)) requires all states to conduct water quality assessments of their water resources to identify water bodies that do not meet water quality standards. Water bodies that do not meet water quality standards due to excessive concentrations of pollutants are placed on a list of impaired waters pursuant to Section 303(d) of the CWA. The Project site's receiving waters include the Perris Valley Storm Drain Channel (disassociated from the Heacock Channel and located approximately 4.9 miles from the Project site), San Jacinto River Reach 1, 3, Canyon Lake, Temescal Creek Reach 1-6, The Prado Basin Management Zone, Lake Elsinore, Santa Ana River Reach 1-3, Tidal Prism of Santa Ana River and Newport Slough, Pacific Ocean Near Shore Zone, and Pacific Ocean Offshore Zone. These receiving waters are included on the CWA's Section 303(d) list of impaired waters because of excessive concentrations of twelve pollutants ("Pollutants of Concern"), including: nutrients, pathogens, PCBs, unknown toxicity, sediment toxicity, organic enrichment/low dissolved oxygen, indicator bacteria, copper, lead, Enterococcus, fecal coliform, and total coliform. (Thienes, 2017a, Table A-1 and E-1)

***E. Groundwater***

The City of Moreno Valley is underlain by groundwater resources associated with the Perris North and San Jacinto Groundwater Basins. The Project site is located within the Perris North Groundwater Basin within the West San Jacinto Groundwater Management Area (EMWD, 2017, Figure 7-1). The Eastern Municipal Water District (EMWD) relies on groundwater resources from both the Perris North and San Jacinto Groundwater Basins for a portion of its water supply, and each of these Groundwater Basins are regulated by the EMWD's West San Jacinto Groundwater Basin Groundwater Management Plan. EMWD oversees the monitoring programs within the West San Jacinto Management Area including groundwater extraction at public and private wells and works with well owners to limit groundwater use and maximize groundwater supply. (EMWD, 2017, pp. 1, 14) According to a site survey conducted by SCS Engineers, there are no water wells on the Project site (SCS, 2017, p. 5).

**4.8.2 APPLICABLE ENVIRONMENTAL PLANS, POLICIES, AND REGULATIONS**

The following is a brief description of the federal, State, and local environmental laws, related regulations, and plans related to hydrology and water quality.

***A. Federal Plans, Policies, and Regulations***

***1. Clean Water Act***

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was substantially reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972. Under the CWA, the Environmental Protection Agency (EPA) has implemented pollution control programs such as setting wastewater standards for industry, and also has set water quality standards for all contaminants in surface waters. The CWA made it unlawful to discharge any pollutant from a point source



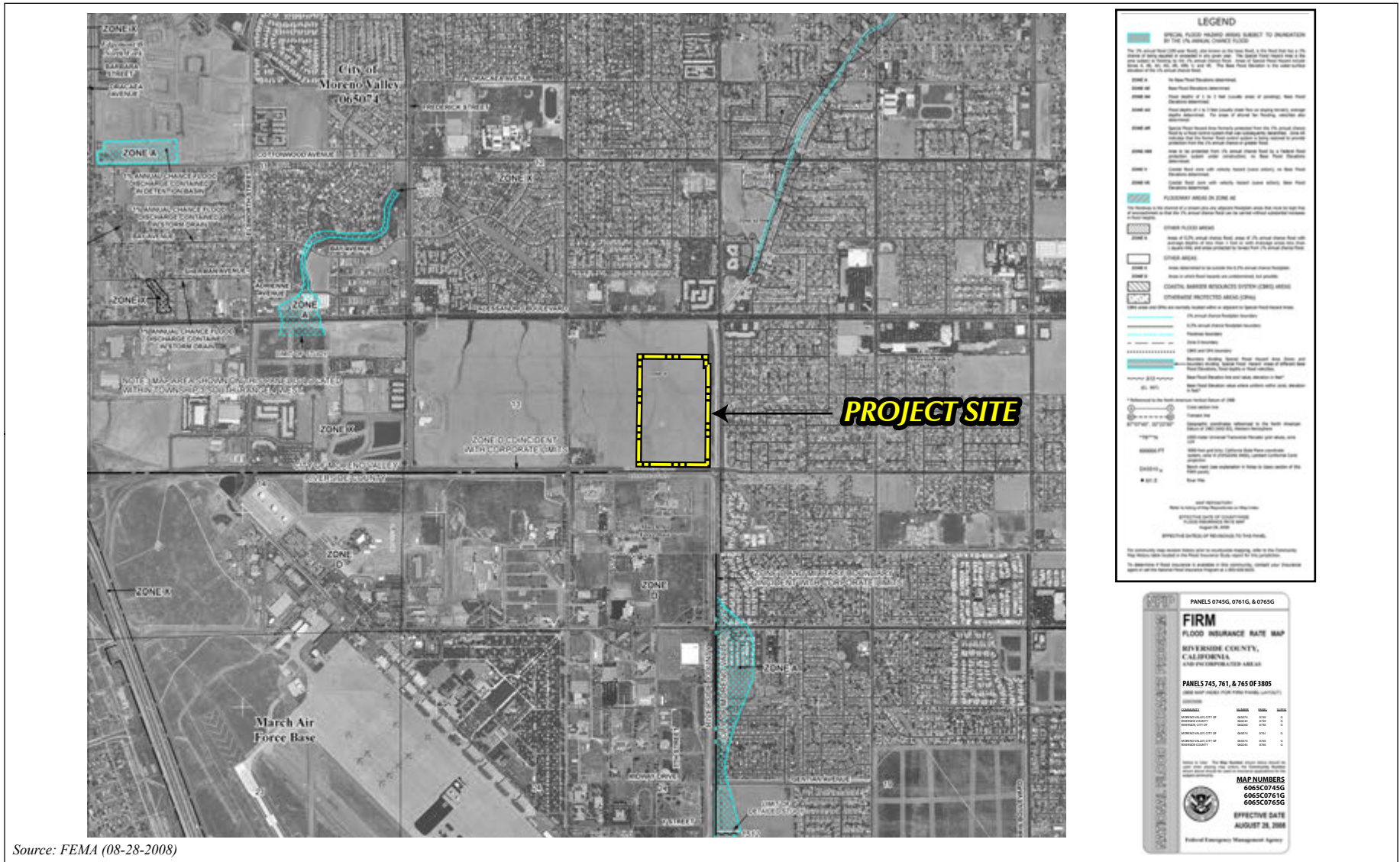


Figure 4.8-3



NOT TO SCALE





into navigable waters, unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. (EPA, 2017)

## **B. State Plans, Policies, and Regulations**

### **1. Porter-Cologne Water Control Act**

The Porter-Cologne Act is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act (California Water Code § 13000 *et seq.*), the policy of the State is as follows:

- That the quality of all the waters of the State shall be protected;
- That all activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason; and
- That the State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation. (SWRCB, 2014)

The Porter-Cologne Act established nine Regional Water Boards (based on hydrogeologic barriers) and the State Water Board, which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The State Water Board provides program guidance and oversight, allocates funds, and reviews Regional Water Boards decisions. In addition, the State Water Board allocates rights to the use of surface water. The Regional Water Boards have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The State Water Board and Regional Water Boards have numerous non-point source (NPS) related responsibilities, including monitoring and assessment, planning, financial assistance, and management.

The Regional Water Boards regulate discharges under the Porter-Cologne Act primarily through issuance of NPDES permits for point source discharges and waste discharge requirements (WDRs) for NPS discharges. Anyone discharging or proposing to discharge materials that could affect water quality (other than to a community sanitary sewer system regulated by an NPDES permit) must file a report of waste discharge. The Storm Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs) can make their own investigations or may require dischargers to carry out water quality investigations and report on water quality issues. The Porter-Cologne Act provides several options for enforcing WDRs and other orders, including cease and desist orders, cleanup and abatement orders, administrative civil liability orders, civil court actions, and criminal prosecutions. (SWRCB, 2014)

The Porter-Cologne Act also implements many provisions of the Clean Water Act, such as the NPDES permitting program. The Porter-Cologne Act also requires adoption of water quality control plans that contain the guiding policies of water pollution management in California. In addition, regional water quality control plans (basin plans) have been adopted by each of the Regional Water Boards and get updated as necessary and practical. These plans identify the existing and potential beneficial uses of waters of the State and establish water quality objectives to protect these uses. The basin plans also contain implementation, surveillance, and



monitoring plans. (SWRCB, 2014) The Project site and vicinity are located in the Santa Ana River Watershed, which is within the purview of the Santa Ana RWQCB. The Santa Ana RWQCB's Santa Ana River Basin Water Quality Control Plan is the governing water quality plan for the region.

## **2. California Water Code**

The California Water Code is the principal state law regulating water quality in California. Water quality provisions must be complied with as contained in numerous code sections including: 1) the Health and Safety Code for the protection of ground and surface waters from hazardous waste and other toxic substances; 2) the Fish and Game Code for the prevention of unauthorized diversions of any surface water and discharge of any substance that may be deleterious to fish, plant, animal, or bird life; 3) the Harbors and Navigation Code for the prevention of the unauthorized discharge of waste from vessels into surface waters; and 4) the Food and Agriculture Code for the protection of groundwater which may be used for drinking water supplies. The California Department of Fish and Wildlife (CDFW), through provisions of the Fish & Game Code (§§ 1601 - 1603) is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by CDFW.

Surface water quality is the responsibility of the applicable RWQCB, water supply and wastewater treatment agencies, and city and county governments. The principal means of enforcement by the RWQCB is through the development, adoption, and issuance of water discharge permits. RWQCB basin plans establish water quality objectives that are defined as the limits or levels of water quality constituents or characteristics for the reasonable protection of beneficial uses of water.

## **3. California Toxics Rule (CTR)**

The California Toxics Rule (CTR) fills gap in California's water quality standards necessary to protect human health and aquatic life beneficial uses. The CTR criteria are similar to those published in the National Recommended Water Quality Criteria. The CTR supplements, and does not change or supersede, the criteria that EPA promulgated for California waters in the National Toxics Rule (NTR). The human health NTR and CTR criteria that apply to drinking water sources (those water bodies designated in the Basin Plans as municipal and domestic supply) consider chemical exposure through consumption of both water and aquatic organisms (fish and shellfish) harvested from the water. For waters that are not drinking water sources (e.g., enclosed bays and estuaries), human health NTR and CTR criteria only consider the consumption of contaminated aquatic organisms. The CTR and NTR criteria, along with the beneficial use designations in the Basin Plans and the related implementation policies, are the directly applicable water quality standards for toxic priority pollutants in California waters. (SWRCB, 2016)

## **4. CDFG Code Section 1600 et seq. (Lake or Streambed Alteration Agreement Program)**

Fish and Game Code § 1602 requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following:

- Substantially divert or obstruct the natural flow of any river, stream, or lake;
- Substantially change or use any material from the bed, channel or bank of any river, stream, or lake;  
or
- Deposit debris, waste or other materials that could pass into any river, stream, or lake. (CDFW, 2017c)



It should be noted that "any river, stream or lake" includes those that are episodic (they are dry for periods of time) as well as those that are perennial (they flow year-round). This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water. (CDFW, 2017c)

CDFW requires a Lake and Streambed Alteration (LSA) Agreement when it determines that the activity, as described in a complete LSA Notification, may substantially adversely affect existing fish or wildlife resources. An LSA Agreement includes measures necessary to protect existing fish and wildlife resources. CDFW may suggest ways to modify a project that would eliminate or reduce harmful impacts to fish and wildlife resources. Before issuing an LSA Agreement, CDFW must comply with CEQA. (CDFW, 2017c)

### **5. *Watershed Management Initiative (WMI)***

The State and Regional Water Boards are currently focused on looking at entire watersheds when addressing water pollution. The Water Boards adopted the Watershed Management Initiative (WMI) to further their goals. The WMI establishes a broad framework overlying the numerous federal and state mandated priorities. As such, the WMI helps the Water Boards achieve water resource protection, enhancement and restoration while balancing economic and environmental impacts. (SWRCB, 2013) The integrated approach of the WMI involves three main ideas:

- Use water quality to identify and prioritize water resource problems within individual watersheds.
- Involve stakeholders to develop solutions.
- Better coordinate point source and nonpoint source regulatory efforts.
- Establish working relationships between staff from different programs.
- Better coordinate local, State, and federal activities and programs, especially those relating to regulations and funding, to assist local watershed groups. (SWRCB, 2013)

### **C. Local Plans, Policies, and Regulations**

#### **1. *Sunnymead Master Drainage Plan***

The Project site is located within the boundary of the *Sunnymead Master Drainage Plan* (MDP). The *Sunnymead MDP* was prepared by the Riverside County Flood Control and Water Conservation District (RCFCWCD), to identify master-planned drainage and flood control facilities that are needed in the Project area to safely convey the peak runoff of a 100-year frequency storm. (RCFCWCD, 1991) Per the *Sunnymead MDP*, drainage flows from the Project site are planned to outlet to the Line "F" storm drain, located beneath Brodiaea Avenue, which ties into the Heacock Channel (Line "B") at the Heacock Street/Brodiaea Avenue intersection.

#### **2. *City of Moreno Valley Municipal Code***

Chapter 8.10 *et seq.* (Stormwater/Urban Runoff Management and Discharge Controls) and Section 8.21.170 (National Pollutant Discharge Elimination Systems) of the City of Moreno Valley Municipal Code requires the City to participate as a "Co-permittee" under the NPDES permit program to accomplish the requirements of the CWA. Pursuant to this chapter, the City is required to participate in the improvement of water quality and comply with federal requirements for the control of urban pollutants to stormwater runoff. (City of Moreno Valley, 2017a)



### **4.8.3 BASIS FOR DETERMINING SIGNIFICANCE**

The proposed Project would result in a significant impact to hydrology and water quality if the Project or any Project-related component would:

- a. *Violate any water quality standards or waste discharge requirements;*
- b. *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);*
- c. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;*
- d. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate of surface runoff in a manner which would result in flooding on- or off-site;*
- e. *Create or contribute runoff which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;*
- f. *Otherwise substantially degrade water quality;*
- g. *Place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;*
- h. *Place within a 100-year flood hazard area structures which would impede or redirect flood flows;*
- i. *Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; or*
- j. *Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow.*

The above-listed thresholds are derived directly from Appendix G to the CEQA Guidelines and address the typical, adverse effects related to hydrology and water quality that could result from development projects.

### **4.8.4 IMPACT ANALYSIS**

*Threshold a: Would the Project violate any water quality standards or waste discharge requirements?*

#### **A. Construction-Related Water Quality Impacts**

Development of the Project site would involve clearing, grading, paving, utility installation, building construction, and landscaping activities, all of which would generate potential water quality pollutants such as silt, debris, chemicals, paints, and other solvents with the potential to adversely affect water quality. As such, short-term water quality impacts have the potential to occur during construction of the Project in the absence of any protective or avoidance measures.

Pursuant to the requirements of the Santa Ana RWQCB and the City of Moreno Valley Municipal Code Section 8.21.170, the Project Applicant would be required to obtain a NPDES Municipal Stormwater Permit for



construction activities. The NPDES permit is required for all development projects that include construction activities, such as clearing, grading, and/or excavation, that disturb at least one (1) acre of total land area. In addition, future Project-related development would be required to comply with the Santa Ana RWQCB's Santa Ana River Basin Water Quality Control Program. Compliance with the NPDES permit and the Santa Ana River Basin Water Quality Control Program involves the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) for construction-related activities. The SWPPP will specify the Best Management Practices (BMPs) that would be required to be implemented during construction activities to ensure that potential pollutants of concern are prevented, minimized, and/or otherwise appropriately treated prior to being discharged from the subject property. Examples of BMPs that may be utilized during construction include, but are not limited to, sandbag barriers, geotextiles, storm drain inlet protection, sediment traps, rip rap soil stabilizers, and hydro-seeding. Mandatory compliance with the SWPPP would ensure that the Project's implementation does not violate any water quality standards or waste discharge requirements during construction activities. Therefore, water quality impacts associated with construction activities would be less than significant and no mitigation measures would be required.

### **B. Post-Development Water Quality Impacts**

Stormwater pollutants commonly associated with the Project's proposed use (industrial warehouse building) include: bacterial indicators, metals, nutrients, pesticides, toxic organic compounds, sediments, trash & debris, and oil & grease (Thienes, 2017a, Table E-1).

To meet the requirements of the City's NPDES permit and in accordance with City of Moreno Valley Municipal Code Chapter 8.10 *et seq.* and Municipal Code Section 8.21.170, the Project would be required to prepare and implement a Water Quality Management Plan (WQMP), which is a site-specific, post-construction water quality management program designed to minimize the release of potential waterborne pollutants, including pollutants of concern for downstream receiving waters, under long-term conditions via BMPs. Implementation of the WQMP ensures on-going, long-term protection of the watershed basin. The Preliminary WQMP for the Project site, prepared by Thienes, is included as *Technical Appendix H1* to this EIR. As identified in *Technical Appendix H1*, the Project is designed to include a bioretention basin (which will act as a filter to remove waterborne pollutants through biological processes and allow water to percolate through an engineered media) and on-site structural source control BMPs consisting of sediment sump pumps, as well as operational source control BMPs (including but not limited to: the installation of water-efficient landscape irrigation systems, storm drain system stenciling and signage, and implementation of a trash and waste storage areas). The BMPs proposed by the Project are designed and selected to minimize, prevent, and/or otherwise appropriately treat stormwater runoff flows before they are discharged from the Project site and to minimize the release of pollutants of concern. Compliance with the applicable WQMP would be required as a condition of approval for the Project and long-term maintenance of on-site water quality features also would be required by conditions of approval to ensure their long-term effectiveness.

In addition to the WQMP, the NPDES program also requires certain land uses, including industrial land uses as proposed by the Project, to prepare a SWPPP for operational activities and to implement a long-term water quality sampling and monitoring program, unless an exemption has been granted. On April 1, 2014, the California State Water Resources Control Board adopted an updated new NPDES permit for stormwater discharge associated with industrial activities (referred to as the "Industrial General Permit"). The new Industrial General Permit, which is more stringent than the existing Industrial General Permit, became effective on July 1, 2015. Under the newly effective NPDES Industrial General Permit, the Project would be required to prepare a SWPPP for operational activities and implement a long-term water quality sampling and monitoring program or receive an exemption. Because the permit is dependent upon the operational activities



of the buildings, and the Project's future building occupants and their operations are not known at this time, details of the SWPPP (including BMPs) or potential exemption to the SWPPP operational activities requirement cannot be determined at this time. However, based on the requirements of the NPDES Industrial General Permit, it is assured that the Project's mandatory compliance with all applicable regulations would further reduce potential water quality impacts during long-term operation.

Based on the foregoing analysis, the Project would not violate any water quality standards or waste discharge requirements during long-term operation. Impacts would be less than significant.

**Threshold b:** *Would the Project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?*

No potable groundwater wells are proposed by the Project. The Project would be served with potable water by the EMWD. The EMWD relies on local potable groundwater as a source of its water supply (in addition to imported water from the Metropolitan Water District of Southern California, desalted ground water, and recycled water). As part of their long-range planning efforts, the EMWD has indicated that it has sufficient available water resources, including groundwater resources, to adequately serve the Project in addition to past, present, and future commitments to supply water (EMWD, 2016b, Table ES-2 through Table ES-5). Therefore, the Project would not substantially deplete groundwater supplies and the Project's impact to groundwater supplies would be less than significant.

Development of the Project would increase impervious surface coverage on the property, which would reduce the amount of water percolating down into the underground aquifer that underlies the Project site and a majority of the City. However, and as noted in the City's General Plan EIR (City of Moreno Valley, 2006, pp. 5.7-12), "the impact of an incremental reduction in groundwater would not be significant as domestic water supplies are not reliant on groundwater as a primary source." Additionally, water captured by the proposed Project's bioretention basin and landscaped areas would have the opportunity to percolate into the ground. With buildout of the Project, the local groundwater levels would not be adversely affected. Accordingly, buildout of the Project with these design features would not interfere substantially with groundwater recharge.

For the reasons stated above, the Project would neither substantially deplete groundwater supplies nor interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. Impacts would be less than significant.

**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, in a manner which would result in substantial erosion or siltation on- or off-site?*

The post-development drainage characteristics of the Project site are illustrated on Figure 4.8-4, *Proposed Post-Development Hydrology Map*. Development on the Project site would include an integrated system of underground storm drain pipes, catch basins, grate inlets, and a bioretention basin to capture on-site stormwater runoff flows, convey the runoff across the site, and treat the runoff with BMPs to minimize the amount of water-borne pollutants carried from the Project site (as described in detail in EIR Section 3.0, *Project Description*). The Project also would construct a drainage swale along the northern boundary of the Project

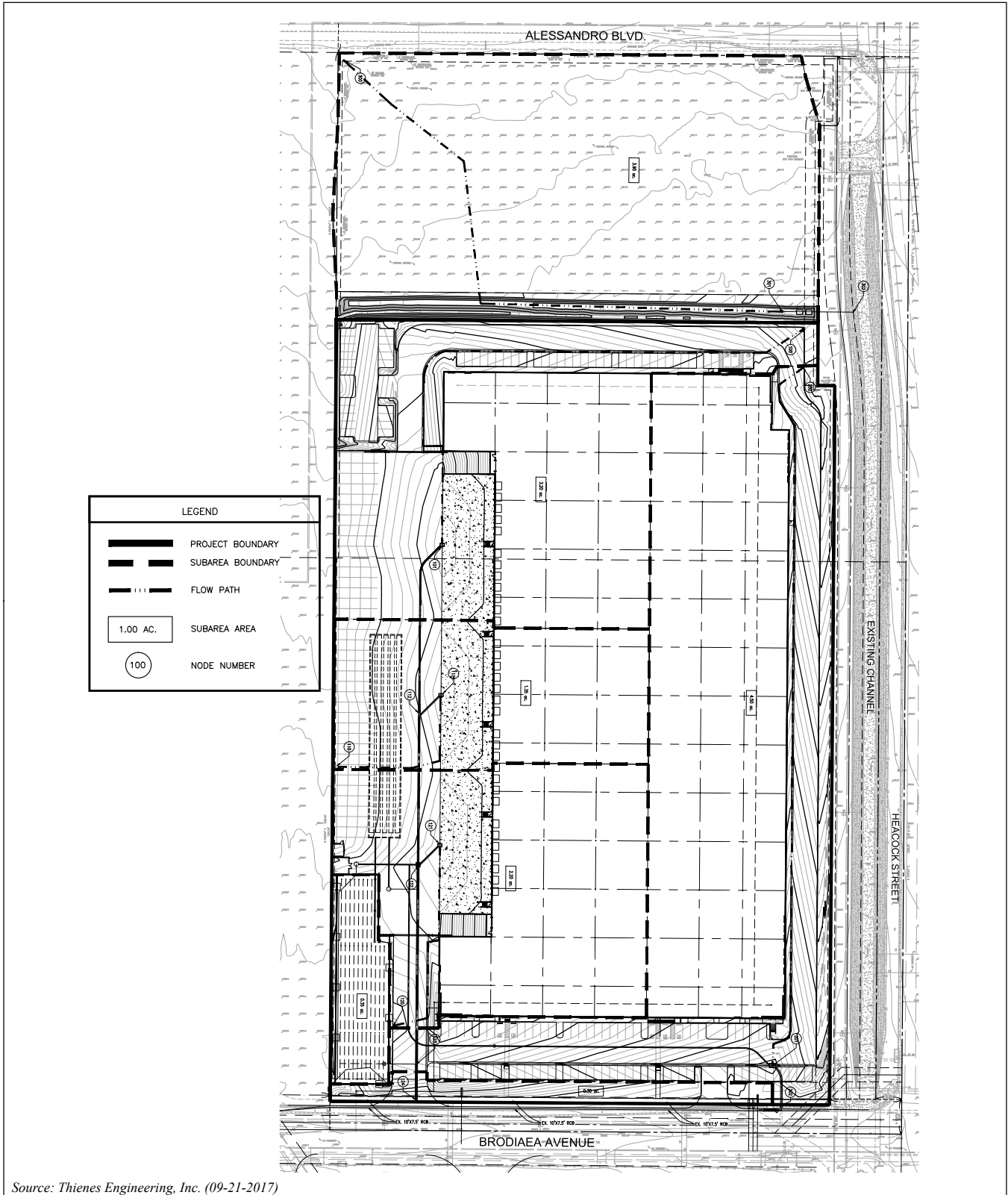


Figure 4.8-4



NOT TO SCALE



**PROPOSED POST-DEVELOPMENT HYDROLOGY MAP**





site to capture surface runoff originating off-site and flowing onto the Project site. All stormwater runoff discharged from the Project site would ultimately flow to the same stormwater drainage facility as receives the Project site's runoff under existing conditions (i.e., Heacock Channel), although a new storm drain outlet would be constructed within the Heacock Channel for the discharge of off-site stormwater flows from the drainage swale along the site's northern boundary (Thienes, 2017b).

Although the Project would alter the subject property's internal drainage patterns, such changes would not result in substantial erosion or siltation on- or off-site. Under post-development conditions, a majority of the site would be covered with impervious surfaces and, therefore, the amount of exposed soils on the Project site would be minimal. Also, as discussed under Threshold "a," the Project would construct an integrated storm drain system on-site with BMPs to minimize the amount of water-borne pollutants carried by runoff flows that originate within the Project site. The BMPs proposed by the Project and implemented by the Project's Water Quality Management Plan, include sediment sump pumps, as well as operational source control BMPs (including but not limited to: the installation of water-efficient landscape irrigation systems, storm drain system stenciling and signage, and implementation of a trash and waste storage areas) are highly effective at removing sediment from stormwater runoff flows. Therefore, stormwater runoff flows leaving the Project site would not carry substantial amounts of sediment. Once stormwater runoff leaves the Project site, it would be discharged either: 1) into a storm drain pipe beneath Brodiaea Avenue and, from there, into the concrete-lined Heacock Channel (on-site runoff flows); or 2) into the concrete-lined Heacock Channel (off-site runoff flows). Because there are no exposed soils at the Project's discharge points, there is no potential for the Project's stormwater runoff to result in erosion as it leaves the Project site. Accordingly, the Project would not result in substantial erosion or siltation on- site or off-site, and a less-than-significant impact would occur.

***Threshold d: 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 substantially increase the rate or surface runoff in a manner which would result in flooding on- or off site?***

As described above under the analysis for Threshold "c," proposed grading and earthwork activities on the Project site would alter the site's existing interior drainage patterns but would not substantially alter the drainage pattern of the local area because under both the pre- and post-development conditions, all surface water runoff that travels through the Project site would ultimately discharge into the Heacock Channel. Under long-term development conditions, the peak storm water runoff flows discharged from the Project site would be 34.2 cubic feet per second (cfs). Flows originating on-site (approximately 25.1 cfs) would be discharged into Line "F" of the *Sunnymead MDP* while flows originating off-site (approximately 9.1 cfs) would be captured in a drainage swale along the northern Project site boundary and conveyed directly to the Heacock Channel. The storm drainage facilities that would receive stormwater runoff from the Project are designed pursuant to the *Sunnymead MDP*. The *Sunnymead MDP* identifies master-planned drainage and flood control facilities that are needed to safely convey stormwater runoff generated within the *MDP* area during a 100-year storm event and preclude flooding. The Heacock Channel and the storm drain line beneath Brodiaea Avenue that would accept peak stormwater runoff flows from the Project is designed pursuant to the *Sunnymead MDP* and has adequate capacity to accept and convey Project stormwater flows downstream and the peak, post-development flows from the Project site are consistent with the projections of the *MDP*. (Thienes, 2017a) Because the proposed Project is consistent with the applicable master drainage plan, Project implementation would not result in flooding on- or off-site due to the introduction of substantial, unanticipated storm water flows. Impacts associated with flooding would be less than significant.



**Threshold e:** *Would the Project create or contribute runoff which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*

As discussed above under the analysis for Threshold “d,” the Project would be consistent with the *Sunnymead MDP* and existing storm drain improvements have sufficient capacity to convey storm water runoff generated by the Project. Accordingly, the Project would not create or contribute runoff which would exceed the capacity of any planned storm water drainage system, and impacts would be less than significant.

As discussed under the analysis of Threshold “a,” the Project would be required to comply with a future SWPPP and the Project’s WQMP (*Technical Appendix HI*), which identify required BMPs to be incorporated into the Project to ensure that near-term construction activities and long-term post-development activities of the proposed Project would not result in substantial amounts of polluted runoff. Therefore, with mandatory compliance with the Project’s SWPPP and WQMP, the Project would not create or contribute substantial additional sources of polluted runoff, and impacts would be less than significant.

**Threshold f:** *Would the Project otherwise substantially degrade water quality?*

There are no conditions associated with industrial development of the Project site that could result in the substantial degradation of water quality beyond what is described above in the responses to Thresholds “a,” “c,” and/or “e.” Accordingly, no additional impacts would occur and mitigation is not required.

**Threshold g:** *Would the Project place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?*

**Threshold h:** *Would the Project place within a 100-year flood hazard area structures which would impede or redirect flood flows?*

The proposed Project does not include housing. In addition, according to the FEMA Flood Insurance Rate Map (FIRM) No. 06065C0761G, the Project site is not located within a 100-year flood hazard area (FEMA, 2008). Accordingly, the Project would have no potential to place housing, or other structures, within a 100-year floodplain or impede or redirect flood flows within a 100-year floodplain. No impact would occur.

**Threshold i:** *Would the Project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?*

The Project site is not located within the vicinity of a levee and would not be subject to flooding caused by the failure of a levee. The Project site is located approximately 4.8 miles northwest of Lake Perris; however, according to the City of Moreno Valley General Plan and the General Plan FEIR, the Project site is not located in an inundation area for Lake Perris (City of Moreno Valley, 2006, Figure 5.5-2; City of Moreno Valley, 2016, Figure 6-4). Accordingly, and also based on the information provided under Thresholds “d,” “g,” and “h,” the Project would not expose people or structures to a significant risk of loss, injury or death involving flooding. No impact would occur.



***Threshold j: Would the Project cause inundation by seiche, tsunami, or mudflow?***

The Pacific Ocean is located more than 40 miles west of the Project site; consequently, there is no potential for the Project site to be inundated by a tsunami. The Project site is not located near any steep hillsides and there are no steep hillsides present on the subject property; therefore, there is no potential for the site to be adversely affected by mudflow. The site also is not subject to flooding hazards associated with a seiche because the nearest large bodies of surface water are approximately 4.8 miles southeast of the Project (Lake Perris) and approximately 11.4 miles northeast of the Project (Lake Mathews), respectively, which are both too far away from the subject property to impact the property with a seiche. Accordingly, implementation of industrial land uses on the Project site would not expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow. No impact would occur.

#### **4.8.5 CUMULATIVE IMPACT ANALYSIS**

The cumulative impact analysis considers potential hydrology and water quality effects of the Project in conjunction with other development projects in the vicinity of the Project site as well as other projects located in the Santa Ana River Basin. The analysis of potential cumulative impacts to hydrology and water quality is divided into six general topics of discussion by combining the Thresholds of Significance (listed above in Subsection 4.8.2) into groupings of like topics, as follows: 1) water quality (Thresholds “a” and “f”); 2) groundwater supply and recharge (Threshold “b”) erosion and siltation (Thresholds “c” and “d”) flood hazards (Thresholds “d,” “g,” “h,” and “e”) stormwater drainage system capacity (Thresholds “e” and “f”) other hazards (Threshold “j”).

##### **A. Water Quality**

Construction of the Project and the construction of other projects in the cumulative study area would have the potential to result in a cumulative water quality impact, including erosion and sedimentation to the Santa Ana River watershed. Pursuant to the requirements of the State Water Resources Control Board and the Santa Ana RWQCB, all construction projects that disturb one (1) or more acres of land area are required to obtain a NPDES permit and obtain coverage for construction activities. In order to obtain coverage, an effective site-specific SWPPP is required to be developed and implemented for all development projects. The SWPPP must identify potential on-site pollutants and identify and implement an effective combination of erosion control and sediment control measures to reduce or eliminate discharge of pollutants to surface water from stormwater and non-stormwater discharges. In addition, the Project and all cumulative developments in the Santa Ana River Basin would be required to comply with the Santa Ana RWQCB’s Santa Ana River Basin Water Quality Control Program. With compliance to these mandatory regulatory requirements, the Project’s contribution to water quality impairments during construction would not be cumulatively-considerable and mitigation is not required.

As discussed in detail under the analysis of Threshold “a,” a WQMP would be required for all development on the Project site. Compliance with the applicable WQMP would be required as a condition of approval for future development activities pursuant to Moreno Valley Municipal Code Chapter 8.10 *et seq.* and § 8.21.170. Other developments within the watershed would similarly be required to prepare site-specific WQMPs and to incorporate BMPs into site design as necessary to ensure that runoff does not substantially contribute to existing water quality violations. Accordingly, under long-term conditions, industrial land use on the Project site would not contribute to cumulatively-considerable water quality effects and no mitigation would be required.



**B. Groundwater Supply and Recharge**

Although the proposed Project would increase the impervious surfaces on the site, the Project incorporates design features that would allow some surface runoff to infiltrate into the groundwater basin, including a bioretention basin and permeable landscape areas. Also, as previously noted, the City's General Plan EIR evaluated potential impacts to the groundwater basins beneath the City and concluded that the incremental reduction in groundwater would not be significant as domestic water supplies are not reliant on groundwater as a primary source (City of Moreno Valley, 2006, pp. 5.7-12). Furthermore, the Project would be served with potable water by the EMWD, which has indicated that it has sufficient available water resources, including groundwater resources, to adequately serve the Project in addition to past, present, and future commitments to supply water (EMWD, 2016b, Table ES-2 through Table ES-5). For these reasons, the proposed Project would not result in cumulatively-considerable impacts associated with the depletion of groundwater supplies or substantial interference with groundwater recharge.

**C. Erosion and Siltation**

Construction of development projects within the Santa Ana River Basin would alter existing ground contours throughout the basin, which would result in changes to the basin's existing drainage patterns. However, developments throughout the basin would be required to comply with federal, State, and local regulations to minimize stormwater pollution during construction (including erosion and siltation). Accordingly, grading plans would be required to be designed to preclude undue soil erosion and developments would be required to prepare and implement a SWPPP and WQMP to ensure that substantial soil erosion and/or sedimentation would not occur during temporary construction conditions or long-term conditions. Because the Project, and all other developments throughout the Santa Ana River Basin, would need to comply with federal, State, and local regulations, implementation of the Project would not result in a cumulatively-considerable impact to erosion and/or siltation.

**D. Flood Hazards**

The Project's proposed stormwater drainage system is designed to ensure that peak flood volumes and flows are substantially similar to those that occur under existing conditions. In addition, the Project would be consistent with the *Sunnymead MDP*. Accordingly, because the Project would not increase flooding potential either on or off the site, the Project would have a less-than-significant cumulatively-considerable impact associated with flooding.

As discussed under Thresholds "g" and "h", the Project site is not located within a special flood hazard area subject to inundation by the 1-percent annual flood (i.e., 100-year floodplain). Accordingly, development on the Project site would have no potential to place housing, or other structures, within a 100-year floodplain or impede or redirect flood flows within a 100-year floodplain and no cumulatively-considerable impact would occur.

As discussed under the analysis of Threshold "i," the Project site is not subject to flood hazards associated with failure of a levee or dam. As such, Project-related development has no potential to contribute to cumulative impacts associated with such failures.

**E. Stormwater Drainage System Capacity**

The Project's proposed storm drain improvements would have sufficient capacity to accommodate and convey stormwater runoff flows generated by the Project and would convey the expected future stormwater runoff flows associated with buildout of the *Sunnymead MDP* area. All development projects in the *Sunnymead MDP*



area are required to demonstrate that storm drain capacity is available to service their anticipated flows. As such, cumulative impacts would be less than significant and the proposed Project's contribution of flows would thus be less than cumulatively-considerable.

#### ***F. Other Hazards***

The Project site is not subject to hazards associated with seiches, tsunamis, or mudflows. There are no components of the proposed Project that would increase the potential for seiches, tsunamis, or mudflows. Accordingly, development of the Project has no potential to make a cumulatively-considerable contribution to these types of impacts.

#### **4.8.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION**

Threshold a: Less-than-Significant Impact. The Project would not violate any water quality standards or waste discharge requirements on a direct or cumulatively-considerable basis. Compliance with a SWPPP and WQMP is required to address construction-related water quality issues.

Threshold b: Less-than-Significant Impact. The Project does not propose potable water wells and would not substantially impact the availability of potable groundwater in the Project area.

Threshold c: Less-than-Significant Impact. The Project would retain the site's general drainage pattern is required to incorporate design features to minimize erosion and sediment within surface water runoff.

Threshold d: Less-than-Significant-Impact. The Project would not create or contribute runoff which would exceed the capacity of existing or planned stormwater drainage systems, nor would development of the Project provide substantial additional sources of polluted runoff.

Threshold e: Less-than-Significant Impact. Downstream stormwater drainage systems have sufficient available capacity to accommodate anticipated surface runoff flows upon development of the Project site. Additionally, the Project would be required to comply with a SWPPP and a site-specific WQMP to address water quality.

Threshold f: No Impact. There are no other components of the Project that would substantially degrade water quality.

Threshold g: No Impact. The Project would not construct housing within a 100-year flood hazard area.

Threshold h: No Impact. The Project would not construct structures within a 100-year flood hazard area that would impede or redirect flood flows.

Threshold i: No Impact. The Project would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.

Threshold j: No Impact. The Project site is not subject to hazards associated with seiches, tsunamis, or mudflow.

#### **4.8.7 MITIGATION**

Impacts would be less than significant; therefore, mitigation is not required.



## **4.9 LAND USE AND PLANNING**

This Subsection discusses the Project’s consistency with applicable land use and planning policies adopted by the City of Moreno Valley and other governing agencies for the purpose of reducing adverse effects on the physical environment. Information used to support the analysis in this Subsection was obtained from the City of Moreno Valley General Plan (City of Moreno Valley, 2016), City of Moreno Valley Zoning Ordinance (City of Moreno Valley, 2017), and Southern California Association of Governments (SCAG) *Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)* (SCAG, 2016), as well as other regional plans with applicability to the Project site. Refer to Section 7.0, *References*, for a complete list of reference sources.

### **4.9.1 EXISTING CONDITIONS**

#### **A. Existing Land Use and Development**

Under existing conditions, the entire Project site is vacant and does not contain any buildings or permanent structures (refer to Figure 2-4, *Aerial Photograph*).

The Project site is located at the interface between employment uses to the west and south (business park, distribution warehousing, e-commerce, and light industrial) and residential and commercial uses to the north and east (as previously shown on Figure 2-1, *Surrounding Land Uses and Development*). Property located north of Alessandro Boulevard is occupied by neighborhood shopping centers and residential land uses. Large warehouses and vacant land are located south of the Project site (south of Brodiaea Avenue). Property immediately west of the Project site is vacant and undeveloped; properties farther west of the Project site are occupied by industrial and smaller-scale commercial land uses. Land located east of the Project site (east of Heacock Street) is developed with residential land uses and a neighborhood shopping center.

### **4.9.2 APPLICABLE ENVIRONMENTAL PLANS, POLICIES, AND REGULATIONS**

The following is a brief description of the federal, State, and local environmental laws and related regulations related to land use and planning.

#### **A. State Plans, Policies, and Regulations**

##### **1. California Planning and Zoning Law**

The legal framework in which California cities and counties exercise local planning and land use functions is set forth in the California Planning and Zoning Law, §§ 65000 - 66499.58. Under State of California planning law, each city and county must adopt a comprehensive, long-term general plan. State law gives cities and counties wide latitude in how a jurisdiction may create a general plan, but there are fundamental requirements that must be met. These requirements include the inclusion of seven mandatory elements described in the Government Code, including a section on land use. Each of the elements must contain text and descriptions setting forth objectives, principles, standards, policies, and plan proposals; diagrams and maps that incorporate data and analysis; and mitigation measures.

##### **2. Subdivision Map Act**

The Subdivision Map Act (“Map Act”) vests in the cities and counties the power to regulate and control the design and improvement of subdivisions within its boundaries. Each city must adopt an ordinance regulating and controlling subdivisions for which the Map Act requires a tentative and final or parcel map. The authority for a city or county to regulate land use, including subdivisions, flows from the general police power. However,



the Map Act sets forth certain mandates that must be followed for subdivision processing. A city can impose conditions on the subdivision process when the Map Act is silent, but it cannot regulate contrary to specific provisions contained in the Map Act. (Curtin, Jr. & Merritt, 2002, p. 1) The Map Act's primary goals are:

- To encourage orderly community development by providing for the regulation and control of the design and improvement of the subdivision, with a proper consideration of its relation to adjoining areas;
- To ensure that the areas within the subdivision that are dedicated for public purposes will be properly improved by the subdivider so that they will not become an undue burden on the community; and
- To protect the public and individual transferees from fraud and exploitation. (Curtin, Jr. & Merritt, 2002, p. 1)

The Map Act is applied in conjunction with other state land use laws such as the general plan, specific plans, zoning, CEQA, and the Permit Streamlining Act. The Map Act provides for regulation of land divisions by a city or county and is interpreted and enforced by the city or county. (Curtin, Jr. & Merritt, 2002, p. 2)

### **3. *Office of Planning and Research (OPR) General Plan Guidelines***

Each city and county in California must prepare a comprehensive, long term general plan to guide its future. To assist local governments in meeting this responsibility, the Governor's Office of Planning and Research (OPR) is required to adopt and periodically revise guidelines for the preparation and content of local general plans pursuant to Government Code § 65040.2. The General Plan Guidelines is advisory, not mandatory. Nevertheless, it is the State's only official document explaining California's legal requirements for general plans. Planners, decision-making bodies, and the public depend upon the General Plan Guidelines for help when preparing local general plans. The courts have periodically referred to the General Plan Guidelines for assistance in determining compliance with planning law. For this reason, the General Plan Guidelines closely adheres to statute and case law. It also relies upon commonly accepted principles of contemporary planning practice. (OPR, 2003, p. 8)

### **B. *Local Plans, Policies, and Regulations***

#### **1. *City of Moreno Valley General Plan***

The City of Moreno Valley General Plan (July 2016) is a policy document that reflects the City's vision for the future of Moreno Valley. The General Plan is organized into seven (7) separate elements that contain a series of policies to guide the City's vision for future development. Each of the elements from the City of Moreno Valley General Plan are summarized below:

#### **□ *Community Development***

The Community Development Element functions as a land use guide for future development in the City. The Element identifies the general distribution, general location, and extent of land uses, such as housing, business, industry, open space, recreation, floodplains, and public facilities. These designations are reflected on the General Plan Land Use Map, which are applied on a parcel-by-parcel basis throughout the City. The Community Development Element also provides standards for residential density and non-residential intensity. It governs how land is to be used; therefore, many of the issues and policies contained in other elements of the General Plan are linked in some degree to this Element. (City of Moreno Valley, 2016, Chapter 2)



The Community Development Element designates the Project site for “Business Park/Light Industrial (BP/LI)” land uses. The BP/LI land use designation is intended to provide manufacturing, research, and development, warehousing and distribution, as well as office and commercial activities.

**Economic Development**

The Economic Development Element is an element that is intended to be added to the General Plan in the future, following completion of an Economic Development Strategy, which is presently being conducted by the City. At the time the Project’s Notice of Preparation (NOP) was distributed for public review on November 13, 2017, no policy guidance had been established as part of the General Plan’s Economic Development Element. (City of Moreno Valley, 2016, Chapter 3)

**Parks, Recreation, and Open Space**

The Parks, Recreation and Open Space Element includes specific policies related to open space preservation, outdoor recreation and recreation facilities, and trails (City of Moreno Valley, 2016, Chapter 4).

**Circulation**

The purpose of the Circulation Element is to develop a safe, efficient, environmentally and financially sound, integrated vehicular circulation system. It also is intended to provide for safe and adequate non-vehicular transportation, including pedestrian, bicycle, and public transportation systems. (City of Moreno Valley, 2006, Figure 5.2-6, Figure 5.2-7, Table 5.2-1)

**Safety**

The goal of the Safety Element is to assist the City in achieving acceptable levels of protection from natural and man-made hazards to life, health, and property, and to ensure that emergency services in the City are adequate to meet the City’s needs during both minor emergencies and major catastrophic situations. (City of Moreno Valley, 2016, Chapter 6)

**Conservation**

The Conservation Element is intended to achieve the wise use of natural resources within the City and immediate environs. Issues addressed by the Conservation Element include erosion, water quality and supply, biological resources and associated habitat, energy conservation, historical/archaeological resources, visual quality, and solid waste and recycling. (City of Moreno Valley, 2016, Chapter 7)

**Housing**

The Housing Element identifies and establishes the City’s policies with respect to meeting the needs of existing and future residents of the City. Specific components of the Housing Element, which also are requirements of State law, include the following: an assessment of housing needs and inventory; an analysis and program for preserving assisted housing developments; a statement of community goals, quantified objectives, and policies relative to the maintenance, preservation, improvement, and development of housing; and a program which sets forth a five-year schedule of actions that the City is undertaking, or intends to undertake, to implement the policies set forth in the Housing Element. (City of Moreno Valley, 2016, Chapter 8)





## **2. City of Moreno Valley Zoning Ordinance**

Development of the Project site is regulated by the development regulations and design standards contained within the City's Zoning Ordinance. The City of Moreno Valley's Zoning Ordinance is contained as Chapter 9 of the City of Moreno Valley Municipal Code. Under existing conditions, the northern, approximately 3.7 acres of the Project site is zoned "Business Park-Mixed Use" (BPX) designation with the "Mixed-Use Neighborhood" (MUN) overlay. According to the City of Moreno Valley Municipal Code, the primary purpose of the BPX district is to provide locations for limited convenience commercial and business support services within close proximity to industrial and business park uses. The MUN overlay district provides for low-rise, mixed-use development that serves the needs of residents, visitors, and employees from the surrounding immediate neighborhood. (City of Moreno Valley, 2017)

The southern, approximately 8.3 acres of the Project site is zoned for "Business Park" (BP) land uses. According to the City's Zoning Ordinance, the purpose of the BP district is to provide for light industrial, research and development, office-based firms and limited supportive commercial in an attractive and pleasant working environment and a prestigious location (City of Moreno Valley, 2017).

## **3. City of Moreno Valley Bicycle Master Plan**

The City of Moreno Valley Bicycle Master Plan, adopted in January 2015, identifies deficiencies and opportunities in the City's existing bicycle facility system and presents a long-range plan for the provision of a safe, convenient and efficient environment for bicycle travel in Moreno Valley. On and surrounding the Project site, the Plan calls for a Class 1 bike lane on Heacock Street (abutting Heacock Channel) between Alessandro Avenue and Cactus Avenue. Refer to EIR Subsection 4.11, *Transportation/Traffic*, for an analysis of the Project's consistency with the City of Moreno Valley Bicycle Master Plan.

## **4. SCAG Regional Transportation Plan and Sustainable Communities Strategy**

The Southern California Association of Governments (SCAG) is a Joint Powers Authority (JPA) under California State law, established as an association of local governments and agencies that voluntarily convene as a forum to address regional issues. Under federal law, SCAG is designated as a Metropolitan Planning Organization (MPO) and under State law as a Regional Transportation Planning Agency and a Council of Governments. The SCAG region encompasses six counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura) and 191 cities in an area covering more than 38,000 square miles. SCAG develops long-range regional transportation plans including sustainable communities strategy and growth forecast components, regional transportation improvement programs, regional housing needs allocations and other plans for the region.

As a MPO and public agency, SCAG develops transportation and housing strategies that transcend jurisdictional boundaries that affect the quality of life for southern California as a whole. SCAG's *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)* includes long-range regional transportation plans, regional transportation improvement programs, regional housing needs allocations, and other plans for the region. The *RTP/SCS* also provides objectives for meeting emissions reduction targets set forth by the California Air Resources Board (ARB); these objectives were provided in a direct response to Senate Bill 375 (SB 375) which was enacted to reduce greenhouse gas emissions from automobiles and light trucks through integrated transportation, land use, housing and environmental planning. (SCAG, 2016)



### **5. *Riverside County Congestion Management Program***

The *Riverside County Congestion Management Program (CMP)* was prepared by the Riverside County Transportation Commission (RCTC). The intent of the *CMP* is to more directly link land use, transportation, and air quality planning and to prompt reasonable growth management programs that would more effectively utilize new and existing transportation funds to alleviate traffic congestion and related impacts and improve air quality. The *Riverside County CMP* was first adopted in December 1992 and has been updated 11 times, with the most recent comprehensive update in December 2011. The *CMP* states that deficiencies along the *CMP* system must be identified when they occur so that improvement measures can be identified. Understanding the reason for these deficiencies and identifying ways to reduce the impact of future growth and development along a critical *CMP* corridor is intended to conserve scarce funding resources and help target those resources appropriately. The proposed Project's consistency with the *CMP* is discussed in detail in EIR Section 4.11, *Transportation and Traffic*.

### **6. *SCAQMD Air Quality Management Plan***

An Air Quality Management Plan (AQMP) is a plan for the regional improvement of air quality. The Project site is located in the South Coast Air Basin and the *2016 AQMP* is the most recent AQMP that is applicable to the Project area (SCAQMD, 2017). The consistency of the Project and Project-related components with the *2016 AQMP* is discussed in more detail in Subsection 4.2, *Air Quality*.

### **7. *Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)***

The Western Riverside County MSHCP is a comprehensive, multi-jurisdictional Habitat Conservation Plan (HCP) focusing on conservation of species and their habitats in Western Riverside County. The Western Riverside County MSHCP was adopted on June 17, 2003, and an Implementing Agreement (IA) was executed between the USFWS, CDFW, and participating entities (including the City of Moreno Valley). Rather than focusing on one species at a time, implementation of the Western Riverside County MSHCP Section 10 Permit preserves native vegetation and meet the habitat needs of multiple species.

The Project site is located within the Reche Canyon/Badlands Area Plan of the Western Riverside County MSHCP but is not located within a Cell Group, Criteria Cell, or Sub-Unit and is not targeted for conservation. The Project site is located within the MSHCP Burrowing Owl Survey Area but is not located within the Narrow Endemic Plan Species Survey Area (NEPSSA), the Criteria Area Plant Species Survey Area (CAPSSA), or the MSHCP Mammal and Amphibian Survey Areas. (RCTLMA, 2014) The proposed Project's consistency with the Western Riverside County MSHCP is discussed in detail in EIR Section 4.3, *Biological Resources*.

### **8. *Stephen's Kangaroo Rat Habitat Conservation Plan (SKR HCP)***

The Stephens' Kangaroo Rat HCP is a comprehensive, multi-jurisdictional HCP focusing on the conservation of the endangered Stephens' Kangaroo Rat and its habitat. The Stephens' Kangaroo Rat HCP was adopted in August 1990 and an Implementing Agreement (IA) was executed between the USFWS, CDFW, and participating entities (including the City of Moreno Valley). The Stephens' Kangaroo Rat HCP provides for the permanent establishment, mitigation, and monitoring of a reserve network for the Stephens' Kangaroo Rat. The Project site is not located within the Stephens' Kangaroo Rat survey area but is located within the Stephens' Kangaroo Rat mitigation fee area. (RCTLMA, 2014)



**9. March Air Reserve Base Airport Land Use Compatibility Plan**

The March Air Reserve Base (ARB) Airport Land Use Compatibility Plan (ALUCP) identifies land use standards and design criteria for new development located in the proximity of the March Air Reserve Base to ensure compatibility between the airport and surrounding land uses and to maximize public safety. The Project site is located within the influence area of March Air Reserve Base and is subject to the March Air Reserve Base ALUCP. The entire Project site is located within “Compatibility Zone E.” Within Compatibility Zone E, there are no land use or design restrictions, with the exception of hazards to flight. (ALUC, 2014a, p. 9, Table MA-1)

The proposed Project’s consistency with the March ARB ALUCP is discussed in detail in EIR Subsection 4.7, *Hazards & Hazardous Materials*.

**4.9.3 BASIS FOR DETERMINING SIGNIFICANCE**

The proposed Project would result in a significant impact to land use and planning if the Project or any Project-related component would:

- a. *Physically divide an established community;*
- b. *Conflict with an applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or*
- c. *Conflict with any applicable habitat conservation plan or natural community conservation plan.*

The above-listed thresholds are derived directly from Appendix G to the CEQA Guidelines and address the typical, adverse effects that development projects could have on the physical environment due to a land use and planning conflict. An inconsistency or conflict with an applicable plan or policy is regarded as a significant impact under CEQA only if it results in an adverse physical environmental effect.

**4.9.4 IMPACT ANALYSIS**

***Threshold a: Would the Project physically divide an established community?***

Under existing conditions, the Project site bordered on the north and west by vacant, undeveloped land. The Heacock Channel and Heacock Street separate the Project site from residential development to the east. Brodiaea Avenue separates the Project site from industrial development to the south. Because the Project site is already physically separated from nearby, established land uses under existing conditions, development of the Project would not physically divide any existing surrounding community. No impact would occur and mitigation is not required.

***Threshold b: Would the Project conflict with an applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?***

Provided below is a discussion of the Project’s consistency with the local land use plans described in Subsection 4.9.1 that are applicable to the proposed Project.



**A. City of Moreno Valley General Plan & Zoning Ordinance**

The Project would be consistent with the land use designation applied to the Project site by the City of Moreno Valley General Plan (i.e., Business Park/Light Industrial – BP). The Project also would not conflict with any of the General Plan’s goals, policies, or policies, as explained in the General Plan Consistency Analysis report that was included with the Project’s discretionary entitlement application materials (and incorporated herein by reference). Therefore, because the Project would not conflict with the City of Moreno Valley General Plan. Accordingly, the Project would not result in an adverse environmental impact due to a conflict with the City of Moreno Valley General Plan.

The Project would change the zoning designation for the Project site to “Light Industrial.” Although the Project would be inconsistent with the existing zoning designation for the Project site (i.e., “Business Park – Mixed Use” with “Mixed-Use Neighborhood” overlay and “Business Park”), such an inconsistency only would be significant if the zoning change were to result in a significant, adverse physical effects to the environment. As described throughout Sections 4.0 and 5.0 of this EIR, the Project would result in only one significant, adverse effect to the environment after the application of the mitigation measures specified in this EIR, which is an air quality impact associated with NO<sub>x</sub> emissions during the Project’s long-term operations. The Project’s NO<sub>x</sub> emissions would primarily be emitted from vehicles traveling to and from the Project site (tailpipe emissions). The Project’s significant NO<sub>x</sub> emissions are not directly attributable to its proposed change of zone request, as the City of Moreno Valley Zoning Ordinance permits similar non-residential uses to occur on the Project site under the property’s existing “Business Park – Mixed Use” with “Mixed-Use Neighborhood” overlay and “Business Park” zones. The City’s Municipal Code regulates the scale and intensity of development in each zoning category, and the amount of traffic generated by the Project (and associated air pollutant emissions) would not be substantively more or less than would occur by developing the Project site under its existing zoning designations. Furthermore, as described in EIR Subsection 4.2, *Air Quality*, the Project would not conflict with the SCAQMD 2016 AQMP nor would the Project’s air pollutant emissions exceed the AQMP’s projections for the Project site. Because the Project’s air pollutant emissions would be similar in type and quantity to those that were projected for the Project site by the AQMP (under the assumption the site would be developed in accordance with its existing zoning designations), a reasonable conclusion can be drawn that there is nothing inherent to the Project’s change of zone request that would result in a significant adverse effect to the environment. Accordingly, the Project’s inconsistency with the City of Moreno Valley Zoning Ordinance is determined to be less than significant.

**B. City of Moreno Valley Bicycle Master Plan**

As described in detail in Subsection 4.11, *Transportation and Traffic*, of this EIR, the Project would not conflict with the City of Moreno Valley Bicycle Master Plan (refer to analysis on EIR Page 4.11-14). No impact would occur.

**C. SCAG Regional Transportation Plan and Sustainable Communities Strategy**

As shown in Table 4.9-1, *SCAG RTP/SCS Goal Consistency Analysis*, the Project would be consistent with the adopted RTP/SCS. Thus, impacts would be less than significant.

**D. Riverside County Congestion Management Program**

As described in detail in EIR Subsection 4.11, *Transportation and Traffic*, the Project would not cause or contribute to significant impacts at any *Riverside County CMP* arterial roadway network facility or freeway facility (refer to analysis on EIR Page 4.11-13). Therefore, the Project would not result in a substantial



**Table 4.9-1 SCAG RTP/SCS Goal Consistency Analysis**

RTP/SCS Goal	Goal Statement	Project Consistency Discussion
G1	Align the plan investments and policies with improving regional economic development and competitiveness.	<u>No inconsistency identified.</u> This policy would be implemented by cities and the counties within the SCAG region as part of comprehensive local and regional planning efforts.
G2	Maximize mobility and accessibility for all people and goods in the region.	<u>No inconsistency identified.</u> EIR Subsection 4.11, <i>Transportation and Traffic</i> , evaluates Project-related traffic impacts and specifies mitigation measures to ensure that Project-related impacts to the local and regional circulation network would be less than significant.
G3	Ensure travel safety and reliability for all people and goods in the region	<u>No inconsistency identified.</u> As disclosed in EIR Subsection 4.11, <i>Transportation and Traffic</i> , there is no component of the proposed Project that would result in a substantial safety hazard to motorists (refer to analysis under Threshold (d)). Furthermore, EIR Subsection 4.11 specifies mitigation measures to ensure that roadway and intersection improvements meet safety standards and operate as efficiently as is possible.
G4	Preserve and ensure a sustainable regional transportation system.	<u>No inconsistency identified.</u> This policy would be implemented by cities and the counties within the SCAG region as part of the overall planning and maintenance of the regional transportation system. The Project would have no adverse effect on such planning or maintenance efforts.
G5	Maximize the productivity of our transportation system.	<u>No inconsistency identified.</u> This policy would be implemented by cities and the counties within the SCAG region as part of comprehensive transportation planning efforts. The Project would be consistent with the City of Moreno Valley’s General Plan Circulation Element, which meets this goal to maximize productivity.
G6	Protect the environment and health for our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking).	<u>No inconsistency identified.</u> An analysis of the Project’s environmental impacts is provided throughout this EIR, and mitigation measures are specified where warranted. Air quality is addressed in EIR Subsection 4.2, <i>Air Quality</i> , and mitigation measures are specified to minimize the Project’s air quality impacts. Additionally, and as discussed in EIR Subsection 4.6, <i>Greenhouse Gas Emissions</i> , and Subsection 5.4, <i>Energy Conservation</i> , the Project would incorporate various measures related to building design, landscaping, and energy systems to promote the efficient use of energy. Additionally, the Project would implement sidewalk and bike lane improvements called for by the City of Moreno Valley’s General Plan and Bicycle Master Plan.
G7	Actively encourage and create incentives for energy efficiency, where possible.	<u>No inconsistency identified.</u> This policy provides guidance to City staff to establish local incentive programs to encourage and promote energy efficient development. EIR Subsection



**Table 4.9-1 SCAG RTP/SCS Goal Consistency Analysis**

RTP/SCS Goal	Goal Statement	Project Consistency Discussion
		5.4, <i>Energy Conservation</i> , discusses the Project’s foreseeable design features related to building design, landscaping, and energy systems to promote the efficient use of energy.
G8	Encourage land use and growth patterns that facilitate transit and active transportation.	<u>No inconsistency identified.</u> This policy provides guidance to the City to establish a local land use plan that facilitates the use of transit and non-motorized forms of transportation. The Project is consistent with the General Plan Land Use Designation for the subject property and complies with all applicable General Plan policies.
G9	Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.	<u>No inconsistency identified.</u> This policy provides guidance to the City of Moreno Valley to monitor the transportation network and to coordinate with other agencies as appropriate.

Source: (SCAG, 2016)

environmental impact due to conflict with the *Riverside County CMP* LOS standards for the *CMP* arterial roadway and freeway network. Impacts would be less-than-significant impact would occur.

**E. SCAQMD Air Quality Management Plan**

As previously described in detail in EIR Subsection 4.2, *Air Quality*, the Project would not conflict with the SCAQMD 2016 AQMP (refer to analysis on EIR Pages 4.2-17 and 4.2-18). Therefore, the Project would not result in a substantial environmental impact due to a conflict with the 2016 AQMP. Impacts would be less than significant.

**F. March Air Reserve Base Inland Port ALUCP**

As previously described in detail in EIR Subsection 4.7, *Hazards and Hazardous Materials*, the Project’s proposed land use and its building design would not conflict with the *March Air Reserve Base ALUCP*, would not result in any safety hazard to people living or working in the Project area due to a land use incompatibility, and would not interfere with operations at the March ARB (refer to analysis on EIR Page 4.7-9). Impacts would be less than significant.

**G. Conclusion**

Based on the foregoing analysis, the Project would not create a conflict with an applicable land use plan, policy, or regulation that would result in a substantial environmental impact. Impacts are less than significant and no mitigation is required.

**Threshold c: Would the Project conflict with any applicable habitat conservation plan or natural community conservation plan?**

The only habitat conservation plans or natural community plans applicable to the Project site are the Western Riverside County MSHCP and the Stephens’ Kangaroo Rat HCP. As previously described in detail in EIR



Subsection 4.3, *Biological Resources*, the Project would not conflict with the Western Riverside County MSHCP or the Stephens' Kangaroo Rat HCP (refer to analysis on EIR Pages 4.3-12 through 4.3-14). As such, the Project would not conflict with any applicable habitat conservation plan or natural community conservation plan and no impact would occur.

#### **4.9.5 CUMULATIVE IMPACT ANALYSIS**

Under existing conditions, the Project site either: 1) abuts vacant, undeveloped land; or 2) is physically separated from established land uses by existing man-made features (i.e., roads and drainage channels). Because the Project does not abut any established land uses, there is no potential for the Project to cause or cumulatively contribute to the division of an established community.

Although the Project is not consistent with the site's existing zoning designations and would require a change of zone, no adverse environmental effects would occur as a result of the zone change request. The Project would be consistent with or not otherwise conflict with all other applicable land use plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect. Because the Project would not result in any adverse environmental impacts due to an inconsistency with an applicable land use plan, policy, or regulation, there is no potential for the Project to contribute to a cumulatively considerable environmental effect under this issue.

As discussed under Threshold "c," the Project would not conflict with the Western Riverside County MSHCP or the Stephens' Kangaroo Rat HCP. Accordingly, there is no potential to contribute cumulatively significant impacts due to a conflict with any applicable habitat conservation plan or natural community conservation plan, and impacts would be less-than-cumulatively-considerable.

#### **4.9.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION**

Threshold a: No Impact. The Project would not physically divide an established community.

Threshold b: Less-than-Significant Impact. The Project would be consistent with all applicable land use plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect. There is nothing inherent in the Project's change of zone request that would result in a significant adverse effect to the environment.

Threshold c: No Impact. The Project would not conflict with the Western Riverside County MSHCP or the Stephens' Kangaroo Rate HCP, which are the only two habitat conservation / natural community conservation plans applicable to the Project site.

#### **4.9.7 MITIGATION**

Refer to all mitigation measures presented in this EIR. In instances where significant impacts are identified in this EIR for the Project's construction and/or operational phases, mitigation measures are recommended in each applicable subsection of this EIR.



## 4.10 NOISE

This Subsection addresses the environmental issue of noise, including existing noise levels in the Project area and the Project's potential to introduce new or elevated sources of noise. The information contained herein is based in part on information contained in a technical report prepared by Urban Crossroads, Inc., dated January 22, 2018, and titled "Brodiaea Commerce Center Noise Impact Analysis" (Urban Crossroads, 2018d). The report is included as *Technical Appendix I* to this EIR. Refer to Section 7.0, *References*, for a complete list of reference sources.

### 4.10.1 NOISE FUNDAMENTALS

#### A. Noise Definitions

Noise is simply defined as "unwanted sound." Sound becomes unwanted when it interferes with normal activities, when it causes physical harm, or when it has adverse effects on health. Because the range of sound that the human ear can detect is large, the scale used to measure sound intensity is based on multiples of 10, the logarithmic scale. The unit of measure to describe sound intensity is the decibel (dB). Each interval of 10 dB indicates a sound energy 10 times greater than before and is perceived by the human ear as being roughly twice as loud. A-weighted decibels (dBA) approximate the subjective response of the human ear to broad frequency noise sources by discriminating against very low and very high frequencies of the audible spectrum (i.e., frequencies that are not audible to the human ear). The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at a distance of three feet is roughly 60 dBA, while a jet engine is 110 dBA at approximately 100 feet. (Urban Crossroads, 2018d, pp. 9-10)

#### B. Noise Descriptors

Environmental noise descriptors are generally based on averages, rather than instantaneous noise levels. The most commonly used figure is the equivalent continuous noise level ( $L_{eq}$ ).  $L_{eq}$  represents a steady state sound level containing the same total energy as a time varying signal over a given time period.  $L_{eq}$  are not measured directly but are calculated from sound pressure levels typically measured in dBA. Consequently,  $L_{eq}$  can vary depending on the time of day. (Urban Crossroads, 2018d, p. 10)

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour levels may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Community Noise Equivalent Level (CNEL), representing a composite 24-hour noise level is utilized. The CNEL is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time of day corrections require the addition of five (5) dB to sound levels in the evening from 7:00 p.m. to 10:00 p.m., and the addition of 10 dB to sound levels at night between 10:00 p.m. and 7:00 a.m. These additions are made to account for the noise sensitive time periods during the evening and nighttime hours when sound appears louder. CNEL does not represent the actual sound level heard at any particular time, but rather represents the total sound exposure. The City of Moreno Valley relies on the 24-hour CNEL level to assess land use compatibility with transportation related noise sources. (Urban Crossroads, 2018d, p. 10)

#### C. Sound Propagation

When sound propagates over a distance, it changes in level and frequency content. The manner in which noise reduces with distance depends on geometric spreading, ground absorption, atmospheric effects, and shielding. (Urban Crossroads, 2018d, p. 10)





### **1. *Geometric Spreading***

Sound from a localized source (i.e., a stationary point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source. (Urban Crossroads, 2018d, p. 10)

### **2. *Ground Absorption of Noise***

To account for the ground-effect attenuation (absorption) of noise, two types of site conditions are commonly used in noise models: soft site and hard site conditions. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receptor, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., sites with an absorptive ground surface between the source and the receptor such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. (Urban Crossroads, 2018d, p. 11)

### **3. *Atmospheric Impacts***

Receptors located downwind from a noise source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Other factors that may affect noise levels include air temperature, humidity, and turbulence. (Urban Crossroads, 2018d, p. 11)

### **4. *Shielding***

A large object or barrier in the path between a noise source and a receptor can substantially attenuate noise levels at the receptor. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Solid objects or barriers are most effective at attenuating noise levels. Effective noise barriers can reduce noise levels by 10 to 15 dBA. Noise barriers, however, do have limitations. For a noise barrier to work, it must be high enough and long enough to block the path of the noise source. (Urban Crossroads, 2018d, p. 11)

### **D. *Traffic Noise Prediction***

Vehicle noise is a combination of the noise produced by the engine, exhaust, and tires on the roadway. According to the *Highway Traffic Noise Analysis and Abatement Policy and Guidance*, provided by the Federal Highway Administration (FHWA), the level of traffic noise depends on three primary factors: 1) the volume of the traffic, 2) the speed of the traffic, and 3) the vehicle mix within the flow of traffic. Generally, the loudness of traffic noise is increased by heavier traffic volumes, higher speeds, and a greater number of trucks. A doubling of the traffic volume, assuming that the speed and vehicle mix do not change, results in a noise level increase of 3 dBA. The vehicle mix on a given roadway may also have an effect on CNEL. As the number of medium and heavy trucks increases and becomes a larger percentage of the vehicle mix, noise levels will increase. (Urban Crossroads, 2018d, p. 35)

### **E. *Response to Noise***

Approximately 10% of the population has a very low tolerance for noise and will object to any noise not of their own making. Consequently, even in the quietest environment, some complaints will occur. Another 25% of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given environment. Despite this variability in behavior on an



individual level, the population as a whole can be expected to exhibit the following responses to changes in noise levels: an increase of 1 dBA cannot be perceived except in carefully controlled laboratory experiments; a change of 3 dBA is considered “barely perceptible;” and a change of 5 dBA is considered “readily perceptible.” (Urban Crossroads, 2018d, p. 12)

#### ***F. Vibration***

Vibration is the periodic oscillation of a medium or object. Sources of groundborne vibration include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, groundborne vibrations may be described by amplitude and frequency. Vibration is often described in units of velocity (inches per second) and decibels (dB) and is denoted as VdB. (Urban Crossroads, 2018d, p. 13)

The background vibration-velocity level in residential areas is generally 50 VdB. Groundborne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels. (Urban Crossroads, 2018d, p. 13)

### **4.10.2 EXISTING NOISE CONDITIONS**

#### ***A. Existing Study Area Ambient Noise Conditions***

Urban Crossroads recorded 24-hour noise readings at eight (8) locations near the Project site on September 13, 2017 (Urban Crossroads, 2018d, p. 29). More information about the sound monitoring locations and the sound level meter equipment is provided in *Technical Appendix I* to this EIR. The noise measurement locations are identified in Figure 4.10-1, *Noise Measurement Locations*. The existing ambient noise levels in the vicinity of the Project site are dominated by the transportation-related noise associated with automobile and truck traffic on the local arterial roadway network (Urban Crossroads, 2018d, p. 31).

The results of the existing noise level measurements are summarized in Table 4.10-1, *Existing 24-Hour Ambient Noise Level Measurements*, and described below. Refer to Appendix 5.2 of *Technical Appendix I* for the noise measurement worksheets used to calculate the noise levels listed in Table 4.10-1

- Location L1 is located northwest of the Project site on Alessandro Boulevard near an existing motel, car wash, and commercial uses. The hourly noise levels measured at Location L1 ranged from 54.4 to 62.8 dBA  $L_{eq}$  during the daytime hours and from 48.8 to 59.8 dBA  $L_{eq}$  during the nighttime hours, respectively. The energy (logarithmic) average daytime noise level was calculated at 59.4 dBA  $L_{eq}$  with an average nighttime noise level of 55.5 dBA  $L_{eq}$ , respectively. The daytime and nighttime noise measurements correlate to a 24-hour exterior noise level of 62.4 dBA CNEL. (Urban Crossroads, 2018d, p. 30)
- Location L2 is located west of the Project site near an existing industrial warehouse use on Brodiaea Avenue. The hourly noise levels measured at Location L2 ranged from 45.7 to 54.8 dBA  $L_{eq}$  during the daytime hours and from 46.0 to 51.4 dBA  $L_{eq}$  during the nighttime hours, respectively. The energy (logarithmic) average daytime noise level was calculated at 49.7 dBA  $L_{eq}$  with an average nighttime noise level of 48.3 dBA  $L_{eq}$ , respectively. The daytime and nighttime noise measurements correlate to a 24-hour exterior noise level of 54.9 dBA CNEL. (Urban Crossroads, 2018d, p. 30)



Source: Urban Crossroads (01-22-2018)

Figure 4.10-1



NOT TO SCALE



**NOISE MEASUREMENT LOCATIONS**



**Table 4.10-1 Existing 24-Hour Ambient Noise Level Measurements**

Location <sup>1</sup>	Distance to Project Boundary (Feet)	Description	Energy Average Hourly Noise Level (dBA Leq) <sup>2</sup>		CNEL
			Daytime	Nighttime	
L1	1,390'	Located northwest of the Project site on Alessandro Boulevard near an existing motel, car wash, and commercial uses.	59.4	55.5	62.4
L2	650'	Located west of the Project site near an existing industrial warehouse use on Brodiaea Avenue.	49.7	48.3	54.9
L3	1,060'	Located north of the Project site adjacent to existing residential homes west of Heacock Street.	55.8	51.5	59.1
L4	920'	Located northeast of the Project site on Ramsdell Drive near existing residential homes.	60.7	57.8	64.7
L5	340'	Located east of the Project site on Dimitra Drive near existing residential homes.	59.3	54.5	62.3
L6	560'	Located southeast of the Project site on Powell Place near existing residential homes.	62.0	59.6	66.1
L7	2,365'	Located southeast of the Project site on Unity Court near existing residential homes and Serrano Elementary School.	56.2	53.1	59.3
L8	1,880'	Located south of the Project site adjacent to March Air Reserve Base and existing industrial uses on Cactus Avenue.	60.2	57.3	64.4

<sup>1</sup>See Figure 4.10-1 for the noise level measurement locations.

<sup>2</sup>Energy (logarithmic) average hourly levels. The long-term 24-hour measurement worksheets are included in Appendix 5.2 of *Technical Appendix I*.

“Daytime” = 8:00 a.m. to 10:00 p.m.; “Nighttime” = 10:01 p.m. to 7:59 a.m.

Source: (Urban Crossroads, 2018d, Table 5-1)

- Location L3 is located north of the Project site adjacent to existing residential homes west of Heacock Street. The hourly noise levels measured at Location L3 ranged from 47.7 to 61.7 dBA L<sub>eq</sub> during the daytime hours and from 46.2 to 55.8 dBA L<sub>eq</sub> during the nighttime hours, respectively. The energy (logarithmic) average daytime noise level was calculated at 55.8 dBA L<sub>eq</sub> with an average nighttime noise level of 51.5 dBA L<sub>eq</sub>, respectively. The daytime and nighttime noise measurements correlate to a 24-hour exterior noise level of 59.1 dBA CNEL. (Urban Crossroads, 2018d, p. 30)
- Location L4 is located northeast of the Project site on Ramsdell Drive near existing residential homes. The noise levels measured at Location L4 ranged from 56.9 to 62.4 dBA L<sub>eq</sub> during the daytime hours and from 50.5 to 61.4 dBA L<sub>eq</sub> during the nighttime hours, respectively. The energy (logarithmic) average daytime noise level was calculated at 60.7 dBA L<sub>eq</sub> with an average nighttime noise level of 57.8 dBA L<sub>eq</sub>, respectively. The daytime and nighttime noise measurements correlate to a 24-hour exterior noise level of 64.7 dBA CNEL. (Urban Crossroads, 2018d, p. 30)



- Location L5 is located east of the Project site on Dimitra Drive near existing residential homes. The hourly noise levels measured at Location L5 ranged from 53.1 to 64.1 dBA  $L_{eq}$  during the daytime hours and from 46.1 to 59.2 dBA  $L_{eq}$  during the nighttime hours, respectively. The energy (logarithmic) average daytime noise level was calculated at 59.3 dBA  $L_{eq}$  with an average nighttime noise level of 54.5 dBA  $L_{eq}$ , respectively. The daytime and nighttime noise measurements correlate to a 24-hour exterior noise level of 62.3 dBA CNEL. (Urban Crossroads, 2018d, p. 30)
- Location L6 is located southeast of the Project site on Powell Place near existing residential homes. The hourly noise levels measured at Location L6 ranged from 58.9 to 66.4 dBA  $L_{eq}$  during the daytime hours and from 54.1 to 63.7 dBA  $L_{eq}$  during the nighttime hours, respectively. The energy (logarithmic) average daytime noise level was calculated at 62.0 dBA  $L_{eq}$  with an average nighttime noise level of 59.6 dBA  $L_{eq}$ , respectively. The daytime and nighttime noise measurements correlate to a 24-hour exterior noise level of 66.1 dBA CNEL. (Urban Crossroads, 2018d, pp. 30-31)
- Location L7 is located southeast of the Project site on Unity Court near existing residential homes and Serrano Elementary School. The hourly noise levels measured at Location L7 ranged from 50.5 to 60.1 dBA  $L_{eq}$  during the daytime hours and from 46.6 to 58.9 dBA  $L_{eq}$  during the nighttime hours, respectively. The energy (logarithmic) average daytime noise level was calculated at 56.2 dBA  $L_{eq}$  with an average nighttime noise level of 53.1 dBA  $L_{eq}$ , respectively. The daytime and nighttime noise measurements correlate to a 24-hour exterior noise level of 59.3 dBA CNEL. (Urban Crossroads, 2018d, p. 31)
- Location L8 is located south of the Project site adjacent to March Air Reserve Base and existing industrial uses on Cactus Avenue. The hourly noise levels measured at Location L8 ranged from 55.5 to 62.6 dBA  $L_{eq}$  during the daytime hours and from 51.9 to 60.1 dBA  $L_{eq}$  during the nighttime hours, respectively. The energy (logarithmic) average daytime noise level was calculated at 60.2 dBA  $L_{eq}$  with an average nighttime noise level of 57.3 dBA  $L_{eq}$ , respectively. The daytime and nighttime noise measurements correlate to a 24-hour exterior noise level of 64.4 dBA CNEL. (Urban Crossroads, 2018d, p. 31)

***B. Existing Groundborne Vibration***

The Project site is vacant and undeveloped, and there are no sources of groundborne vibration perceptible to humans on the Project site under existing conditions.

***C. Airport Noise***

The Project site is located in the vicinity of March Air Reserve Base Airport. According to noise modeling conducted on behalf of the Riverside County Airport Land Use Commission (ALUC), the Project site is located outside of the 60 CNEL contour from aircraft noise, and is not exposed to substantial aircraft noise (ALUC, 2014a, Exhibit MA-4; Urban Crossroads, 2018d, p. 21).



### **4.10.3 APPLICABLE ENVIRONMENTAL PLANS, POLICIES, AND REGULATIONS**

The following is a brief description of the federal, State, and local environmental laws and regulations related to noise that are applicable to the Project, the Project site, and/or the surrounding area.

#### ***A. Federal Plans, Policies, and Regulations***

##### **1. Noise Control Act of 1972**

The Noise Control Act of 1972 establishes a national policy to promote an environment for all Americans free from noise that jeopardizes their health and welfare. The Act also serves to (1) establish a means for effective coordination of federal research and activities in noise control; (2) authorize the establishment of federal noise emission standards for products distributed in commerce; and (3) provide information to the public respecting the noise emission and noise reduction characteristics of such products. (EPA, 2017g)

While primary responsibility for control of noise rests with state and local governments, federal action is essential to deal with major noise sources in commerce, control of which require national uniformity of treatment. The Environmental Protection Agency (EPA) is directed by Congress to coordinate the programs of all federal agencies relating to noise research and noise control. (EPA, 2017g)

##### **2. Federal Transit Administration**

The Federal Transit Administration (FTA) published a *Noise and Vibration Impact Assessment (NVIA)*, which provides guidance for preparing and reviewing the noise and vibration sections of environmental documents. In the interest of promoting quality and uniformity in assessments, the manual is used by project sponsors and consultants in performing noise and vibration analyses for inclusion in environmental documents. The manual sets forth the methods and procedures for determining the level of noise and vibration impact resulting from most federally-funded transit projects and for determining what can be done to mitigate such impact. (FTA, 2006, p. 1-1)

##### **3. Federal Highway Administration**

The Federal Highway Administration (FHWA) is the agency responsible for administering the federal-aid highway program in accordance with federal statutes and regulations. The FHWA developed the noise regulations as required by the Federal-Aid Highway Act of 1970 (Public Law 91-605, 84 Stat. 1713). The regulation, 23 CFR 772 Procedures for Abatement of Highway Traffic Noise and Construction Noise, applies to highway construction projects where a state department of transportation has requested federal funding for participation in the project. The regulation requires the highway agency to investigate traffic noise impacts in areas adjacent to federally-aided highways for proposed construction of a highway on a new location or the reconstruction of an existing highway to either substantially change the horizontal or vertical alignment or increase the number of through-traffic lanes. If the highway agency identifies impacts, it must consider abatement. The highway agency must incorporate all feasible and reasonable noise abatement into the project design. (FHWA, 2017)

The FHWA regulations for mitigation of highway traffic noise in the planning and design of federally aided highways are contained in Title 23 of the United States Code of Federal Regulations Part 772. The regulations contain noise abatement criteria, which represent the upper limit of acceptable highway traffic noise for different types of land uses and human activities. The regulations do not require meeting the abatement criteria in every instance. Rather, they require highway agencies make every reasonable and feasible effort to provide noise mitigation when the criteria are approached or exceeded. Compliance with the noise regulations is a



prerequisite for the granting of federal-aid highway funds for construction or reconstruction of a highway. (FHWA, 2017)

#### **4. Construction-Related Hearing Conservation**

The Occupational Safety and Health Administration (OSHA) hearing conservation program is designed to protect workers with significant occupational noise exposures from hearing impairment even if they are subject to such noise exposures over their entire working lifetimes. Standard 29 CFR, Part 1910 indicates the noise levels under which a hearing conservation program is required to be provided to workers exposed to high noise levels. (OSHA, 2002)

#### ***B. State Plans, Policies, and Regulations***

##### **1. State of California Noise Requirements**

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city in the State of California adopt a General Plan that includes a Noise Element, which is to be prepared according to guidelines adopted by the Governor's Office of Planning and Research. The purpose of the Noise Element is to limit the exposure of the community to excessive noise levels.

##### **2. California Building Standards Code**

The State of California's noise insulation standards are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 2, and the California Building Standards Code. These noise standards are applied to new construction in California for the purpose of controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are developed near major transportation noise sources, and where such noise sources create an exterior noise level of 60 dBA CNEL or higher. Acoustical studies that accompany building plans for noise-sensitive land uses must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new residential buildings, schools, and hospitals, the acceptable interior noise limit for new construction is 45 dBA CNEL.

##### **3. OPR General Plan Guidelines**

Though not adopted by law, the 2003 California General Plan Guidelines, published by the California Governor's Office of Planning and Research (OPR), provides guidance for local agencies in preparing or updating General Plans. The Guidelines provide direction on the required Noise Element portion of the General Plans. The purpose of the Noise Element is to limit the exposure of the community to excessive noise levels. Local governments must "analyze and quantify" noise levels and the extent of noise exposure through actual measurement or the use of noise modeling. Technical data relating to mobile and point sources must be collected and synthesized into a set of noise control policies and programs that "minimizes the exposure of community residents to excessive noise." Noise level contours must be mapped and the conclusions of the element used as a basis for land use decisions. The element must include implementation measures and possible solutions to existing and foreseeable noise problems. Furthermore, the policies and standards must be sufficient to serve as a guideline for compliance with sound transmission control requirements. The noise element directly correlates to the Land Use, Circulation, and Housing Elements. The Noise Element must be used to guide decisions concerning land use and the location of new roads and transit facilities since these are



common sources of excessive noise levels. The noise levels from existing land uses, including mining, agricultural, and industrial activities, must be closely analyzed to ensure compatibility, especially where residential and other sensitive receptors have encroached into areas previously occupied by these uses. (OPR, 2003, p. 87)

***C. Local Plans, Policies, and Regulations***

***1. City of Moreno Valley Noise Standards***

The Noise Ordinance included in Chapter 11.80 of the Moreno Valley Municipal Code provides performance standards and noise control guidelines for activities within the City limits, as described below.

**□ Operational Noise Standards**

Moreno Valley Municipal Code Section 11.80.030(C), *Nonimpulsive Sound Decibel Limits*, provides the following restriction:

*No person shall maintain, create, operate or cause to be operated on private property any source of sound in such a manner as to create any nonimpulsive sound which exceeds the limits set forth for the source land use category (as defined in Section 11.80.020) in Table 11.80.030-2 when measured at a distance of two hundred (200) feet or more from the real property line of the source of the sound, if the sound occurs on privately owned property, or from the source of the sound, if the sound occurs on public right-of-way, public space or other publicly owned property. Any source of sound in violation of this subsection shall be deemed prima facie to be a noise disturbance. (City of Moreno Valley, 2017)*

For industrial land uses, the operational noise level limits are 65 dBA  $L_{eq}$  during the daytime hours (8:00 a.m. to 10:00 p.m.) and 60 dBA  $L_{eq}$  during the nighttime hours (10:01 p.m. to 7:59 a.m.). Therefore, at a distance of 200 feet from the property line, operational noise from industrial buildings is not permitted to exceed 65 dBA  $L_{eq}$  during the day and 60 dBA  $L_{eq}$  during the night. (Urban Crossroads, 2018d, p. 19)

Additionally, Moreno Valley Municipal Code Section 9.10.140 prohibits the use of loudspeakers, bells, gongs, buzzers, or other noise attention or attracting devices on industrial properties that exceed 55 dBA at any one time beyond the boundaries of the subject property (City of Moreno Valley, 2017)

**□ Construction Noise Standards**

The City of Moreno Valley Municipal Code has established restrictions on the time of day that construction activities can occur. Moreno Valley Municipal Code Section 11.80.030(D)(7), *Construction and Demolition*, states:

*No person shall operate or cause operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between the hours of 8:00 p.m. and 7:00 a.m. the following day such that the sound there from creates a noise disturbance, except for emergency work by public service utilities or for other work approved by the city manager or designee.*

A noise disturbance is defined by the Moreno Valley Municipal Code as any sound which: a) disturbs a reasonable person of normal sensitivities; b) exceeds the sound level limits set forth in Municipal Code Table 11.80.030-2; or c) is plainly audible as defined in Municipal Code Section 11.80.030. Where no specific





distance is set forth for the determination of audibility, references to noise disturbance are deemed to mean plainly audible at a distance of 200 feet from the real property line of the source of the sound on private property or from the source of the sound on roads or other publicly owned property.

☐ **Vibration**

Moreno Valley Municipal Code Section 9.10.170 prohibits vibration that “can be felt at or beyond the property line.” (City of Moreno Valley, 2017)

**4.10.4 METHODOLOGY FOR ESTIMATING PROJECT-RELATED NOISE IMPACTS**

***A. Construction Noise Analysis Methodology***

Urban Crossroads collected reference noise level measurements at construction sites throughout southern California that were using the same types of construction equipment that would be used to construct the proposed Project and that were performing similar types of construction activities as would occur to construct the proposed Project (refer to EIR Section 3.0, *Project Description*, for a description of the construction equipment and construction activities that would be needed to construct the proposed Project). Table 4.10-2, *Construction Reference Noise Levels*, provides a summary of the reference noise level measurements. Because the reference noise measurements were collected at different distances to the primary noise source, all construction noise level measurements presented in Table 4.10-2 were normalized by Urban Crossroads to describe a common reference distance of 50 feet. (Urban Crossroads, 2018d, p. 64)

In accordance with CEQA, the construction noise analysis evaluates Project-related construction noise levels at the nearby sensitive receiver locations in the Project study area. This analysis of construction-related noise does not evaluate the noise exposure of construction workers within the Project site based on CEQA’s requirements to evaluate impacts to the existing environment; CEQA does not require an evaluation of the Project’s impacts upon itself. During construction activities, periodic exposure to high noise levels in short duration, such as would occur during the Project’s construction, is typically considered an annoyance and not impactful to human health. It would take several years of exposure to high noise levels to result in hearing impairment.

***B. Transportation-Related Noise Analysis Methodology***

Transportation-related noise impacts were projected using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model FHWA-RD-77-108 (the “FHWA Model”). The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). In California, the national REMELs are substituted with the California Vehicle Noise (Calveno) Emission Levels. Adjustments are then made to the REMELs to account for: 1) roadway classification (e.g., collector, secondary, major or arterial), 2) roadway travel width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), 3) total average daily traffic (ADT), 4) travel speed, 5) percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, 6) roadway grade, 7) angle of view (e.g., whether the roadway view is blocked), 8) site conditions (“hard” or “soft” relates to the absorption of the ground, pavement, or landscaping), and 9) percentage of total ADT that flows each hour throughout a 24-hour period. (Urban Crossroads, 2018d, p. 35)



**Table 4.10-2 Construction Reference Noise Levels**

ID	Noise Source	Reference Distance from Source (Feet)	Reference Noise Levels @ Reference Distance (dBA Leq)	Reference Noise Levels @ 50 Feet (dBA Leq) <sup>6</sup>
1	Truck Pass-Bys & Dozer Activity <sup>1</sup>	30'	63.6	59.2
2	Dozer Activity <sup>1</sup>	30'	68.6	64.2
3	Construction Vehicle Maintenance Activities <sup>2</sup>	30'	71.9	67.5
4	Foundation Trenching <sup>2</sup>	30'	72.6	68.2
5	Rough Grading Activities <sup>2</sup>	30'	77.9	73.5
6	Residential Framing <sup>3</sup>	30'	66.7	62.3
7	Water Truck Pass-By & Backup Alarm <sup>4</sup>	30'	76.3	71.9
8	Dozer Pass-By <sup>4</sup>	30'	84.0	79.6
9	Two Scrapers & Water Truck Pass-By <sup>4</sup>	30'	83.4	79.0
10	Two Scrapers Pass-By <sup>4</sup>	30'	83.7	79.3
11	Scraper, Water Truck, & Dozer Activity <sup>4</sup>	30'	79.7	75.3
12	Concrete Mixer Truck Movements <sup>5</sup>	50'	71.2	71.2
13	Concrete Paver Activities <sup>5</sup>	30'	70.0	65.6
14	Concrete Mixer Pour & Paving Activities <sup>5</sup>	30'	70.3	65.9
15	Concrete Mixer Backup Alarms & Air Brakes <sup>5</sup>	50'	71.6	71.6
16	Concrete Mixer Pour Activities <sup>5</sup>	50'	67.7	67.7
17	Forklift, Jackhammer, & Metal Truck Bed Loading	50'	67.9	67.9

<sup>1</sup>As measured by Urban Crossroads on 10/14/15 at a business park construction site located at the northwest corner of Barranca Parkway and Alton Parkway in the City of Irvine.

<sup>2</sup>As measured by Urban Crossroads on 10/20/15 at a construction site located in Rancho Mission Viejo.

<sup>3</sup>As measured by Urban Crossroads on 10/20/15 at a residential construction site located in Rancho Mission Viejo.

<sup>4</sup>As measured by Urban Crossroads on 10/30/15 during grading operations within an industrial construction site located in the City of Ontario.

<sup>5</sup>Reference noise level measurements were collected from a nighttime concrete pour at an industrial construction site, located at 27334 San Bernardino Avenue in the City of Redlands, between 1:00 a.m. to 2:00 a.m. on 7/1/15.

<sup>6</sup>Reference noise levels are calculated at 50 feet using a drop off rate of 6 dBA per doubling of distance (point source).

Source: (Urban Crossroads, 2018d, Table 10-1)

Table 4.10-3, *Roadway Parameters*, presents the FHWA Model roadway parameters used by Urban Crossroads for each of the nine (9) roadway segments in the study area. For the purpose of the off-site analysis, soft site conditions were used to analyze the traffic noise impacts on each roadway segment in the study area because landscaping (e.g., parkways, back yards, side yards) between the street surface and the noise receiver locations along all study area roadways. (Urban Crossroads, 2018d, p. 35) Noise attenuation from any existing noise barriers to topographic features that may be located along the study area roadway segments was not factored into the model; therefore, the traffic noise levels/impacts identified by the traffic model are overstated (“worst-case”) (Urban Crossroads, 2018d, p. 42).

To quantify transportation-related noise levels, the Project’s vehicular trips were assigned to the nine (9) roadway segments listed above, using the trip distribution and vehicle mix information contained in the Project’s traffic impact analysis prepared by Urban Crossroads (refer to *Technical Appendix I*) (Urban Crossroads, 2018d, p. 35).



**Table 4.10-3 Roadway Parameters**

ID	Roadway	Segment	Adjacent Land Use	Distance from Centerline to Nearest Adjacent Land Use (Feet) <sup>1</sup>	Posted Speed Limit (mph)
1	Gilbert St.	s/o Brodiaea Av.	Business Park	39'	35
2	Gilbert St.	n/o Cactus Av.	Business Park	39'	35
3	Heacock St.	n/o Alessandro Bl.	Commercial	50'	40
4	Heacock St.	s/o Alessandro Bl.	Residential	50'	45
5	Heacock St.	n/o Brodiaea Av.	Residential	50'	45
6	Heacock St.	s/o Brodiaea Av.	Residential	50'	45
7	Alessandro Bl.	w/o Heacock St.	Commercial	55'	45
8	Brodiaea Av.	e/o Gilbert St.	Business Park	39'	35
9	Cactus Av.	w/o Gilbert St.	Business Park	55'	50

<sup>1</sup>Distance to adjacent land use is based upon the right-of-way distances for each functional roadway classification provided in the General Plan Circulation Element

Source: (Urban Crossroads, 2018d, Table 6-1)

**C. Vibration**

Vibration levels were predicted using reference vibration levels and logarithmic equations contained in the FTA’s NVIA (Urban Crossroads, 2018d, p. 39). The vibration source levels for Project construction equipment are summarized in Table 4.10-4, *Vibration Source Levels for Construction Equipment*.

**Table 4.10-4 Vibration Source Levels for Construction Equipment**

Equipment	Vibration Decibels (VdB) at 25 feet
Small bulldozer	58
Jackhammer	79
Loaded Trucks	86
Large bulldozer	87

Source: (Urban Crossroads, 2018d, Table 6-8)

**4.10.5 BASIS FOR DETERMINING SIGNIFICANCE**

The proposed Project would result in a significant noise impact if the Project or any Project-related component would:

- a. *Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;*
- b. *Expose persons to or generate excessive groundborne vibration or groundborne noise levels;*
- c. *Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;*
- d. *Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;*



- e. For a project located within an airport land use plan, or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels; or*
- f. For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.*

The above-listed thresholds are derived directly from Appendix G to the CEQA Guidelines and address the typical, adverse noise-related effects that could result from development projects. The specific, quantitative criteria described below are utilized to evaluate the significance of potential traffic impacts under Thresholds “a,” “b,” “c,” and “d” and are based on applicable City of Moreno Valley regulations and relevant federal and State performance standards.

In relation to Threshold “a,” City of Moreno Valley’s noise ordinance (Municipal Code Chapter 11.80) is the only relevant, established noise standards for the Project site. Pursuant to the City of Moreno Valley Municipal Code, the Project would result in a significant noise impact under Threshold “a” if any of the following were to occur:

- Construction activities that result in continuous noise levels that exceed 90 dBA  $L_{eq}$  at any time of day when measured at nearby residential receivers.
- Nighttime construction activities (between 10:01 p.m. to 7:59 a.m.) that result in noise levels that exceed 60 dBA  $L_{eq}$  when measured at a nearby sensitive receptor;
- Operational activities that result in continuous noise levels that exceed 90 dBA  $L_{eq}$  at any time of day when measured at nearby residential receivers.
- Operational activities that result in noise levels that exceed 65 dBA  $L_{eq}$  during the daytime hours (8:00 a.m. to 10:00 p.m.) and/or 60 dBA  $L_{eq}$  during the nighttime hours (10:01 p.m. to 7:59 a.m.) when measured at a distance of 200 feet from the property line for the Project site.

The City of Moreno Valley Municipal Code does not establish a qualitative metric for evaluating vibration and groundborne noise effects. For purposes of evaluating Threshold “b,” this EIR relies on the vibration standards recommended by the FTA in their *NVIA*, which is a national standard that many CEQA lead agencies use to evaluate the significance of vibration. Therefore, for evaluation under Threshold “b,” vibration and groundborne noise levels are considered significant if Project-related activities would exceed 80 vibration decibels (Vdb) at noise-sensitive receiver locations.

While the City of Moreno Valley Municipal Code provides noise standards that are sufficient to assess the significance of noise impacts under Threshold “a,” the Municipal Code does not define the levels at which noise increases are considered substantial. Under CEQA, consideration must be given to the magnitude of the increase, the existing ambient noise levels, and the location of sensitive receptors in order to determine if a noise increase represents a substantial increase and thus a significant adverse environmental impact. For purposes of this EIR, the significance thresholds are adapted from the noise compatibility criteria by land use category provided in the General Plan Guidelines, a publication of the California Office of Planning and Research (OPR, 2003, p. 250). Based on the noise level increases that are normally perceptible to humans, and the standards listed in the City of Moreno Valley Municipal Code (Urban Crossroads, 2018d, pp. 12-13), noise level increases associated with the Project’s operation and construction will be considered significant under Thresholds “c” and “d,” respectively, based on the following:



For evaluation under Threshold “c,” the Project would result in a significant noise impact if the Project’s stationary source (on-site) or mobile source (off-site traffic) activities result in:

- Noise levels that exceed 65 dBA  $L_{eq}$  during the daytime hours (8:00 a.m. to 10:00 p.m.) and/or 60 dBA  $L_{eq}$  during the nighttime hours (10:01 p.m. to 7:59 a.m.) when measured at nearby residential receivers;
- A 5 dBA or greater noise level increase at noise-sensitive receptors when the existing ambient noise level is less than 60 dBA CNEL;
- A 3 dBA or greater noise level increase at noise-sensitive receptors when the existing ambient noise level is between 60.1 and 65 dBA CNEL;
- A 1.5 dBA or greater noise level increase at noise-sensitive receptors when the existing ambient noise levels exceeds 65.1 dBA CNEL;
- A 5 dBA or greater noise level increase at non-noise-sensitive receptors when the existing ambient noise level is less than 70 dBA CNEL *and* the additional noise causes ambient noise levels to exceed 70 dBA CNEL; or
- A 3 dBA or greater noise level increase at non-noise-sensitive receptors when the existing ambient noise level exceeds 70 dBA CNEL.

For evaluation under Threshold “d,” the Project would result in a significant noise impact if the Project’s construction activities result in:

- Noise levels that exceed 65 dBA  $L_{eq}$  during the daytime hours (8:00 a.m. to 10:00 p.m.) and/or 60 dBA  $L_{eq}$  during the nighttime hours (10:01 p.m. to 7:59 a.m.) when measured at nearby residential receivers.

**4.10.6 IMPACT ANALYSIS**

<b>Threshold a:</b>	<i>Would the Project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?</i>
<b>Threshold c:</b>	<i>Would the Project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?</i>
<b>Threshold d:</b>	<i>Would the Project result in a substantially temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?</i>

The analysis presented on the following pages summarizes the Project’s potential construction noise levels and operational noise levels, including operational noise that would be generated on-site as well as off-site noise that would be generated by the Project’s traffic. The detailed noise calculations for the analysis presented here are provided in Appendices 7.1, 9.1, and 9.2 of *Technical Appendix I*.

**A. Construction Noise Impact Analysis**

Construction activities on the Project site are proposed to primarily occur on weekdays during daylight hours; however, specific construction activities (i.e., concrete pouring for building foundation and tilt-up wall panels) could occur on weekdays during nighttime hours because cool temperatures are needed to pour and cure concrete and daytime air temperatures are often too warm. Construction activities on the Project site are expected to proceed in five stages: 1) site preparation; 2) grading; 3) building construction; 4) paving; and 5)



application of architectural coatings. These activities would create temporary periods of noise when heavy construction equipment is in operation and would cause a short-term increase in ambient noise levels. Examples of construction equipment that generate noise include, but are not limited to, off-road equipment (e.g., graders, scrapers), power tools, concrete mixers, and portable generators. (Urban Crossroads, 2018d, p. 62).

Construction noise levels were calculated at seven (7) representative noise sensitive receiver locations surrounding the Project site. The noise sensitive receiver locations studied are shown on Figure 4.10-2, *Noise Receiver Locations*. Receiver locations in the Project study area include single-family residential homes (Receivers R2 and R4 through R7), a motel (Receiver R1), and a church (Receiver R3). (Urban Crossroads, 2018d, p. 49) The Project's daytime (8:00 a.m. to 10:00 p.m.) and nighttime (10:01 p.m. to 7:59 a.m.) construction noise levels at each of the modeled sensitive receiver locations are summarized in Table 4.10-5, *Project-Related Construction Noise Levels*. These seven (7) locations are representative of all sensitive receivers located nearest the Project site. It is not necessary to study every single receiver location surrounding Project site because receivers with similar distances, ground elevations, orientation, and intervening physical conditions would experience the same or very similar noise effects from the Project as would occur at these seven (7) locations.

As shown in Table 4.10-5, peak daytime construction activities on the Project site are calculated to expose nearby sensitive receivers to noise levels ranging from a minimum of 47.4 dBA  $L_{eq}$  (at Receiver R2) to a maximum of 64.8 dBA  $L_{eq}$  (at Receiver R7). Peak nighttime construction activities are calculated to expose nearby sensitive receptors to noise levels ranging from a minimum of 39.4 dBA  $L_{eq}$  (at Receiver R2) to a maximum of 56.8 dBA  $L_{eq}$ . The noise levels presented in Table 4.10-5 reflect noise attenuation from the existing sound wall located on the east side of Heacock Street – calculated to be a reduction of 5.5 decibels at noise-sensitive receptors that receive screening from the wall. Most construction activities would not be particularly or excessively loud from off-site areas; however, at times there may be a sound (e.g., bell, back-up alarm, pounding) that may be heard off-site that would be more of an annoyance than a cause of human distress because no stage of Project construction – either daytime or nighttime activities – would result in continuous noise levels equivalent to or greater than 90 dBA  $L_{eq}$  (Urban Crossroads, 2018d, pp. 65-70). Accordingly, the Project's construction activities would neither expose persons to or generate noise levels in excess of the standards established by the City of Moreno Valley Municipal Code nor result in a substantial temporary or periodic increase in ambient noise levels. The Project would result in a less-than-significant impact related to construction noise under Thresholds "a" and "d."

### ***B. Stationary Noise Impact Analysis***

Stationary (on-site) noise sources associated with the Project's long-term operation are expected to include idling trucks, delivery truck and automobile parking, delivery truck backup alarms, roof-top air conditioning units, emergency generators, and cargo handling equipment. The Project also is expected to generate noise during the loading and unloading of dry goods on-site. The locations and types of stationary noise expected on the Project site during long-term operation are illustrated on Figure 4.10-3, *Operational Noise Source Locations*. Based on the design of the Project's proposed warehouse building, with the loading docks positioned only on the west side of the building, the most noise-intensive stationary activities would occur on the west side of the Project site.



**LEGEND:**

- Receiver Locations
- Distance from receiver to Project site boundary (in feet)
- Existing Barrier
- Existing Barrier Height (in feet)

Source: Urban Crossroads (01-22-2018)

Figure 4.10-2



NOT TO SCALE



**NOISE RECEIVER LOCATIONS**



**Table 4.10-5 Project-Related Construction Noise Levels**

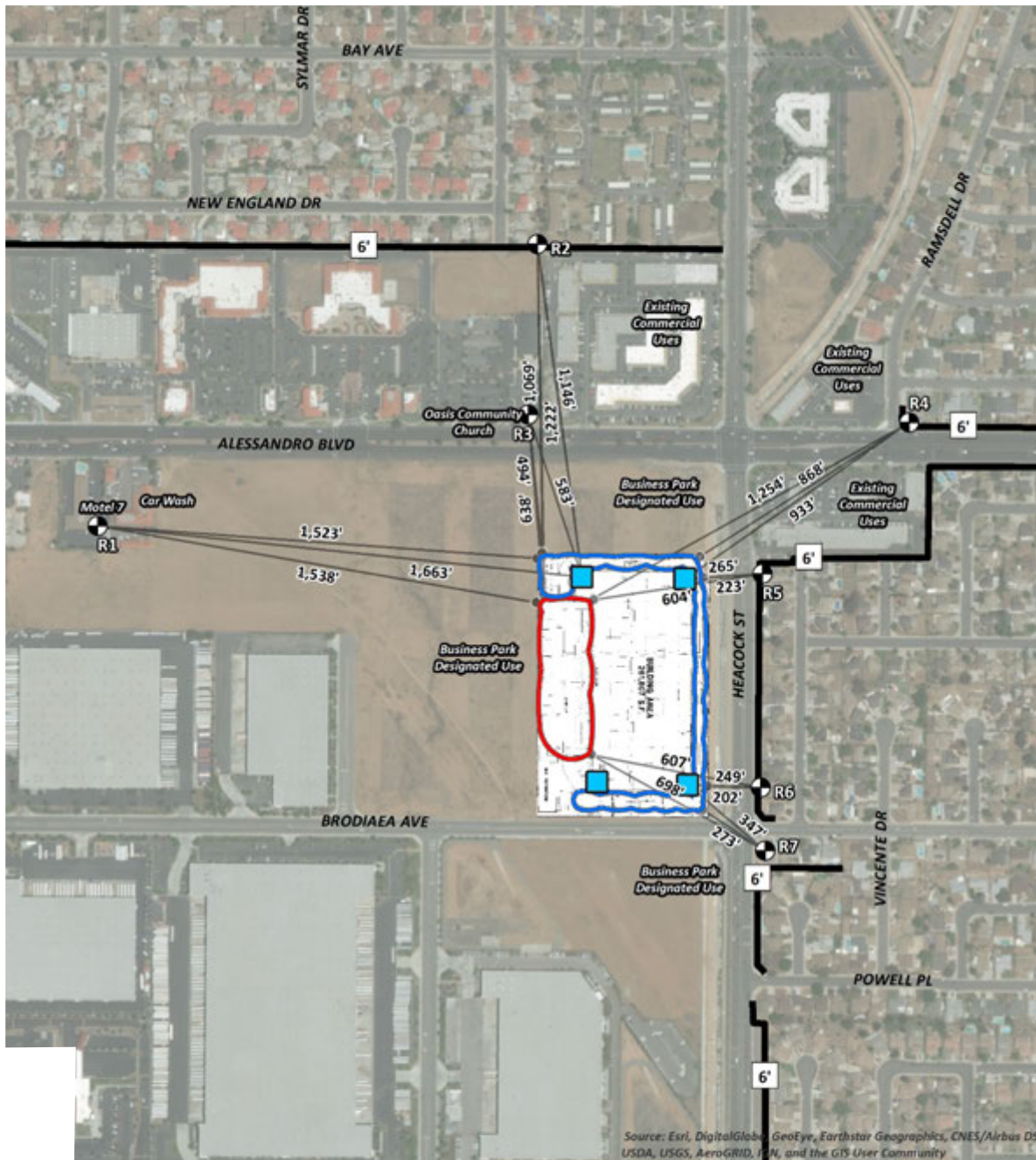
Receiver Location <sup>1</sup>	Distance to Receiver (Feet)	Daytime Construction Noise Levels (dBA Leq)						Nighttime Concrete Pour Noise Levels (dBA Leq)	Threshold Exceeded? <sup>2</sup>	
		Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Daytime Construction Noise Levels		Daytime (65 dBA Leq)	Nighttime (60 dBA Leq)
R1	1,517'	49.9	49.9	38.5	42.0	37.8	49.9	42.0	No	No
R2	1,078'	47.4	47.4	36.0	39.4	35.3	47.4	39.4	No	No
R3	495'	59.7	59.7	48.3	51.7	47.6	59.7	51.7	No	No
R4	867'	49.3	49.3	37.9	41.3	37.2	49.3	41.3	No	No
R5	198'	62.1	62.1	50.7	54.1	50.0	62.1	54.1	No	No
R6	200'	62.0	62.0	50.6	54.1	49.9	62.0	54.1	No	No
R7	274'	64.8	64.8	53.4	56.8	52.7	64.8	56.8	No	No

<sup>1</sup>See EIR Figure 4.10-2 for the receiver source locations.

<sup>2</sup>Do the noise levels exceed applicable thresholds listed in EIR Subsection 4.10.5?

Source: (Urban Crossroads, 2018d, Table 10-8)





**LEGEND:**

Receiver Locations	Roof-Top Air Conditioning Unit	Distance from receiver to noise source (in feet)
6' Existing Barrier Height (in feet)	Parking Lot Vehicle Movements	
Existing Barrier	Distribution/Warehouse Activity	

Source: Urban Crossroads (01-22-2018)

Figure 4.10-3



NOT TO SCALE



**OPERATIONAL NOISE SOURCE LOCATIONS**



The Project’s stationary, operational noise levels were calculated at the same seven (7) noise-sensitive receiver locations that were modeled as part of the Project’s construction noise analysis (refer to Table 4.10-5). Table 4.10-6, *Operational Noise Level Projections at Receiver Locations*, summarizes the Project’s stationary, operational noise levels at the modeled sensitive receptor locations.

**Table 4.10-6 Operational Noise Level Projections at Receiver Locations**

Receiver Location <sup>1</sup>	Noise Levels by Noise Source (dBA Leq) <sup>2</sup>			Combined Operational Noise Levels (dBA Leq) <sup>3</sup>	Threshold Exceeded? <sup>4</sup>	
	Unloading/ Docking Activity	Roof-Top Air Conditioning Unit	Parking Lot Vehicle Movements		Daytime (65 dBA Leq)	Nighttime (60 dBA Leq)
R1	33.0	24.9	19.5	33.8	No	No
R2	29.5	22.8	16.3	30.5	No	No
R3	40.6	34.0	26.8	41.6	No	No
R4	17.2	24.7	17.6	26.1	No	No
R5	23.5	35.9	26.5	36.6	No	No
R6	23.5	36.5	27.1	37.2	No	No
R7	22.3	38.5	30.7	39.3	No	No

<sup>1</sup>See EIR Figure 4.10-2 for the receiver locations.

<sup>2</sup>Reference noise sources as shown on Table 9-1 in *Technical Appendix I*.

<sup>3</sup>Calculations for each noise source are provided in Appendix 9.2 of *Technical Appendix I*.

<sup>4</sup>Do the noise levels exceed applicable thresholds listed in EIR Subsection 4.10.5?

Source: (Urban Crossroads, 2018d, Table 9-3)

As shown in Table 4.10-6, operational activities on the Project site would not expose any sensitive receptor to noise levels in excess of 41.6 dBA Leq during daytime or nighttime hours. When measured at a distance of 200 feet from the Project site’s property line, the Project’s operational noise levels are calculated to be 51.5 dBA Leq (Urban Crossroads, 2018d, p. 56). During long-term operation, the Project would not expose persons to or generate noise levels in excess of standards established by the City of Moreno Valley Municipal Code because the Project’s stationary noise levels would neither result in continuous noise levels equivalent to or greater than 90 dBA Leq nor would the Project’s stationary noise levels exceed 65 dBA Leq during the daytime hours (8:00 a.m. to 10:00 p.m.) or 60 dBA Leq during the nighttime hours (10:01 p.m. to 7:59 a.m.) when measured at a distance of 200 feet from the property line for the Project site. The Project would result in a less-than-significant impact under Threshold “a.”

When evaluated against the context of existing ambient noise levels in the Project area, the Project’s operational noise would not be perceptible at noise-sensitive-receiver locations during daytime or nighttime hours. The Project’s contribution to the existing noise environment is summarized in Table 4.10-7, *Daytime Operational Noise Level Contributions*, and Table 4.10-8, *Nighttime Operation Noise Level Contributions*.

As shown in Table 4.10-7 and Table 4.10-8, operational activities on the Project site would increase ambient noise levels at noise-sensitive-receiver locations by no more than 0.2 dBA Leq during daytime hours and by no more than 0.4 dBA Leq during nighttime hours, respectively. (As described earlier in this Subsection, noise level increases of 1 dBA can only be perceived by the human ear in a controlled, laboratory environment.) The Project’s contribution to the existing noise environment at noise-sensitive-receiver locations would be far below the applicable significance threshold (i.e., 5 dBA) and, therefore, would not represent a substantial permanent increase in ambient noise levels in the Project site vicinity above levels existing without the Project. The Project would result in a less-than-significant impact under Threshold “c.”



**Table 4.10-7 Daytime Operational Noise Level Contributions**

Receiver Location <sup>1</sup>	Total Project Operational Noise Level <sup>2</sup>	Measurement Location <sup>3</sup>	Reference Ambient Noise Levels <sup>4</sup>	Combined Project and Ambient <sup>5</sup>	Project Contribution <sup>6</sup>	Threshold Exceeded? <sup>7</sup>
R1	33.8	L1	59.4	59.4	0.0	No
R2	30.5	L3	55.8	55.8	0.0	No
R3	41.6	L3	55.8	56.0	0.2	No
R4	26.1	L4	60.7	60.7	0.0	No
R5	36.6	L5	59.3	59.3	0.0	No
R6	37.2	L6	62.0	62.0	0.0	No
R7	39.3	L6	62.0	62.0	0.0	No

<sup>1</sup>See EIR Figure 4.10-2 for the receiver locations.

<sup>2</sup>Total Project operational noise levels as shown on EIR Table 4.10-6.

<sup>3</sup>Reference noise level measurement locations as shown on EIR Figure 4.10-1.

<sup>4</sup>Observed daytime ambient noise levels as shown on EIR Table 4.10-1.

<sup>5</sup>Represents the combined ambient conditions plus the Project activities.

<sup>6</sup>The noise level increase expected with the addition of the proposed Project activities.

<sup>7</sup>Do the noise levels exceed applicable thresholds listed in EIR Subsection 4.10.5?

Source: (Urban Crossroads, 2018d, Table 9-4)

**Table 4.10-8 Nighttime Operation Noise Level Contributions**

Receiver Location <sup>1</sup>	Total Project Operational Noise Level <sup>2</sup>	Measurement Location <sup>3</sup>	Reference Ambient Noise Levels <sup>4</sup>	Combined Project and Ambient <sup>5</sup>	Project Contribution <sup>6</sup>	Threshold Exceeded? <sup>7</sup>
R1	33.8	L1	55.5	55.5	0.0	No
R2	30.5	L3	51.5	51.5	0.0	No
R3	41.6	L3	51.5	51.9	0.4	No
R4	26.1	L4	57.8	57.8	0.0	No
R5	36.6	L5	54.5	54.6	0.1	No
R6	37.2	L6	59.6	59.6	0.0	No
R7	39.3	L6	59.6	59.6	0.0	No

<sup>1</sup>See EIR Figure 4.10-2 for the receiver locations.

<sup>2</sup>Total Project operational noise levels as shown on EIR Table 4.10-6.

<sup>3</sup>Reference noise level measurement locations as shown on EIR Figure 4.10-1.

<sup>4</sup>Observed daytime ambient noise levels as shown on EIR Table 4.10-1.

<sup>5</sup>Represents the combined ambient conditions plus the Project activities.

<sup>6</sup>The noise level increase expected with the addition of the proposed Project activities.

<sup>7</sup>Do the noise levels exceed applicable thresholds listed in EIR Subsection 4.10.5?

Source: (Urban Crossroads, 2018d, Table 9-5)



### ***C. Traffic-Related Noise Impact Analysis***

To evaluate off-site noise increases that could result from Project-related traffic, noise levels were modeled for the following scenarios:

- Existing plus Project Conditions
- Opening Year (2022) Conditions
- Horizon Year (2040) Conditions

The Existing (2017) plus Project (E+P) analysis determines the Project's traffic noise impacts under the theoretical scenario where the Project is added to existing conditions. The E+P scenario is presented to disclose direct impacts to the existing environment as required by CEQA. In the case of the proposed Project, the estimated time period between the commencement of the Project's environmental review (2017) and estimated Project buildout (2019) is two years. During this time period, traffic conditions are not static – other projects are being constructed, the transportation network is evolving, and traffic patterns are changing. Therefore, the E+P scenario is very unlikely to materialize in real-world conditions and thus does not accurately describe the environment that will likely exist when the proposed Project is constructed and becomes operational. Regardless, the E+P scenario is evaluated to satisfy CEQA requirements to identify the Project's impacts to the existing environment.

The Opening Year (2022) Conditions analysis determines the potential for the Project to contribute to near-term noise impacts after the addition of background traffic from ambient growth and local cumulative development projects.

The Horizon Year (2040) Conditions analysis determines the potential for the Project to contribute to long-term noise impacts after the addition of growth expected from build out of local general plans and local cumulative development projects.

Refer to EIR Subsection 4.11, *Transportation and Traffic*, for information about the distribution pattern of Project-related traffic. The trip distribution for the proposed Project was developed based on anticipated passenger car and truck travel patterns to-and-from the Project site. The traffic distribution pattern for Project-related truck trips and passenger car trips are shown in EIR Subsection 4.11 and discussed in more detail in the Project's technical Traffic Impact Analysis included as *Technical Appendix J* to this EIR.

#### ***1. Existing plus Project Conditions***

Table 4.10-9, *Existing plus Project Traffic Noise Impacts*, summarizes noise conditions along study area roadway segments under E+P conditions. As shown in Table 4.10-9, traffic noise attributed to the Project under E+P conditions would not exceed 0.1 dBA CNEL along any study area roadway that abuts noise-sensitive land uses (Heacock Street) and would not exceed applicable significance thresholds. Adjacent to non-noise-sensitive land uses (e.g., commercial and industrial/business park), traffic noise attributed to the Project would range between 0.0 and 12.1 dBA CNEL, with Gilbert Street experiencing the Project's greatest increase to traffic noise at 12.1 dBA CNEL and Brodiaea Avenue experiencing the Project's second-greatest increase of traffic noise at 2.2 dBA CNEL. The resulting traffic noise levels would be compatible with non-noise-sensitive land uses and the Project's noise contribution would not exceed applicable significance criteria.



**Table 4.10-9 Existing plus Project Traffic Noise Impacts**

ID	Road	Segment	Adjacent Existing Land Use Designation	CNEL at Adjacent Land Use (dBA) <sup>1</sup>			Noise-Sensitive Land Use? <sup>2</sup>	Threshold Exceeded? <sup>3</sup>	Significant Impact? <sup>4</sup>
				No Project	With Project	Project Addition			
1	Gilbert St.	s/o Brodiaea Av.	Business Park	55.9	63.3	7.4	No	Yes	No <sup>4</sup>
2	Gilbert St.	n/o Cactus Av.	Business Park	50.6	62.7	12.1	No	Yes	No <sup>4</sup>
3	Heacock St.	n/o Alessandro Bl.	Commercial	72.5	72.5	0.0	No	No	No
4	Heacock St.	s/o Alessandro Bl.	Residential	72.9	73.0	0.1	Yes	No	No
5	Heacock St.	n/o Brodiaea Av.	Residential	72.5	72.6	0.1	Yes	No	No
6	Heacock St.	s/o Brodiaea Av.	Residential	72.3	72.3	0.0	Yes	No	No
7	Alessandro Bl.	w/o Heacock St.	Commercial	76.1	76.1	0.0	No	No	No
8	Brodiaea Av.	e/o Gilbert St.	Business Park	64.2	66.4	2.2	No	No	No
9	Cactus Av.	w/o Gilbert St.	Business Park	78.1	78.3	0.2	No	No	No

<sup>1</sup>The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.

<sup>2</sup>"Yes" = Existing, noise-sensitive land uses adjacent to the study area roadway segment.

<sup>3</sup>Do the noise levels exceed applicable thresholds listed in EIR Subsection 4.10.5?

<sup>4</sup>The with Project off-site traffic noise levels remain below the normally compatible land use compatibility criteria (70 dBA CNEL) for the adjacent business park use, and therefore, the impact is considered less than significant.

Source: (Urban Crossroads, 2018d, Table 7-7; City of Moreno Valley, 2017b)

Therefore, the Project's contribution of off-site traffic noise would not result in a substantial permanent increase in ambient noise levels under E+P conditions. Impacts would be less than significant under Threshold "c" and no mitigation is required.

## 2. Year 2022 Conditions

Table 4.10-10, *Year 2022 Traffic Noise Impacts*, summarizes noise conditions along study area roadway segments under Year 2022 conditions. As shown in Table 4.10-10, transportation noise attributed to the Project under Year 2022 conditions would not exceed 0.1 dBA CNEL along any roadway that abuts noise-sensitive land uses (Heacock Street) and would not exceed applicable significance thresholds. Adjacent to non-noise-sensitive land uses (e.g., commercial and industrial/business park), traffic noise attributed to the Project would range between 0.0 and 11.8 dBA CNEL, with Gilbert Street experiencing the Project's greatest increase to traffic noise at 11.8 dBA CNEL and Brodiaea Avenue experiencing the Project's second-greatest increase of traffic noise at 2.1 dBA CNEL; however, the resulting noise levels would be compatible with non-noise-sensitive land uses and the Project's noise contribution would not exceed applicable significance criteria. Therefore, the Project's contribution of off-site, traffic noise would not result in a substantial permanent increase in ambient noise levels under Year 2022 conditions. Impacts would be less than significant under Threshold "c" and no mitigation is required.



**Table 4.10-10 Year 2022 Traffic Noise Impacts**

ID	Road	Segment	Adjacent Existing Land Use Designation	CNEL at Adjacent Land Use (dBA) <sup>1</sup>			Noise-Sensitive Land Use? <sup>2</sup>	Threshold Exceeded? <sup>3</sup>	Significant Impact?
				No Project	With Project	Project Addition			
1	Gilbert St.	s/o Brodiaea Av.	Business Park	56.3	63.4	7.1	No	Yes	No <sup>4</sup>
2	Gilbert St.	n/o Cactus Av.	Business Park	51.0	62.8	11.8	No	Yes	No <sup>4</sup>
3	Heacock St.	n/o Alessandro Bl.	Commercial	73.1	73.2	0.1	No	No	No
4	Heacock St.	s/o Alessandro Bl.	Residential	73.8	73.8	0.0	Yes	No	No
5	Heacock St.	n/o Brodiaea Av.	Residential	73.2	73.3	0.1	Yes	No	No
6	Heacock St.	s/o Brodiaea Av.	Residential	73.0	73.0	0.0	Yes	No	No
7	Alessandro Bl.	w/o Heacock St.	Commercial	76.8	76.8	0.0	No	No	No
8	Brodiaea Av.	e/o Gilbert St.	Business Park	64.6	66.7	2.1	No	No	No
9	Cactus Av.	w/o Gilbert St.	Business Park	79.7	79.8	0.1	No	No	No

<sup>1</sup>The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.

<sup>2</sup>"Yes" = Existing, noise-sensitive land uses adjacent to the study area roadway segment.

<sup>3</sup>Do the noise levels exceed applicable thresholds listed in EIR Subsection 4.10.5?

<sup>4</sup>The Project off-site traffic noise levels remain below the normally compatible land use compatibility criteria (70 dBA CNEL) for the adjacent business park use, and therefore, the impact is considered less than significant.

Source: (Urban Crossroads, 2018d, Table 7-8)

### 3. Year 2040 Conditions

Table 4.10-11, *Year 2040 Traffic Noise Impacts*, summarizes noise conditions along study area roadway segments under Year 2040 conditions. As shown in Table 4.10-11, transportation noise attributed to the Project under Year 2022 conditions would not exceed 0.1 dBA CNEL along any roadway that abuts noise-sensitive land uses (Heacock Street) and would not exceed applicable significance thresholds. Adjacent to non-noise-sensitive land uses (e.g., commercial and industrial/business park), traffic noise attributed to the Project would range between 0.0 and 11.4 dBA CNEL with Gilbert Street experiencing the Project's greatest increase to traffic noise at 11.4 dBA CNEL and Brodiaea Avenue experiencing the Project's second-greatest increase of traffic noise at 2.0 dBA CNEL. The resulting noise levels would be compatible with non-noise-sensitive land uses and the Project's noise contribution would not exceed applicable significance criteria. Therefore, the Project's contribution of off-site, traffic noise would not result in a substantial permanent increase in ambient noise levels under Year 2040 conditions. Impacts would be less than significant under Threshold "c" and no mitigation is required.



**Table 4.10-11 Year 2040 Traffic Noise Impacts**

ID	Road	Segment	Adjacent Existing Land Use Designation	CNEL at Adjacent Land Use (dBA) <sup>1</sup>			Noise-Sensitive Land Use? <sup>2</sup>	Threshold Exceeded? <sup>3</sup>	Significant Impact?
				No Project	With Project	Project Addition			
1	Gilbert St.	s/o Brodiaea Av.	Business Park	56.7	63.5	6.8	No	Yes	No <sup>4</sup>
2	Gilbert St.	n/o Cactus Av.	Business Park	51.4	62.8	11.4	No	Yes	No <sup>4</sup>
3	Heacock St.	n/o Alessandro Bl.	Commercial	73.6	73.6	0.0	No	No	No
4	Heacock St.	s/o Alessandro Bl.	Residential	74.2	74.3	0.1	Yes	No	No
5	Heacock St.	n/o Brodiaea Av.	Residential	73.6	73.7	0.1	Yes	No	No
6	Heacock St.	s/o Brodiaea Av.	Residential	73.4	73.4	0.0	Yes	No	No
7	Alessandro Bl.	w/o Heacock St.	Commercial	78.1	78.1	0.0	No	No	No
8	Brodiaea Av.	e/o Gilbert St.	Business Park	65.0	67.0	2.0	No	No	No
9	Cactus Av.	w/o Gilbert St.	Business Park	80.1	80.2	0.1	No	No	No

<sup>1</sup>The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.

<sup>2</sup>"Yes" = Existing, noise-sensitive land uses adjacent to the study area roadway segment.

<sup>3</sup>Do the noise levels exceed applicable thresholds listed in EIR Subsection 4.10.5?

<sup>4</sup>The Project off-site traffic noise levels remain below the normally compatible land use compatibility criteria (70 dBA CNEL) for the adjacent business park use, and therefore, the impact is considered less than significant.

Source: (Urban Crossroads, 2018d, Table 7-9)

**Threshold b: Would the Project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?**

**A. Construction Analysis**

Construction activities on the Project site would utilize construction equipment that has the potential to generate vibration and noise. As shown in Table 4.10-12, *Construction Groundborne Vibration & Noise Levels*, all sensitive receivers in the vicinity of the Project site would be exposed to peak vibration and groundborne noise levels below applicable significance thresholds (i.e., 80 Vdb). Accordingly, the Project would not expose persons to or generate excessive groundborne vibration or noise during construction. Impacts are less than significant and no mitigation is required.



**Table 4.10-12 Construction Groundborne Vibration & Noise Levels**

Receiver Location <sup>1</sup>	Distance to Construction Activity (Feet)	Receiver Vibration Levels (VdB) <sup>2</sup>					Threshold Exceeded? <sup>3</sup>
		Small Bulldozer	Jackhammer	Loaded Trucks	Large Bulldozer	Highest Vibration Level	
R1	1,517'	4.5	25.5	32.5	33.5	33.5	No <sup>4</sup>
R2	1,078'	9.0	30.0	37.0	38.0	38.0	No
R3	495'	19.1	40.1	47.1	48.1	48.1	No
R4	867'	11.8	32.8	39.8	40.8	40.8	No
R5	198'	31.0	52.0	59.0	60.0	60.0	No
R6	200'	30.9	51.9	58.9	59.9	59.9	No
R7	274'	26.8	47.8	54.8	55.8	55.8	No

<sup>1</sup> See EIR Figure 4.10-2 for the receiver locations.

<sup>2</sup>Based on the Vibration Source Levels of Construction Equipment included on EIR Table 4.10-4.

<sup>3</sup>Does the peak vibration exceed the applicable thresholds listed in EIR Subsection 4.10.5?

Source: (Urban Crossroads, 2018d, Table 10-8)

***B. Operational Analysis***

Under long-term conditions, the operational activities of the proposed Project would not include or require equipment, facilities, or activities that would result in perceptible ground-borne vibration. Trucks would travel to and from the Project site on surrounding roadways; however, vibration and groundborne noise levels for heavy trucks operating at the posted speed limits on smooth, paved surfaces – as is expected on the Project site and surrounding roadways – are typically below the human threshold of perception (65 VdB) and therefore below the 80 VdB significance threshold presented in Subsection 4.10.5. (Urban Crossroads, 2018d, p. 59) Accordingly, the Project would not result in the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels during long-term operation. Impacts are less than significant and no mitigation is required.

***Threshold e:*** *For a project located within an airport land use plan, or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

The Project site is located outside of the 60 dBA CNEL noise level contour of the March Air Reserve Base. Warehousing land uses located outside of the 60 dBA CNEL noise level contour, like those proposed by the Project, are classified as “clearly acceptable” by the Riverside County ALUC. (ALUC, 2014a, Exhibit MA-4; Urban Crossroads, 2018d, p. 21). Accordingly, the Project would not expose people working in the Project area to excessive airport-related noise levels. Impacts are less than significant and no mitigation is required.

***Threshold f:*** *For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?*

The Project site is not located near any private airfields or airstrips. Therefore, the Project has no potential to result in a safety hazard for people living or residing in the Project area. No impact would occur.





#### **4.10.7 CUMULATIVE IMPACT ANALYSIS**

The cumulative impact analysis considers construction and operation of the proposed Project in conjunction with other development projects in the vicinity of the Project site and resulting from full General Plan buildout in the City of Moreno Valley and surrounding areas.

##### ***A. Construction-Related Noise***

There are no known active or pending construction projects in the immediate vicinity of the Project site that would overlap with the Project's proposed construction schedule. Accordingly, there is no potential for the Project to contribute to the exposure of sensitive receptors to substantial temporary increases in ambient noise levels.

##### ***B. Stationary Noise***

The analysis presented for Threshold "c" addresses the Project's contribution of noise to existing cumulative noise sources (i.e., ambient noise) in the Project area. As previously shown in Table 4.10-7 and 0, the Project's noise contribution would not be perceptible to noise-sensitive receptors in the Project area during daytime or nighttime hours. Furthermore, with the exception of a 4.0-acre property located immediately north of the Project site, most of the undeveloped land in the Project vicinity is located west of the Project site – farther away from noise-sensitive receptors. The Project's proposed warehouse building would act as a barrier between potential stationary noise sources to the west of the Project site and noise-sensitive receptors to the east of the Project site, thereby attenuating local stationary noise levels. The Project's permanent stationary noise impacts would not be cumulatively considerable.

##### ***C. Traffic Noise***

The analysis presented for Threshold "d" evaluates the Project's traffic noise contribution along study area roadways with consideration of near-term (Year 2022) and long-term (Year 2040) cumulative development. As summarized in Table 4.10-10 and Table 4.10-11, noise-sensitive and non-noise-sensitive receptors in the Project study area would be exposed to traffic noise levels that exceed acceptable levels for the respective land category (i.e., 65 dBA CNEL for noise-sensitive land uses and 70 dBA CNEL for non-noise-sensitive land uses) under both near-term and long-term cumulative analysis scenarios. The receiver locations that are exposed to unacceptable noise levels under existing conditions and also under with-Project conditions are located east of Heacock Street and include R3 through R7 and R8. The Project's traffic noise contribution at each of the affected receiver locations along Heacock Street would range from 0.0 to 0.1 dBA CNEL under the near- and long-term cumulative analysis scenarios and would not exceed the applicable significance thresholds (i.e., 1.5 dBA adjacent to noise-sensitive receivers and 3 dBA adjacent to non-noise-sensitive receivers). Accordingly, the Project's traffic noise impacts would not be cumulatively considerable under near- or long-term cumulative conditions.

##### ***D. Groundborne Vibration and Noise***

There are no known active or pending construction projects in the vicinity of the Project site that would overlap with the Project's proposed construction schedule. Accordingly, there is no potential for the Project to contribute to the exposure of persons to substantial temporary groundborne vibration or noise.

Under long-term conditions, the Project would not include or require equipment, facilities, or activities that would result in perceptible groundborne vibration at the Project site. Trucks would travel to and from the Project site and surrounding properties on abutting roadways; however, vibration levels for heavy trucks



operating at the posted speed limits on smooth, paved surfaces as is expected on the Project site and surrounding properties, are typically below the human threshold of perception (65 VdB) and therefore below the significance threshold of 80 VdB. The Project would not cumulatively contribute to the exposure of persons to excessive groundborne vibration or noise levels during long-term operation.

***E. Airport Noise***

The Project site and the immediately surrounding area are not subject to substantial airport- or air traffic-related noise. Accordingly, there is no potential for cumulative development to expose persons residing or working in the Project area to excessive airport-related noise levels.

**4.10.8 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION**

Threshold a: Less-than-Significant Impact. The Project would generate short-term construction and long-term operational noise but would not generate noise levels during construction and/or operation that exceed the standards established by the City of Moreno Valley Municipal Code.

Threshold b: Less-than-Significant Impact. The Project's construction and operational activities would not result in a perceptible groundborne vibration or noise.

Threshold c: Less-than-Significant Impact. The Project would generate short-term construction and long-term operational noise but would not result in a substantial permanent increase in ambient noise levels in the vicinity of the Project site.

Threshold d: Less-than-Significant Impact. The Project would not result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project.

Threshold e: Less-than-Significant Impact. The Project site is located outside of the 60 dBA CNEL noise level contour of the March Air Reserve Base. As such, the Project would not expose people to excessive noise levels associated with a public airport or public use airport.

Threshold f: No Impact. The Project site is not located near any private airfields or airstrips.

**4.10.9 MITIGATION**

Impacts would be less than significant; therefore, mitigation is not required.



## **4.11 TRANSPORTATION AND TRAFFIC**

The following analysis is based on a technical traffic study prepared by Urban Crossroads, titled “Brodiaea Commerce Center Traffic Impact Analysis” and dated October 13, 2017. This Traffic Impact Analysis (TIA) report is included as *Technical Appendix J* to this EIR (Urban Crossroads, 2018e). The TIA was prepared in accordance with the City of Moreno Valley’s traffic study requirements and also, where relevant, addresses requirements of the County of Riverside Congestion Management Program.

### **4.11.1 STUDY AREA DESCRIPTION**

The geographic area that was evaluated for Project-related effects to the transportation and circulation network (hereafter referred to as the “Study Area”) is defined as follows:

#### ***A. Intersections***

Pursuant to the City of Moreno Valley’s traffic study guidelines, the City requires analysis of intersections where a development project would contribute 50 or more peak hour trips. A “peak hour trip” is defined as a trip that occurs between the hours of 7:00 AM and 9:00 AM (AM peak hour) or between the hours of 4:00 PM and 6:00 PM (PM peak hour). The “50 peak hour trip” criteria utilized by the City of Moreno Valley is consistent with the methodology utilized by many other jurisdictions, including the County of Riverside, and generally represents a threshold of trips at which a typical intersection would have the potential to be significantly impacted. Although each intersection may have unique operating characteristics, this traffic engineering rule of thumb is a valid and proven way to establish a Study Area. Because the Project is calculated to contribute fewer than 50 peak hour trips at all intersections, the Study Area was developed based on the direction from City of Moreno Valley staff. (Urban Crossroads, 2018e, pp. 4-5, 27)

Six (6) existing and future intersections are located within the Study Area (Urban Crossroads, 2018e, pp. 4-5). These intersections are identified on Figure 4.11-1, *Study Area Intersection Locations*, and are listed in Table 4.11-1, *Study Area Intersection Analysis Locations*. All Study Area intersections are located within the City of Moreno Valley.

#### ***B. Freeways***

All freeway facilities (e.g., mainlines, off-ramps) in California are under the jurisdiction of the California Department of Transportation (Caltrans). For administrative purposes, Caltrans divides the State of California into 12 districts; the Project is located within District 8. Caltrans District 8 requests that traffic studies evaluate potential impacts to freeway mainline segments when a proposed development project is calculated to contribute 50 or more two-way peak hour trips to a freeway facility. Caltrans District 8 has indicated that traffic from a development project that contributes fewer than 50 peak hour trips to the State highway system is undistinguishable from other traffic on the State highway system. I-215 and SR-60 are the only State highways located in relative proximity to the Project site and the Project would not contribute 50 or more peak hour trips to any I-215 or SR-60 mainline segment or ramp (Urban Crossroads, 2018e, p. 44). Therefore, no freeway facilities are included in the Study Area and no quantitative analysis of the existing and/or future level of service at any freeway facility is required.

### **4.11.2 EXISTING CONDITIONS**

The Project site is located in the central portion of the City of Moreno Valley, north of Brodiaea Avenue, east of Heacock Street, and approximately 325 feet south of Alessandro Boulevard. Figure 4.11-2, *City of Moreno Valley General Plan Circulation Plan*, depicts the City of Moreno Valley’s network of major roads located



adjacent to and surrounding the Project site. The Project site is located approximately 2.2 miles northeast of I-215, and approximately 1.7 miles south of State Route 60 (SR-60).

#### ***A. Existing Intersection Conditions***

Weekday AM and PM peak hour traffic count data was collected at all Study Area intersections in September 2017. The raw manual peak hour turning movement traffic count data sheets are included in Appendix 3.1 of the Project's TIA (*Technical Appendix J*). There were no atypical traffic conditions (e.g. construction activity or detour routes) and nearby schools were in session and operating on normal schedules on the dates that traffic counts were collected. (Urban Crossroads, 2018e, p. 27) The existing stop controls and approach lanes at Study Area intersections are summarized in Table 4.11-2, *Existing Intersection Conditions*.

The traffic count data includes a tabulation of passenger cars, 2-axle trucks, 3-axle trucks, and 4-or-more-axle trucks. Larger vehicles take up more space on the roadway and take longer to accelerate and decelerate than smaller passenger vehicles; therefore, converting larger vehicles into passenger car equivalents (PCEs) allows for the real-world effect of larger vehicles on roadways to be accurately reflected in the TIA and for traffic to be represented as a standardized unit. For purposes of the analysis, a PCE factor of 1.5 was applied to 2-axle truck trips, 2.0 was applied to 3-axle truck trips, and 3.0 was applied for 4-or-more-axle truck trips. (Urban Crossroads, 2018e, p. 27) A detailed description of the methodology used to classify peak hour and daily traffic trips is provided in *Technical Appendix J*.

Existing weekday average daily traffic (ADT) volumes on arterial highways throughout the Study Area are shown on Figure 4.11-3, *Existing Average Daily Traffic (ADT)*. Existing AM and PM peak hour intersection volumes also are shown on Figure 4.11-3. Except where specifically noted, all of the intersection traffic volumes illustrated on Figure 4.11-3 and used in the analysis presented in this EIR Subsection and *Technical Appendix J* are shown in terms of PCE. (Urban Crossroads, 2018e, p. 31)

Existing (2017) peak hour traffic operations were evaluated for the six (6) existing and future Study Area intersections based on the analysis methodologies presented in Subsection 4.11.4. The Level of Service (LOS) for Study Area intersections during peak hours are illustrated on Figure 4.11-4, *Existing Levels of Service Summary – Study Area Intersections*, and summarized in Table 4.11-2. As shown, all intersections in the Study Area operate at acceptable LOS during peak hours under existing conditions and there are no unsignalized intersections in the Study Area that warrant a traffic signal under existing conditions (Urban Crossroads, 2018e, p. 31).

Existing queuing conditions for all Study Area intersections were evaluated using the methodology presented in Subsection 4.11.4. All Study Area intersections, except for the Heacock Street/Alessandro Boulevard intersection, provide adequate stacking distance under existing conditions (Urban Crossroads, 2018e, Table 3-2)

#### ***B. Existing Mass Transit***

The Study Area is served by Riverside Transit Authority (RTA), a public transit agency serving various jurisdictions within Riverside County, with bus service along Alessandro Boulevard via Route 11 and Route 20. The nearest Route 11 transit stop is located approximately 0.1-mile northeast of the Project site, at the intersection of Heacock Street and Alessandro Boulevard. The nearest Route 20 transit stop is located less than 0.1-mile north of the Project site, also at the intersection of Heacock Street and Alessandro Boulevard. (Urban Crossroads, 2018e, p. 21; Google Earth Pro, 2017)



***C. Existing Pedestrian and Bicycle Facilities***

Field observations conducted Urban Crossroads in September 2017 indicate nominal pedestrian and bicycle activity within the Study Area (Urban Crossroads, 2018e, p. 27). The nearest pedestrian facility (i.e., sidewalk) is located along the south side of Brodiaea Avenue, adjacent to the southern Project boundary. Additional sidewalks within the Project site vicinity are located along Heacock Street and Alessandro Boulevard. (Urban Crossroads, 2018e, Exhibit 3-8) An existing Class I bike lane is located along Heacock Street, south of Brodiaea Avenue, and existing Class II bike lanes are located in the immediate vicinity of the Project site along Alessandro Boulevard (Urban Crossroads, 2018e, p. 27).

**4.11.3 APPLICABLE PLANS, REGULATIONS, AND POLICIES**

***A. SCAG Regional Transportation Plan / Sustainable Communities Strategy***

The Southern California Association of Governments (SCAG) is a regional agency established pursuant to California Government Code § 6500, also referred to as the Joint Powers Authority law. SCAG is designated as a Council of Governments (COG), a Regional Transportation Planning Agency (RTPA), and a Metropolitan Planning Organization (MPO). The Project site is within SCAG's regional planning authority. On April 2016, SCAG adopted the *2016-2040 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS)* with goals to: 1) preserve the existing transportation system; 2) expand the regional transit system; 3) expand passenger rail; 4) improve highway and arterial capacity; 5) managing demands on the transportation system; 6) optimizing the performance of the transportation system; 7) promoting forms of active transportation; 8) strengthening the regional transportation network for goods movement; 9) leveraging technology; 10) improving airport access; and 11) focusing new growth around transit (SCAG, 2016, pp. 6-8).

***B. Riverside County Congestion Management Program***

The *Riverside County Congestion Management Program (CMP)* was prepared by the Riverside County Transportation Commission (RCTC). The intent of the *CMP* is to more directly link land use, transportation, and air quality planning and to prompt reasonable growth management programs that would more effectively utilize new and existing transportation funds to alleviate traffic congestion and related impacts and improve air quality. The *Riverside County CMP* was first adopted in December 1992 and has been updated 11 times, with the most recent comprehensive update in December 2011. The *CMP* states that deficiencies along the *CMP* system must be identified when they occur so that improvement measures can be identified. Understanding the reason for these deficiencies and identifying ways to reduce the impact of future growth and development along a critical *CMP* corridor is intended to conserve scarce funding resources and help target those resources appropriately. (RCTC, 2011, p. ES-1) No *CMP* arterial roadways, intersections, and/or freeway facilities are located within the Project's Study Area.

***C. Transportation Uniform Mitigation Fee (TUMF) Program***

In 2000, the Western Riverside Council of Governments (WRCOG) established the Transportation Uniform Mitigation Fee (TUMF) Program to mitigate the cumulative regional impacts of projected future growth and new development on the region's arterial highway system. The TUMF Program applies a uniform mitigation fee to new development projects that is collected by each WRCOG member agency, including the City of Moreno Valley. The collected funds are pooled and used by WRCOG to fund transportation network improvements, including roads, bridges, interchanges, and railroad grade separations, identified by the public works departments of WRCOG member agencies and listed in the *Regional System of Highways and Arterials (RHSA)*. (WRCOG, 2016, p. 1)



***D. City of Moreno Valley Development Impact Fee (DIF) Program***

The City of Moreno Valley created its Development Impact Fee (DIF) program to impose and collect fees from new residential, commercial, and industrial development for the purpose of funding local improvements necessary to accommodate City growth as identified in the City's General Plan Circulation Element. The identification of specific roadway and intersection improvement projects and the timing to use the DIF fees is established through periodic capital improvement programs which are overseen by the City's Public Works Department. (Urban Crossroads, 2018e, p. 8)

***E. City of Moreno Valley General Plan Circulation Element***

The City of Moreno Valley's General Plan Circulation Element is intended to guide the development of the City's circulation system in a manner that is compatible with the City's General Plan Land Use Element. To help meet traffic demands and achieve balanced growth, the City has adopted specific goals and policies, which serve as the basis for the Circulation Element. Refer to Table 4.11-2 for an illustration of the City's master circulation plan and refer to *Technical Appendix J* for a detailed summary of the City's General Plan Circulation Element.

***F. City of Moreno Valley Bicycle Master Plan***

The City of Moreno Valley's Bicycle Master Plan, adopted in January 2015, guides design and implementation of bicycle transportation infrastructure, programs and policies designed to make the City of Moreno Valley a more bicycle-friendly place and to encourage more residents to ride bicycles rather than drive. (Moreno Valley, 2015, pp. iv-v)

**4.11.4 TRAFFIC IMPACT ANALYSIS METHODOLOGY**

The traffic impact analysis provided in *Technical Appendix J* and summarized in this Subsection evaluates the Project's potential traffic impacts using the methodology described below.

***A. Level of Service***

The performance of roadway facilities is described using the term "level of service" (LOS). LOS has been used as the basis for determining the significance of traffic impacts as standard practice in CEQA documents for decades. LOS is a qualitative description of traffic flow based on several factors such as speed, travel time, delay, and freedom to maneuver. In 2013, the California Legislature passed Senate Bill (SB) 743, which is intended to provide local governments with flexibility to balance the competition between the need to use the LOS metric for local traffic planning and the need to provide infill housing and mixed-use commercial developments within walking distance of mass transit facilities, downtowns, and town centers. Upon full implementation of SB 743, the California Governor's Office of Planning and Research (OPR) is expected to replace LOS as the metric against which traffic impacts are evaluated, with a metric based on vehicle miles traveled (VMT). At the time the NOP for this EIR was released (November 2017), a VMT metric was not adopted by OPR, and the City of Moreno Valley in its capacity as Lead Agency uses LOS as the significance criteria for evaluating a Project's traffic impacts. For this reason, a LOS metric and not a VMT metric is appropriately used as the significance criterion in this EIR.

Six (6) LOS levels are typically defined ranging from LOS A, representing completely free-flow conditions, to LOS F, representing breakdown in flow resulting in stop-and-go conditions. LOS E represents operations at or near capacity, an unstable level where vehicles are operating with the minimum spacing for maintaining uniform flow. Table 4.11-3, *LOS Thresholds for Signalized Intersections*, and Table 4.11-4, *LOS Thresholds*



for *Unsignalized Intersections*, summarize typical operational conditions at signalized and unsignalized intersections for each LOS classification, respectively. (Urban Crossroads, 2018e, pp. 13-15) The target LOS for City of Moreno Valley roads (including intersections) is LOS D or better (Urban Crossroads, 2018e, p. 17).

### ***B. Intersection Capacity Analysis***

The intersection LOS analysis is based on the traffic volumes observed during weekday peak hour conditions. The following weekday peak hours were selected for analysis because these hours typically experience the most traffic during a 24-hour period: AM peak hour, between 7:00 AM and 9:00 AM, and PM peak hour, between 4:00 PM and 6:00 PM.

For signalized intersections under the City of Moreno Valley's jurisdiction, peak hour performance is calculated using the methodology described in the Transportation Research Board's *Highway Capacity Manual 2010 (HCM)*. Intersection performance is based on an intersection's average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. At signalized intersections LOS is directly related to the average control delay per vehicle and is correlated to a LOS designation as described in Table 4.11-3. (Urban Crossroads, 2018e, p. 13) The traffic modeling and signal timing optimization software package Synchro (Version 9.1) was used to analyze signalized intersections capacity as specified in the *HCM*. (Urban Crossroads, 2018e, pp. 13, 16)

At unsignalized intersections, operations were evaluated using the methodology described in the *HCM*. At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. For all-way stop controlled intersections, LOS is computed for the intersection as a whole. (Urban Crossroads, 2018e, p. 15) The LOS rating is based on the weighted average control delay expressed in seconds per vehicle, as shown in Table 4.11-4.

For a more detailed discussion on intersection capacity analysis methodology, refer to Subsection 2.2 of *Technical Appendix J*.

### ***C. Traffic Signal Warrant Analysis***

The term "signal warrant" refers to the list of criteria used by Caltrans and other public agencies to quantitatively justify or ascertain the potential need for installation of a traffic signal at an unsignalized intersection. A signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this threshold condition does not require that a traffic control signal be installed at a particular intersection location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. It should also be noted that signal warrants do not necessarily correlate with LOS. An intersection may satisfy a signal warrant condition and operate at or above acceptable LOS or operate below acceptable LOS and not meet a signal warrant (Urban Crossroads, 2018e, p. 16).

The signal warrant criteria presented in the latest edition of the Federal Highway Administration's (FHWA) *Manual on Uniform Traffic Control Devices (MUTCD)*, as amended by the *MUTCD 2014 California Supplement*, is used to evaluate the potential need for traffic signals at all Study Area intersections that are currently unsignalized (refer to Table 4.11-5, *Traffic Signal Warrant Analysis Locations*). (Urban Crossroads, 2018e, p. 15)

For more information on signal warrant methodology, refer to Subsection 2.3 of *Technical Appendix J*.



***D. Queuing Analysis***

The traffic progression analysis tool and *HCM* intersection analysis program, Synchro (Version 9.1), was used to assess potential queuing impacts/needs at Study Area intersections under near-term traffic conditions. (A queuing analysis was not performed for long-term – Horizon Year – conditions because the ultimate layouts of Study Area intersections are not known and cannot be predicted at this time without undue speculation.) Storage (turn-pocket) length recommendations at the ramps are based upon the 95th percentile queue resulting from the Synchro progression analysis. SimTraffic also was used to generate random simulations from the input parameters from Synchro. The random simulations are utilized to determine the 50th and 95th percentile queue lengths observed for each turn. The 50th percentile is the maximum back of queue on a typical cycle, while the 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes. (Urban Crossroads, 2018e, pp. 16-17)

***E. Cumulative Projects***

CEQA Guidelines § 15130 requires that an EIR disclose the impact from the Project along with the incremental impacts from closely-related past, present, and reasonably foreseeable future projects (i.e., cumulative impact analysis). As previously described in EIR Subsection 4.0, *Environmental Analysis*, the Project’s potential cumulative traffic impacts analysis utilizes a summary of projections approach plus a list of projects approach in order to provide a conservative, overstated analysis of cumulative impacts. Data for the summary of projections approach was obtained from the sources previously described in EIR Subsection 4.0. The list of 20 cumulative projects was identified in consultation with planning and engineering staff from the City of Moreno Valley based on their records of past, pending, and foreseeable future projects as of approximately November 2017 (the date that the NOP for this EIR was issued). The list of these 20 projects is included in EIR Subsection 4.0, *Environmental Analysis*. Descriptive and locational information about each project considered in the cumulative impact analysis can be found in Section 4.7 of *Technical Appendix J*.

***F. Future Year Background Traffic***

***1. Opening Year (2022) Background Traffic***

Opening Year (2022) background traffic forecasts are based upon a background (or ambient) growth rate of 2% per year above Existing (2017) conditions. This ambient growth factor is intended to approximate area-wide traffic growth in addition to the traffic growth expected from the known cumulative development projects that were manually added to the traffic impact analysis (refer to Subsection 4.11.4D, above). (Urban Crossroads, 2018e, pp. 41, 45)

According to regional population projections included in SCAG’s 2016 *RTP/SCS*, the City of Moreno Valley’s population is projected to increase 0.94% annually, between 2012 and 2040. Over this same time period, the number of households in the City is expected to increase 1.23% annually and employment is expected to increase 3.54% annually. The 2% annual growth rate assumed by the Project’s traffic analysis reflects the fact that not every new person, household, and/or job in the City of Moreno Valley will translate on a one-to-one basis with a new vehicle trip in the region. The 2% annual growth rate used for the Project’s traffic analysis establishes a judicious mid-range estimate between the 2016 *RTP/SCS*’s estimated population growth rate (0.94%, annually) and employment growth rate (3.54%, annually) for the City of Moreno Valley. (Urban Crossroads, 2018e, p. 45)

For more information on the derivation of opening year background traffic forecasts, refer to Subsection 4.5 of *Technical Appendix J*.





## **2. *Horizon Year (2040) Background Traffic***

Horizon Year (2040) background traffic conditions were derived from the Riverside County Transportation Analysis Model (RivTAM). The RivTAM model reflects long-range land use and circulation network data from cities and public agencies within Riverside County and is consistent with SCAG's traffic model for the southern California region. The RivTAM model was supplemented and modified using industry-accepted procedures for model forecast refinement and smoothing rather than solely relying on RivTAM model defaults. The modifications to the RivTAM model were made to provide a conservative analysis of the Project's potential long-range traffic impacts under Horizon Year (2040) conditions that would overstate – as opposed to understate – the Project's potential traffic impacts as compared to the results had the RivTAM model defaults been used. (Urban Crossroads, 2018e, p. 50)

Refer to Subsection 4.8 of *Technical Appendix J* for a detailed description of the refinements made to the RivTAM model for purposes of the Project's traffic impact analysis.

### ***G. Future Year Roadway Conditions***

#### **1. *Project-Related Roadway Improvements***

The roadway improvements proposed by the Project are described in detail in EIR Section 3.0, *Project Description*. The construction of these roadway improvements is assumed throughout the analysis presented in *Technical Appendix J* and summarized in this Subsection.

#### **2. *Opening Year (2022) Roadway Conditions***

The traffic analysis presented in *Technical Appendix J* and summarized in this Subsection assumes that the traffic facilities listed below would be in place for the Project's Opening Year (2022), in addition to the lane configurations and traffic controls in place under existing conditions (as summarized in Table 4.11-2) and the improvements proposed by the Project (Urban Crossroads, 2018e, p. 59):

- Driveways and those facilities that would be installed as part of the proposed Project to provide access to the Project site (frontage improvements to Brodiaea Avenue and two driveway connections to Brodiaea Avenue); and
- Driveways and those facilities assumed to be constructed by nearby cumulative development projects to provide access to the respective sites.

#### **3. *Horizon Year (2040) Roadway Conditions***

The traffic analysis presented in *Technical Appendix J* and summarized in this Subsection assumes that the City of Moreno Valley's roadway network, as described in the City's General Plan Circulation Element, would be fully built-out, in addition to the improvements described in Subsections 4.11.4F.1 and 4.11.4F.2, above (Urban Crossroads, 2018e, p. 67).



#### 4.11.5 BASIS FOR DETERMINING SIGNIFICANCE

The Project would result in a significant impact to the transportation/traffic system if the Project or any Project-related component would:

- a. *Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;*
- b. *Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;*
- c. *Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;*
- d. *Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment);*
- e. *Result in inadequate emergency access; or*
- f. *Conflict with adopted policies or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.*

The above-listed thresholds are derived directly from Appendix G to the CEQA Guidelines and address the typical, adverse effects that development projects could have on the relevant circulation network.

The specific criteria described below are utilized to evaluate the significance of potential traffic impacts under Thresholds “a” and “b,” and are based on applicable City of Moreno Valley, Caltrans, and *Riverside County CMP* performance standards.

#### **A. Significance Criteria**

The Project would result in a substantial adverse effect to the performance of the circulation system if any of the following situations occur (Urban Crossroads, 2018e, pp. 17-18):

##### City of Moreno Valley Facilities

- A direct impact would occur if the Project would cause an intersection to degrade from LOS D or better to LOS E or F.
- A cumulatively considerable impact would occur if an intersection is calculated to operate at an unacceptable level of service (i.e., LOS E or F) without the Project, and the Project contributes 50 or more peak hour trips to the affected intersection or increases the average delay at the affected intersection by more than 1 second.

The City of Moreno Valley does not have a significance threshold for peak hour queues at intersections. Therefore, if the addition of Project traffic is found to have a less-than-significant impact to peak hour



intersection operations, then a less-than-significant impact also has been identified for the peak hour queues at the same intersection (Urban Crossroads, 2018e, p. 18).

*Caltrans and Riverside County CMP Facilities*

- A direct impact would occur if the Project would cause a roadway facility (e.g., intersection, freeway mainline) to degrade from LOS D or better to LOS E or F.
- A cumulatively considerable impact would occur if an intersection is calculated to operate at an unacceptable level of service (i.e., LOS E or F) without the Project, and the Project contributes 50 or more peak hour trips to the affected roadway facility.

**4.11.6 IMPACT ANALYSIS**

***Threshold a: Would the Project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?***

The analysis under this Threshold focuses on potential impacts to local circulation, based on acceptable LOS standards established by the City of Moreno Valley General Plan. Refer to Threshold “b” for an analysis of potential impacts to the *Riverside County CMP* roadway network (i.e., regional circulation).

**Project-Related Vehicle Trip Generation**

Vehicle trip generation represents the amount of traffic that is both attracted to and produced by a development project. Determining traffic generation for a specific project is, therefore, based upon forecasting the amount of traffic that is expected to be both attracted to and produced by the specific land uses being proposed by a given project.

At the time the traffic impact analysis was performed, the Project proposed to develop a 262,398 s.f. warehouse building. Since that time, minor modifications have been made to the Project’s design in response to comments from City of Moreno Valley staff which reduced the Project’s building size to 261,807 s.f. The Project trip generation described below is based on the original, larger Project proposal and, therefore, represents a conservative projection that overstates the amount of traffic that would be generated by the Project.

The Project’s vehicle trips were calculated using the Institute of Transportation Engineer (ITE) *Trip Generation Manual (9th Edition, 2012)* trip generation rate and vehicle mix (i.e., percentage of passenger cars trips vs. truck trips) for high-cube warehouse land uses (ITE Code 152). The *Trip Generation Manual* does not provide guidance on truck fleet mix (i.e., percentage of 2-axle, 3-axle, and 4-or-more axle trucks); therefore, data regarding truck vehicle mix is based on recommendations provided the by the South Coast Air Quality Management District (SCAQMD). Based on data from the ITE and the recommendations of the SCAQMD, the Project is calculated to generate 441 actual daily vehicle trips, including 273 daily passenger car trips and 168 daily truck trips. (Urban Crossroads, 2018e, pp. 37-38, 40)

As noted earlier in this Subsection, PCE trips better reflect the real-world effect of larger vehicles (i.e., trucks) on the circulation system than actual vehicle trips. The City of Moreno Valley requires the use of PCE trips for traffic impact analyses for non-residential projects. Table 4.11-6, *Trip Generation Summary (Passenger*



*Car Equivalent*), summarizes the Project's trip generation with PCE factors applied. After applying the PCE factors, the Project is calculated to generate 691 PCE trips, including 41 PCE trips in the AM peak hour and 47 PCE trips in the PM peak hour. (Urban Crossroads, 2018e, p. 38) The Project's PCE trips presented in Table 4.11-6 are utilized throughout the analysis in *Technical Appendix J* and this EIR Subsection to determine the Project's effect to the transportation and circulation network.

For more information on the trip generation methodology, refer to Subsection 4.1 of *Technical Appendix J*.

#### **Project-Related Vehicle Trip Distribution**

Trip distribution is the process of identifying the probable destinations, directions, or traffic routes that will be utilized by a project's traffic. The potential interaction between a project's land uses and surrounding regional access routes are considered to identify the route where a project's traffic would distribute. The trip distribution for the proposed Project was developed based on anticipated passenger car and truck travel patterns to-and-from the Project site. The traffic distribution pattern for Project-related truck trips is depicted on Figure 4.11-5, *Project Truck Trip Distribution*. The traffic distribution pattern for Project-related passenger car trips is depicted on Figure 4.11-6, *Project Passenger Car Trip Distribution*.

Based on the Project's traffic generation and trip distribution patterns, the Project's average daily traffic (ADT) along study area roadways and AM and PM peak hour volumes at study area intersections are shown on Figure 4.11-7, *Project-Related Traffic Volumes*. (Urban Crossroads, 2018e, p. 41)

#### **Analysis Scenario**

The Project's potential impacts to the local transportation and circulation network are assessed for each of the scenarios listed below.

- Short-Term Construction Conditions
- Existing (2017) plus Project Conditions
- Opening Year (2022) Conditions
- Horizon Year (2040) Conditions

The Short-term Construction conditions analysis determines the potential for the Project's construction-related traffic to result in an adverse effect to the local roadway system.

The Existing (2017) plus Project (E+P) analysis determines direct Project-related traffic impacts that would occur on the roadway system under the theoretical scenario where the Project is added to existing conditions. The E+P scenario is presented to disclose direct impacts as required by CEQA. In the case of the proposed Project, the estimated time period between the commencement of the Project's environmental review (2017) and estimated Project buildout (2019) is two years. During this time period, traffic conditions are not static – other projects are being constructed, the transportation network is evolving, and traffic patterns are changing. Therefore, the E+P scenario is very unlikely to materialize in real-world conditions and thus does not accurately describe the environment that will likely exist when the proposed Project is constructed and becomes operational. Regardless, the E+P scenario is evaluated to satisfy CEQA requirements to identify the Project's impacts to the existing environment.

The Opening Year (2022) analysis includes an evaluation the Existing plus Ambient Growth plus Project (E+A+P) traffic conditions and Existing plus Ambient Growth plus Project plus Cumulative Development



(E+A+P+C) conditions to identify the Project's contribution to potential cumulative traffic impacts within the study area. The E+A+P analysis identifies the potential cumulative impacts that would result solely from expected background growth in the study area plus development of the proposed Project (Existing plus Ambient Growth plus Project, or E+A+P). Cumulative development projects within the Project study area are not included within the E+A+P evaluation. The E+A+P+C analysis adds traffic from development projects that are approved and not yet constructed to the E+A+P traffic volumes to identify potential, additional cumulative impacts.

The Horizon Year (2040) analysis is utilized to determine if improvements funded through local and regional transportation mitigation fee programs, such as the City of Moreno Valley Development Impact Fee program or other approved funding mechanisms, can accommodate the City's planned long-term growth at the target level of service identified in the City's General Plan Circulation Element.

Refer to *Technical Appendix J* for a detailed discussion of the methodologies and assumptions for each analysis scenario, and a list of cumulative development projects considered in the analysis.

**A. Impact Analysis for Short-Term Construction Traffic Conditions**

During the Project's construction phase, traffic to-and-from the subject property would be generated by activities such as construction employee trips, construction materials deliveries, and the use/delivery of heavy equipment.

Vehicular traffic associated with construction employees would be substantially less than daily and peak hour traffic volumes generated during Project operational activities, especially because construction activities typically begin/end outside of the peak hours. Accordingly, a majority of the construction employees would not be driving to/from the Project site during hours of peak congestion. Traffic from construction workers is not expected to result in a substantial adverse effect to Project study area intersections because most trips would occur during non-peak hours and the total volume of trips would be less than the Project's operational trips, which are shown to result in a less-than-significant impact in the following subsection.

Construction materials deliveries to the Project site also would also have a nominal effect to Project study area intersections. Construction materials would be delivered to the site throughout the construction phase based on need and would not occur on an everyday basis. Furthermore, many construction materials deliveries would occur during non-peak hours. The total daily number of construction materials deliveries to the Project site are expected to be well below the Project's operational trips, which are shown in the following subsection to result in a less-than-significant impact.

Heavy equipment would be utilized on the Project site during the construction phase. As most heavy equipment is not authorized to be driven on public roadways, most equipment would be delivered and removed from the site via flatbed trucks (sometimes with multiple pieces of equipment delivered to the site on a single trip). As with the delivery of construction materials, the delivery of heavy equipment to the Project site would not occur on a daily basis, but would occur periodically throughout the construction phase based on need. As described in EIR Section 3.0, *Project Description*, only up to four (4) pieces of construction equipment are expected on the Project site during any given phase of construction; therefore, deliveries of construction equipment to the Project site is not expected to generate substantial traffic.



Accordingly, traffic generated by the Project's construction phase would not result in a conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. Impacts during the Project's construction phase would be less than significant.

***B. Impact Analysis for Existing plus Project Traffic Conditions***

Study Area roadway ADT volumes and peak hour intersection volumes under E+P traffic conditions are illustrated on Figure 4.11-8, *Existing plus Project Traffic Volumes*. The peak hour LOS at Study Area intersections is summarized in Table 4.11-7, *Existing plus Project Intersection Analysis*.

As shown in Table 4.11-7, all Study Area intersections would operate at acceptable LOS under E+P traffic conditions. One Study Area intersection (Heacock Street / Alessandro Boulevard, Intersection #5) would experience long vehicle queues in the AM and PM peak hours for the northbound left and westbound left turning movements, respectively; however, the Project's impacts related to vehicle queuing would be less than significant because the Project would send less than 50 peak hour trips to Intersection #5 and would result in less than a 1.0 second increase in the average peak hour delay at the Intersection, and the Intersection would continue to achieve an acceptable LOS (meaning the long vehicle queues would not adversely affect the Intersection's operations) (Urban Crossroads, 2018e, pp. 57-58). Lastly, no unsignalized Study Area intersections would warrant a traffic signal under E+P conditions (Urban Crossroads, 2018e, p. 53). Based on the foregoing information, the Project would not result in a conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system under E+P traffic conditions. Impacts would be less than significant.

***C. Operation Year (2022) Impact Analysis***

Study Area roadway ADT volumes and peak hour intersection volumes under Opening Year (2022) traffic conditions are illustrated on Figure 4.11-9, *Opening Year (2022) Traffic Volumes*. The peak hour LOS at Study Area intersections is summarized in Table 4.11-8, *Opening Year (2022) Intersection Analysis*.

As shown in Table 4.11-8, all Study Area intersections would operate at acceptable LOS under Opening Year (2022) traffic conditions. One Study Area Intersection (Intersection #5) would experience long vehicle queues in the AM and PM peak hours for the northbound left and westbound left turn movements, respectively, as well as long vehicles queues in the PM peak hour for the southbound left, eastbound left, and eastbound right turn movements. However, the Project's impacts related to vehicle queuing would be less than significant because the Project would send less than 50 peak hour trips to Intersection #5 and would result in less than a 1.0 second increase in the average peak hour delay at the Intersection, and the Intersection would continue to achieve an acceptable LOS (meaning the long vehicle queues would not adversely affect the Intersection's operations). (Urban Crossroads, 2018e, p. 64) Lastly, no unsignalized Study Area intersections would warrant a traffic signal under Opening Year (2022) conditions (Urban Crossroads, 2018e, p. 62). Based on the foregoing information, the Project would not result in a conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system under Opening Year (2022) traffic conditions. Impacts would be less than significant.

***D. Horizon Year (2040) Impact Analysis***

Study Area roadway ADT volumes and peak hour intersection volumes under Horizon Year (2040) traffic conditions are illustrated on Figure 4.11-10, *Horizon Year (2040) Traffic Volumes*. The peak hour LOS at Study Area intersections is summarized in Table 4.11-9, *Horizon Year (2040) Intersection Analysis*.



As shown in Table 4.11-9, all Study Area intersections would operate at acceptable LOS under Horizon (2040) traffic conditions with the exception of Intersection #5 (LOS F in the AM and PM peak hours). The Project's impacts to Intersection #5 would be less than significant because the Project would send less than 50 peak hour trips to the Intersection and the Project would result in less than a 1.0 second increase in the average peak hour delay at the Intersection (Urban Crossroads, 2018e, pp. 67, 72). No unsignalized Study Area intersections would warrant a traffic signal under Horizon (2040) traffic conditions (Urban Crossroads, 2018e, p. 72). Based on the foregoing information, the Project would not result in a conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system under Horizon (2040) traffic conditions. Impacts would be less than significant.

***Threshold b: Would the Project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?***

The *Riverside County CMP* is applicable to the Project's geographic area. As described in Subsection 4.11.3B, there are no *CMP* arterial roadway facilities located within the Study Area; therefore, there is no potential for the Project to conflict with applicable LOS standards for the *CMP* arterial roadway network under Short-Term Construction, E+P, Opening Year (2022), or Horizon Year (2040) traffic conditions.

The Project would contribute less than 50 peak hour trips to all *Riverside County CMP* freeway facilities in the Project site vicinity, including I-215 and SR-60, under all analysis scenarios. Because the Project would not contribute substantial traffic (defined as 50 or more peak hour trips) to any freeway facility; there is no potential for the Project to cause or substantially contribute to the exceedance applicable *Riverside County CMP* or Caltrans LOS standards. Accordingly, the Project would not conflict with the *Riverside County CMP* LOS standards for the *CMP* freeway/highway network under Short-Term Construction, E+P, Opening Year (2022), or Horizon Year (2040) traffic conditions. Impacts would be less than significant.

Although Project-related traffic is expected to enter *CMP* freeway/highway network at the I-215 and SR-60 on-ramps nearest the Project site, the Project's traffic would continue to travel throughout the southern California region along the State highway system, dissipating as distance from the Project site increases. As such, the Project's traffic has the potential to travel along freeway mainline segments that experience unacceptable levels of service, including but not limited to *Riverside County CMP* segments of SR-60, SR-91, I-15, I-215, and I-10, as well as freeway segments located outside of Riverside County, such as I-5, I-110, I-405, and I-710, among others. All State highway system facilities that operate at an unacceptable LOS are considered to be cumulatively impacted; however, because the Project would not contribute 50 or more peak hour trips to any congested freeway segment, the effect to *Riverside County CMP* freeway facilities and other freeway facilities located outside of Riverside County would be less than cumulatively-considerable under Short-Term Construction, E+P, Opening Year (2022), and Horizon Year (2040) traffic conditions.

***Threshold c: Would the Project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?***

The proposed Project does not contain an air travel component (e.g., runways, helipads); thus, air traffic levels in the vicinity of the March Air Reserve Base would not be changed as a result of the Project. As previously described in EIR Section 3.0, *Project Description*, the Project would develop the subject property with one (1) warehouse distribution/light industrial building and related improvements, including parking areas, loading bays, detention basins, and landscaping. The tallest feature on the Project site would be the proposed building,



which would not exceed a height of 43 feet above finished grade, and would not include any component that would obstruct the flight path or interfere with flight operations at the March Air Reserve Base. Accordingly, the Project would not have the potential to affect air traffic patterns, including an increase in traffic levels or a change in flight path location that results in substantial safety risks. No impact would occur.

***Threshold d: Would the Project substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?***

The types of traffic generated by the Project (i.e., passenger cars and trucks) would be compatible with the existing traffic on the City of Moreno Valley's roadway network in the vicinity of the Project site. In addition, all proposed improvements within the public right-of-way would be installed in conformance with City design standards. The City of Moreno Valley Public Works Department reviewed the Project's application materials (refer to EIR Section 3.0, *Project Description*) and determined that no hazardous transportation design features would be introduced by the Project. Accordingly, the proposed Project would not create or substantially increase safety hazards due to a design feature or incompatible use. The Project would result in a less-than-significant impact.

***Threshold e: Would the Project result in inadequate emergency access?***

The City of Moreno Valley reviewed the Project's design, including but not limited to proposed driveway locations and parking lot/drive aisle configuration, to ensure that adequate access to-and-from the Project site would be provided for emergency vehicles. The City of Moreno Valley also will require the Project to provide adequate paved access to-and-from the site as a condition of Project approval. Furthermore, the City of Moreno Valley will review all future Project construction drawings to ensure that adequate emergency access is maintained along abutting public streets during temporary construction activities. With required adherence to City requirements for emergency vehicle access, no impact would occur.

***Threshold f: Would the Project the project conflict with adopted policies or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?***

The Bicycle Master Plan identifies a planned Class I, multi-use bike path along the segment of Heacock Street that abuts the Project site and a Class III bike route (signed, with shared travel lane) along the Brodiaea Avenue segment that abuts the Project site. In addition, the Bicycle Master Plan identifies a Class II (striped) bike lane along the Alessandro Boulevard segment located due north of the Project site. The Project would install the Class I bike path segment, which is a segment of the Juan Bautista De Anza Multi-Use Trail, along its eastern site boundary, in accordance with the Bicycle Master Plan. The Class I bike path would conform with all applicable City design standards. In addition, the Project does not include any element that would prevent the implementation of or preclude the use of the existing or planned Class II and Class III bicycle facilities and sidewalk facilities in the Project site vicinity, including those along the Project site's frontages with Heacock Street and Brodiaea Avenue.

Two bus routes, Route 11 and 20, operate in close proximity to the Project site; however, neither bus route operates along roads that abut the Project site (Urban Crossroads, 2018e, p. 21) There are no other public transit services in the vicinity of the Project site under existing conditions. Accordingly, implementation of the Project would not conflict with local public transit service.





As demonstrated by the foregoing analysis, the Project would not conflict with adopted policies, plans or programs related to alternative transportation, or otherwise substantially decrease the performance or safety of such facilities, and a less-than-significant impact would occur.

#### **4.11.7 CUMULATIVE IMPACT ANALYSIS**

As disclosed in Threshold “a,” the Project would not result in cumulatively considerable impacts on the City of Moreno Valley transportation network.

As disclosed under Threshold “b,” there are no *CMP* arterial roadways or freeway facilities within the Study Area. Therefore, Project-related traffic would not cumulatively impact the existing and planned *CMP* roadway network.

The proposed Project has no potential to contribute to a significant cumulative impact under the topics discussed under Thresholds “c,” “d,” and “e,” because the Project has no potential to result in changes to air traffic patterns, to result in transportation design safety concerns, or to adversely affect emergency access on a direct or cumulative basis.

As presented under Threshold “f,” the Project is consistent with the City of Moreno Valley Bicycle Master Plan. Because Project-related development would further the provision of pedestrian and/or bicycle facilities in the areas surrounding the Project site, there is no potential for the Project to contribute to cumulative, adverse effects to such facilities.

#### **4.11.8 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION**

Threshold a: Less-than-Significant Impact. The Project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system during projected near- or long-term development conditions. Impacts to the local circulation system would be less than significant.

Threshold b: Less-than-Significant Impact. The Project would contribute less-than-significant traffic volumes to freeway facilities included within the *Riverside County CMP* roadway network under Short-Term Construction, E+P, Opening Year (2022), and Horizon Year (2040) traffic conditions.

Threshold c: No Impact. There is no potential for the Project to change air traffic patterns or create substantial air traffic safety risks.

Threshold d: Less-than-Significant Impact. No significant transportation safety hazards would be introduced as a result of the proposed Project.

Threshold e: No Impact. Adequate emergency access would be provided to the Project site during construction and long-term operation. The Project would not result in inadequate emergency access to the site or surrounding properties.

Threshold f: Less-than-Significant Impact. The proposed Project is consistent with adopted policies and programs regarding public transit, bicycle, and pedestrian facilities, and is designed to minimize potential conflicts with non-vehicular means of transportation. Potential impacts to the performance or safety of transit, bicycle, and pedestrian systems would be less than significant.



#### **4.11.9 MITIGATION**

Although the Project would result in less-than-significant impacts to the transportation system, and although mandatory compliance with governmental regulatory requirements are not required to be duplicated as mitigation measures, the following mitigation measures are recommended to assure the payment of mandatory traffic impact fees. The fees collected by the two programs identified below are used by the City of Moreno Valley and WRCOG to advance roadway improvement projects in the City and the region, respectively.

- MM 4.11-1 Prior to issuance of building permits, the Project Applicant shall comply with the City of Moreno Valley Development Impact Fee (DIF) program, which requires the payment of a fee to the City (less any applicable fee credits), a portion of which is applied to reduce traffic congestion by funding the installation of roadway improvements.
  
- MM 4.11-2 Prior to issuance of building permits, the Project Applicant shall comply with the Western Riverside Council of Governments (WRCOG) Transportation Uniform Mitigation Fee (TUMF) program, which requires the payment of a fee to the City (for conveyance to WRCOG) to address cumulative impacts of growth throughout western Riverside County.



**Table 4.11-1 Study Area Intersection Analysis Locations**

ID	Intersection Location	Jurisdiction	CMP?
1	Gilbert Street / Brodiaea Avenue	Moreno Valley	No
2	Gilbert Street / Cactus Avenue	Moreno Valley	No
3	Driveway 1 / Brodiaea Avenue – Future Intersection	Moreno Valley	No
4	Driveway 2 / Brodiaea Avenue – Future Intersection	Moreno Valley	No
5	Heacock Street / Alessandro Boulevard	Moreno Valley	No
6	Heacock Street / Brodiaea Avenue	Moreno Valley	No

Source: (Urban Crossroads, 2018e, Table 1-1)

**Table 4.11-2 Existing Intersection Conditions**

#	Intersection	Traffic Control <sup>3</sup>	Intersection Approach Lanes <sup>1</sup>												Delay (secs.) <sup>2</sup>		Level of Service	
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM
			L	T	R	L	T	R	L	T	R	L	T	R				
1	Gilbert St. / Brodiaea Av.	CSS	1	0	1	0	0	0	0	1	0	1	1	0	10.2	10.1	B	B
2	Gilbert St. / Cactus Av.	TS	0	0	0	1	0	1>	1	3	0	0	3	d	6.9	5.0	A	A
3	Dwy. 1 / Brodiaea Av.		Future Intersection															
4	Dwy. 2 / Brodiaea Av.		Future Intersection															
5	Heacock St. / Alessandro Bl.	TS	1	2	d	1	2	d	1	3	1>	1	3	d	25.4	29.0	C	C
6	Heacock St. / Brodiaea Av.	TS	1	2	0	1	2	0	1	1	1>	1	1	0	14.9	15.3	B	B

<sup>1</sup> When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. L= Left; T=Through; R= Right; >= Right Turn Overlap Phasing; d= Defacto Right Turn Lane.

<sup>2</sup> Per the 2010 Highway Capacity Manual (HCM), overall average intersection delay and level of service are shown for intersections with a traffic signal. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. LOS calculated using Synchro (Version 9.1).

<sup>3</sup> CSS= Cross-street Stop; TS= Traffic Signal  
Source: (Urban Crossroads, 2018e, Table 3-1)



**Table 4.11-3 LOS Thresholds for Signalized Intersections**

Description	Average Control Delay (Seconds), V/C ≤ 1.0	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00	A	F
Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00	B	F
Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00	C	F
Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00	D	F
Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00	E	F
Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths	80.01 and up	F	F

Source: (Urban Crossroads, 2018e, Table 2-1)

**Table 4.11-4 LOS Thresholds for Unsignalized Intersections**

Description	Average Control Delay Per Vehicle (Seconds)	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Little or no delays.	0 to 10.00	A	F
Short traffic delays.	10.01 to 15.00	B	F
Average traffic delays.	15.01 to 25.00	C	F
Long traffic delays.	25.01 to 35.00	D	F
Very long traffic delays.	35.01 to 50.00	E	F
Extreme traffic delays with intersection capacity exceeded.	> 50.00	F	F

Source: (Urban Crossroads, 2018e, Table 2-2)



**Table 4.11-5 Traffic Signal Warrant Analysis Locations**

ID	Intersection Location	Jurisdiction
2	Gilbert Street / Cactus Avenue	Moreno Valley
3	Driveway 1 / Brodiaea Avenue – Future Intersection	Moreno Valley
4	Driveway 2 / Brodiaea Avenue – Future Intersection	Moreno Valley

Source: (Urban Crossroads, 2018e, Table 2-4)

**Table 4.11-6 Trip Generation Summary (Passenger Car Equivalent)**

Land Use	Units <sup>2</sup>	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
<b>Trip Generation Rates<sup>1</sup></b>									
High-Cube Warehouse <sup>3,4</sup>	TSF	152	0.076	0.034	0.110	0.037	0.083	0.120	1.680
		Passenger Cars	0.055	0.025	0.080	0.025	0.055	0.080	1.040
		2-Axle Trucks (PCE = 1.5)	0.007	0.003	0.010	0.004	0.009	0.013	0.211
		3-Axle Trucks (PCE = 2.0)	0.007	0.003	0.011	0.004	0.010	0.014	0.226
		4-Axle+ Trucks (PCE = 3.0)	0.037	0.017	0.054	0.022	0.050	0.072	1.158

Land Use	Quantity	Units <sup>2</sup>	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
<b>Passenger Car Equivalent (PCE) Trip Generation Summary</b>									
High-Cube Warehouse	262.398	TSF							
Passenger Cars:			14	7	21	7	14	21	273
Truck Trips:									
2-axle:			2	1	3	1	2	3	55
3-axle:			2	1	3	1	3	4	59
4+-axle:			10	4	14	6	13	19	304
		- Net Truck Trips (PCE)	14	6	20	8	18	26	418
		<b>TOTAL NET TRIPS (PCE)<sup>5</sup></b>	<b>28</b>	<b>13</b>	<b>41</b>	<b>15</b>	<b>32</b>	<b>47</b>	<b>691</b>

<sup>1</sup> Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Ninth Edition (2012).

<sup>2</sup> TSF= Thousand Square Feet

<sup>3</sup> Vehicle Mix Source: Total truck percentage source from ITE Trip Generation Manual. Truck mix (by axle type) from SCAQMD.

<sup>4</sup> PCE rates are per SANBAG. They are 1.5 for 2-axle trucks, 2.0 for 3-axle trucks, and 3.0 for 4+ axle trucks.

<sup>5</sup> TOTAL NET TRIPS (PCE)= Passenger Cars + Net Truck Trips (PCE).

Source: (Urban Crossroads, 2018e, Table 4-1)



**Table 4.11-7 Existing plus Project Intersection Analysis**

#	Intersection	Traffic Control <sup>2</sup>	Existing (2017)				E+P			
			Delay <sup>1</sup> (secs.)		Level of Service		Delay <sup>1</sup> (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM
1	Gilbert St. / Brodiaea Av.	CSS	10.2	10.1	B	B	10.3	10.4	B	B
2	Gilbert St. / Cactus Av.	TS	6.9	5.0	A	A	7.4	5.3	A	A
3	Dwy. 1 / Brodiaea Av.	<u>CSS</u>	Future Intersection				9.3	9.3	A	A
4	Dwy. 2 / Brodiaea Av.	<u>CSS</u>	Future Intersection				9.5	9.4	A	A
5	Heacock St. / Alessandro Bl.	TS	25.4	29.0	C	C	25.5	29.0	C	C
6	Heacock St. / Brodiaea Av.	TS	14.9	15.3	B	B	15.0	15.6	B	B

<sup>1</sup> Per the 2010 Highway Capacity Manual (HCM), overall average intersection delay and level of service are shown for intersections with a traffic signal. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. LOS calculated using Synchro (Version 9.1).

<sup>2</sup> TS= Traffic Signal; CSS= Cross-street Stop; CSS= Improvement  
Source: (Urban Crossroads, 2018e, Table 5-1)

**Table 4.11-8 Opening Year (2022) Intersection Analysis**

#	Intersection	Traffic Control <sup>2</sup>	2022 Without Project				2022 With Project			
			Delay <sup>1</sup> (secs.)		Level of Service		Delay <sup>1</sup> (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM
1	Gilbert St. / Brodiaea Av.	CSS	10.3	10.2	B	B	10.5	10.6	B	B
2	Gilbert St. / Cactus Av.	TS	20.6	20.4	C	C	24.2	20.5	C	C
3	Dwy. 1 / Brodiaea Av.	<u>CSS</u>	Future Intersection				9.4	9.3	A	A
4	Dwy. 2 / Brodiaea Av.	<u>CSS</u>	Future Intersection				9.6	9.5	A	A
5	Heacock St. / Alessandro Bl.	TS	36.3	44.3	D	D	36.4	44.7	D	D
6	Heacock St. / Brodiaea Av.	TS	17.0	17.0	B	B	17.1	17.3	B	B

<sup>1</sup> Per the 2010 Highway Capacity Manual (HCM), overall average intersection delay and level of service are shown for intersections with a traffic signal. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. LOS calculated using Synchro (Version 9.1).

<sup>2</sup> TS= Traffic Signal; CSS= Cross-street Stop; CSS= Improvement  
Source: (Urban Crossroads, 2018e, Table 6-1)



**Table 4.11-9 Horizon Year (2040) Intersection Analysis**

#	Intersection	Traffic Control <sup>2</sup>	2040 Without Project				2040 With Project			
			Delay <sup>1</sup> (secs.)		Level of Service		Delay <sup>1</sup> (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM
1	Gilbert St. / Brodiaea Av.	CSS	10.5	10.4	B	B	10.7	10.8	B	B
2	Gilbert St. / Cactus Av.	TS	44.1	46.3	D	D	49.2	46.4	D	D
3	Dwy. 1 / Brodiaea Av.	<b>CSS</b>	Future Intersection				9.5	9.4	A	A
4	Dwy. 2 / Brodiaea Av.	<b>CSS</b>	Future Intersection				9.8	9.6	A	A
5	Heacock St. / Alessandro Bl.	TS	<b>96.7</b>	<b>128.0</b>	<b>F</b>	<b>F</b>	<b>96.8</b>	<b>128.2</b>	<b>F</b>	<b>F</b>
6	Heacock St. / Brodiaea Av.	TS	18.9	18.7	B	B	19.1	19.0	B	B

**BOLD**= LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

<sup>1</sup> Per the 2010 Highway Capacity Manual (HCM), overall average intersection delay and level of service are shown for intersections with a traffic signal. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. LOS calculated using Synchro (Version 9.1).

<sup>2</sup> TS= Traffic Signal; CSS= Cross-street Stop; **CSS**= Improvement

Source: (Urban Crossroads, 2018e, Table 7-1)

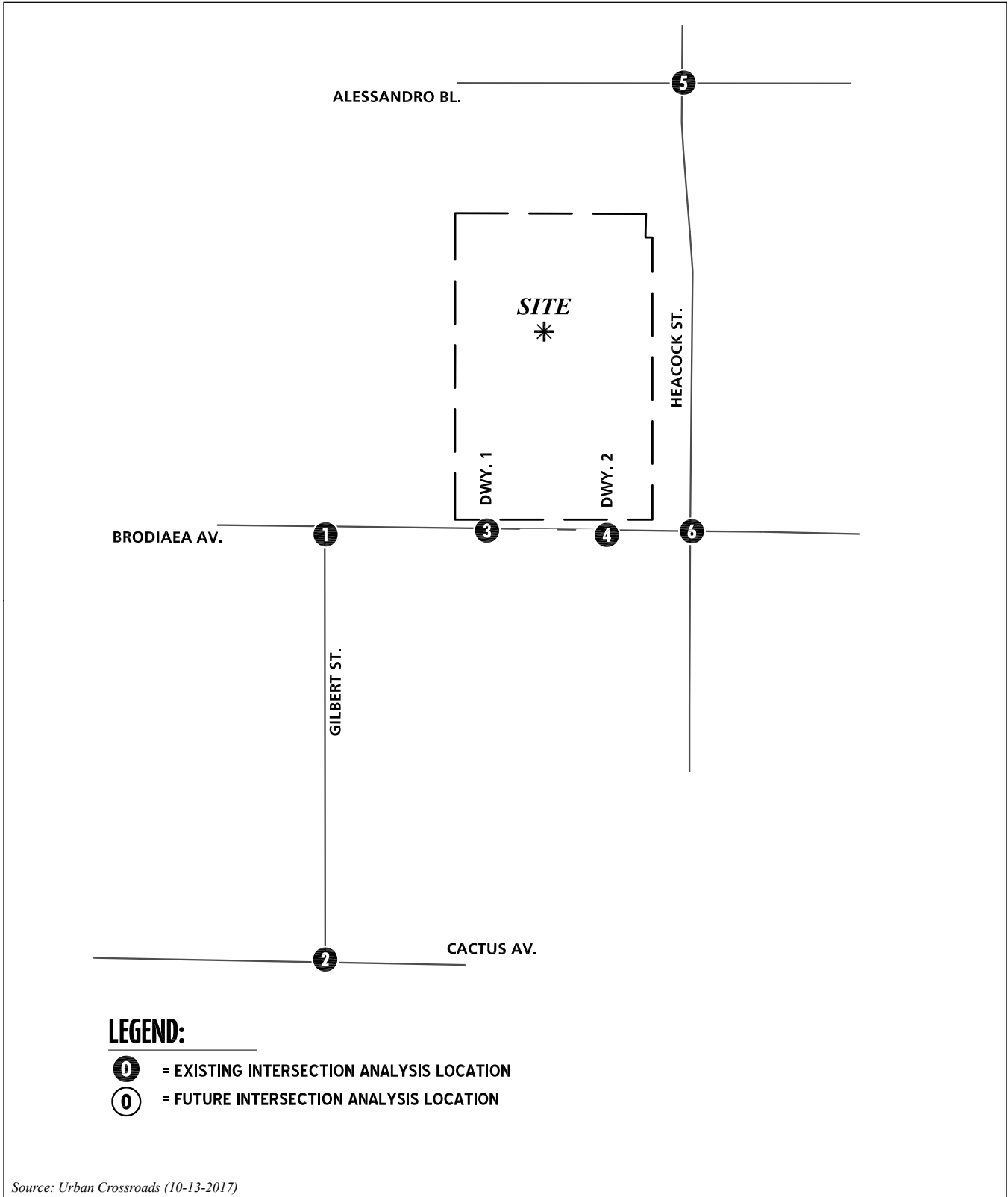


Figure 4.11-1



NOT TO SCALE



**STUDY AREA INTERSECTION LOCATIONS**



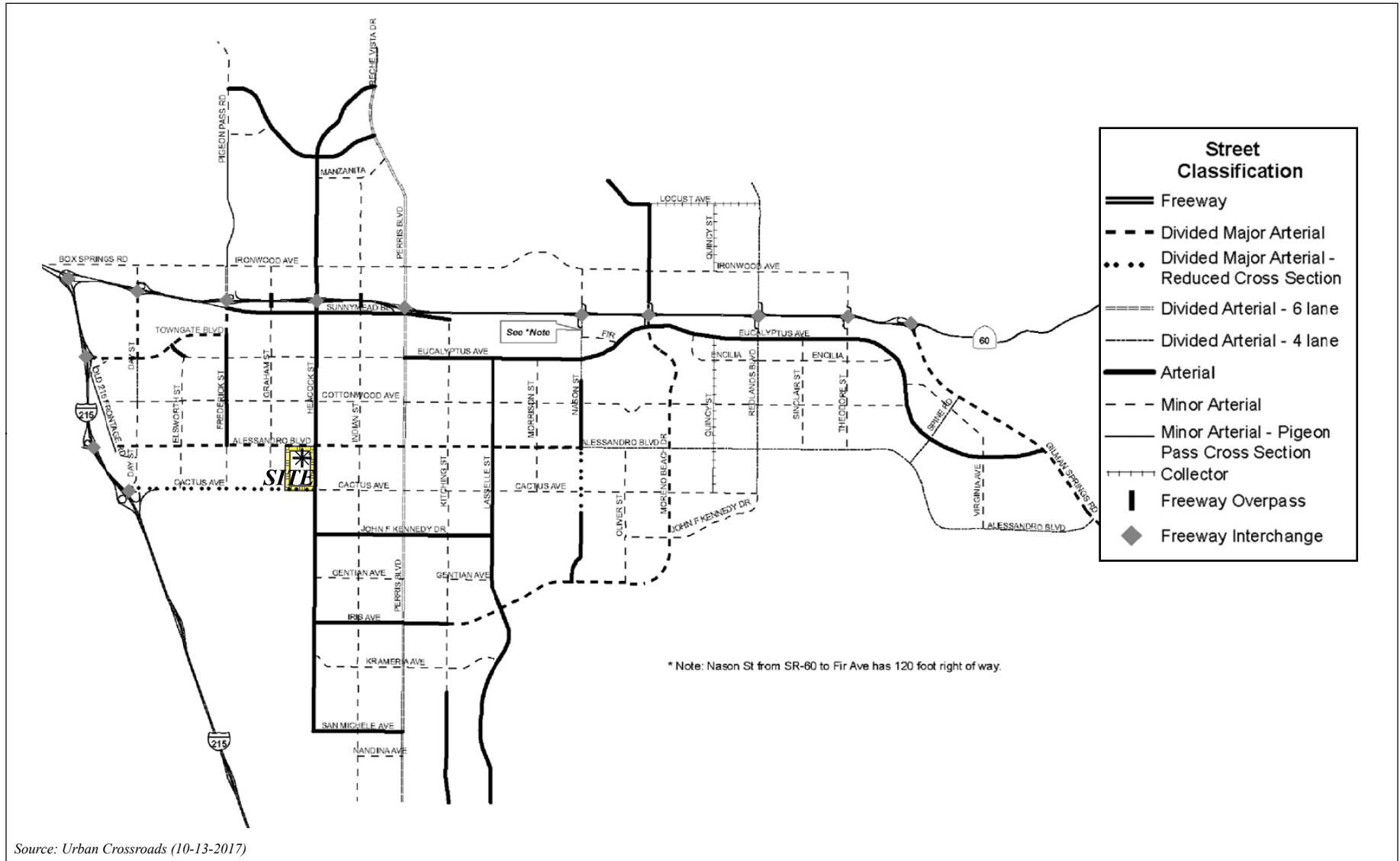
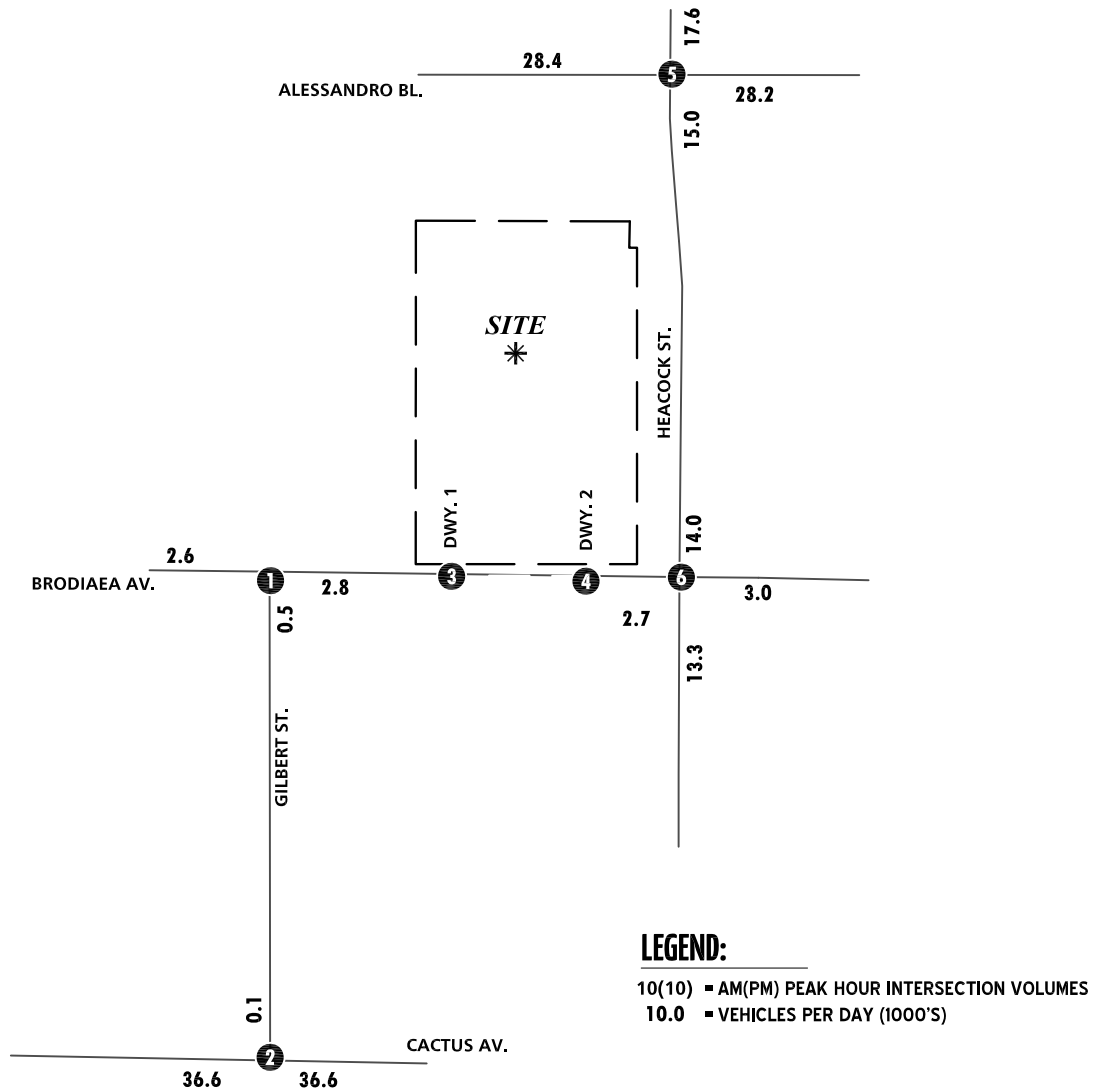


Figure 4.11-2



NOT TO SCALE





1	2	3	4	5	6
Gilbert St. & Brodiaea Av.	Gilbert St. & Cactus Av.	Dwy. 1 & Brodiaea Av.	Dwy. 2 & Brodiaea Av.	Heacock St. & Alessandro Bl.	Heacock St. & Brodiaea Av.
← 147(103) ← 8(12) 41(111) → 6(8) → 15(8) → 18(16) →	← 20(3) ← 13(2) ← 11(2) ← 1938(1013) 24(3) → 1044(2195) →	Future Intersection	Future Intersection	← 174(146) ← 321(481) ← 120(251) ← 138(159) ← 1238(740) ← 42(47) 70(114) → 381(1189) → 57(128) → 157(177) → 475(398) → 41(88) →	← 18(29) ← 362(586) ← 16(49) ← 39(34) ← 99(66) ← 12(19) 18(26) → 23(79) → 18(22) → 39(20) → 632(503) → 13(19) →

Source: Urban Crossroads (10-13-2017)

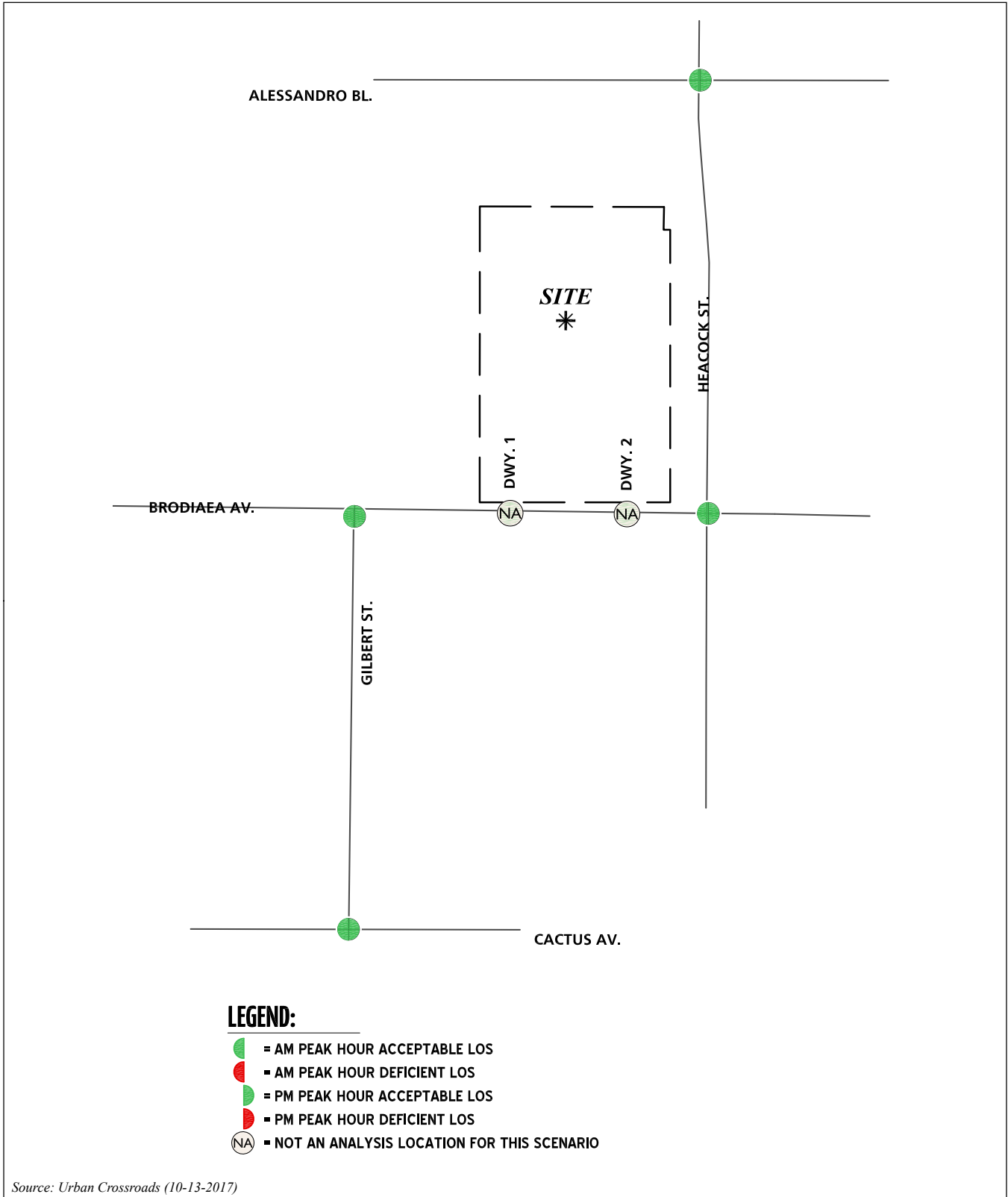
Figure 4.11-3



NOT TO SCALE



**EXISTING AVERAGE DAILY TRAFFIC (ADT)**



Source: Urban Crossroads (10-13-2017)

Figure 4.11-4

**EXISTING LEVELS OF SERVICE SUMMARY -  
STUDY AREA INTERSECTIONS**



NOT TO SCALE





**LEGEND:**

10 = PERCENT TO/FROM PROJECT

Source: Urban Crossroads (10-13-2017)

Figure 4.11-5



NOT TO SCALE



**PROJECT TRUCK TRIP DISTRIBUTION**

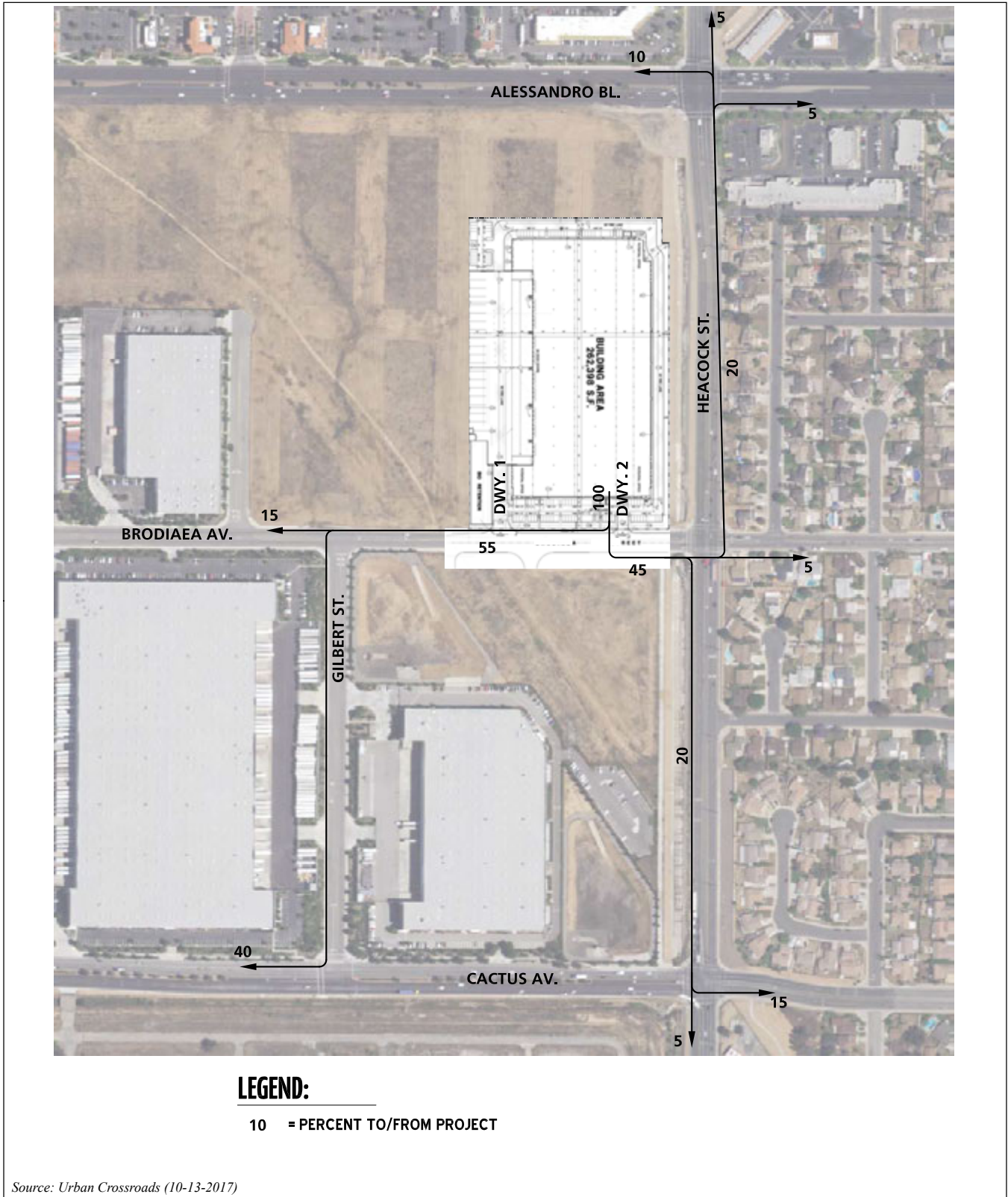


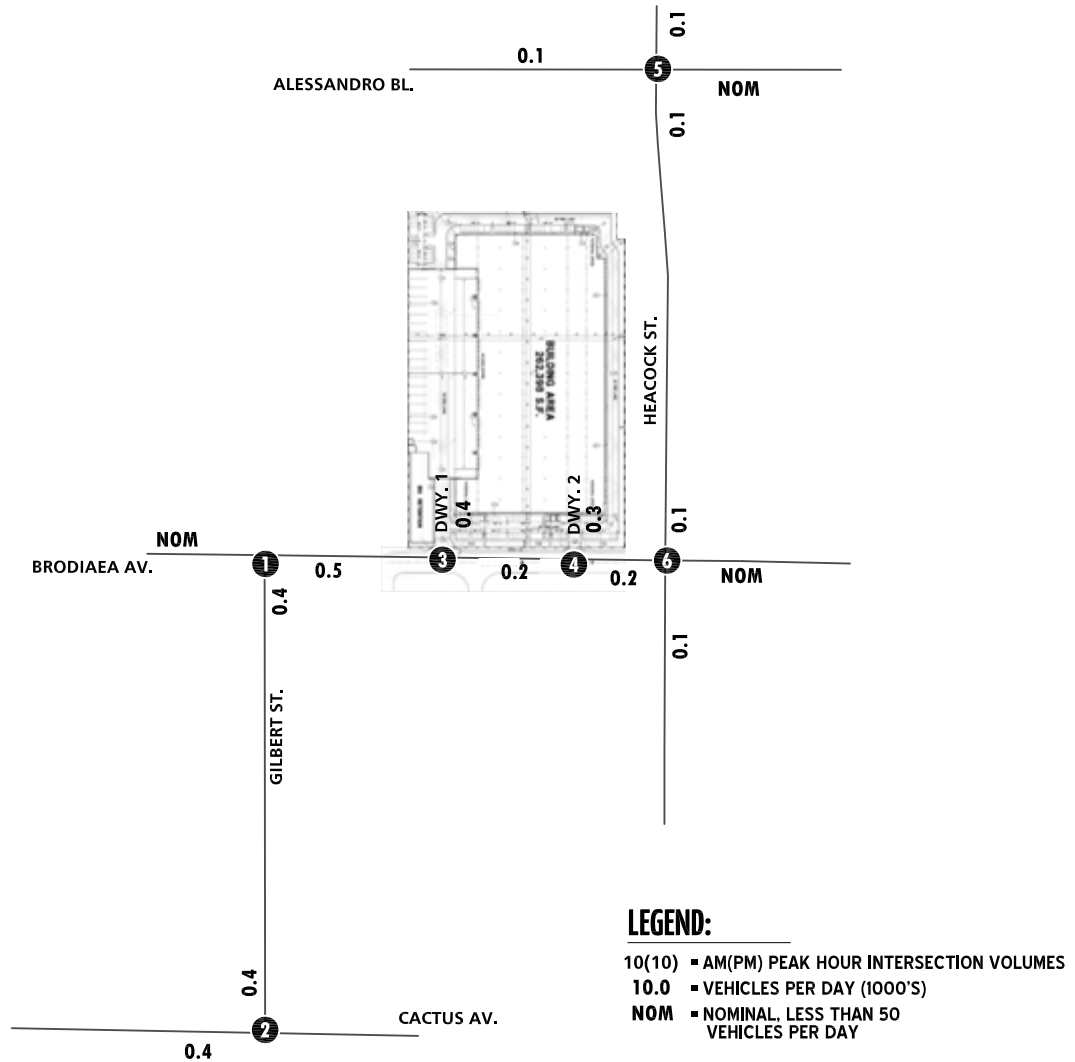
Figure 4.11-6



NOT TO SCALE



**PROJECT PASSENGER CAR TRIP DISTRIBUTION**



1	Gilbert St. & Brodiaea Av.	2	Gilbert St. & Cactus Av.	3	Dwy. 1 & Brodiaea Av.	4	Dwy. 2 & Brodiaea Av.	5	Heacock St. & Alessandro Bl.	6	Heacock St. & Brodiaea Av.
	← 1(2) ↓ 7(20) 0(0) →	↓ 7(20) ← 0(0) ← 0(0)	↓ 5(14) ← 1(4) ← 3(2) ← 3(8)	↓ 3(8) ← 3(6) ← 6(3) ← 3(2)	↓ 0(0) ↓ 2(1) ↓ 0(0) ↓ 1(0)	↓ 6(3) ↓ 0(0) ↓ 0(0) ↓ 0(0)	↓ 2(1) ↓ 0(0) ↓ 3(2)	↓ 1(3) ↓ 1(3) ↓ 0(1)	↓ 2(6) ↓ 0(1) ↓ 1(3)	↓ 0(0) ↓ 1(0) ↓ 0(0)	↓ 3(1) ↓ 0(0) ↓ 0(0)
	2(1) → 0(0) →	17(9) → 0(0) →	11(6) → 8(4) →	8(4) → 1(4) →	0(0) → 0(0) → 3(2) →	0(0) → 0(0) → 3(2) →	1(3) → 1(3) → 0(1) →	2(6) → 0(1) → 1(3) →	0(0) → 1(0) → 0(0) →	3(1) → 0(0) → 0(0) →	

Source: Urban Crossroads (10-13-2017)

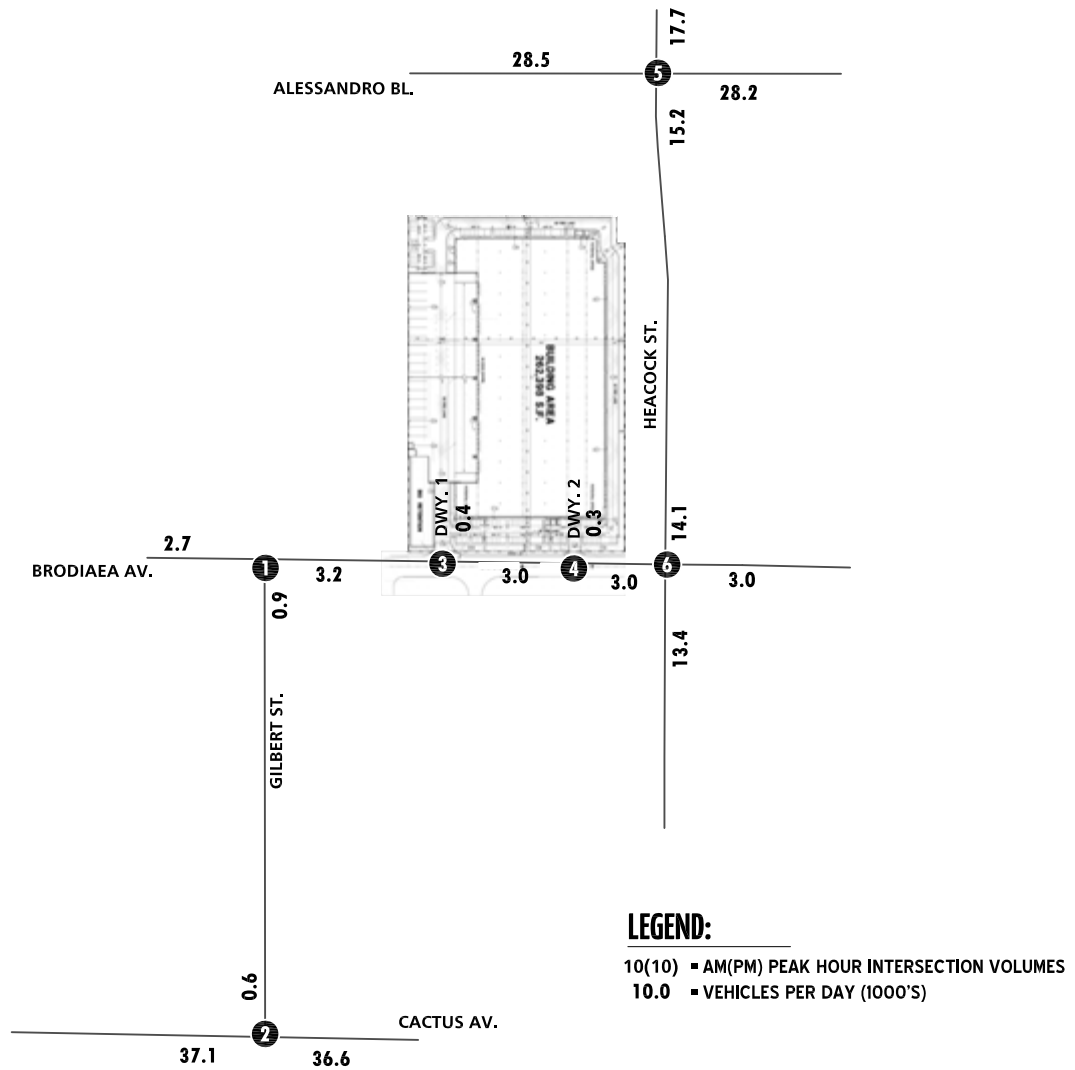
Figure 4.11-7



NOT TO SCALE



**PROJECT-RELATED TRAFFIC VOLUMES**



**LEGEND:**  
 10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES  
 10.0 = VEHICLES PER DAY (1000'S)

1	Gilbert St. & Brodiaea Av.	2	Gilbert St. & Cactus Av.	3	Dwy. 1 & Brodiaea Av.	4	Dwy. 2 & Brodiaea Av.	5	Heacock St. & Alessandro Bl.	6	Heacock St. & Brodiaea Av.
	← 148(105) ← 15(32) 43(112) → 6(8) → 15(8) → 35(25) →	← 27(23) ← 13(2) ← 11(2) ← 1938(1013) 41(12) → 1044(2195) →	← 5(14) ← 1(4) ← 3(2) ← 158(123) 11(6) → 67(131) →	← 3(8) ← 3(6) ← 6(3) ← 158(117) 8(4) → 60(131) →	← 174(146) ← 323(482) ← 120(251) ← 138(159) ← 1238(740) ← 43(47) 70(114) → 381(1189) → 60(130) →	← 24(32) ← 362(586) ← 16(49) ← 39(34) ← 100(66) ← 12(19) 20(32) → 23(80) → 19(25) →	← 42(21) ← 632(503) ← 13(19) 42(21) → 632(503) → 13(19) →				

Source: Urban Crossroads (10-13-2017)

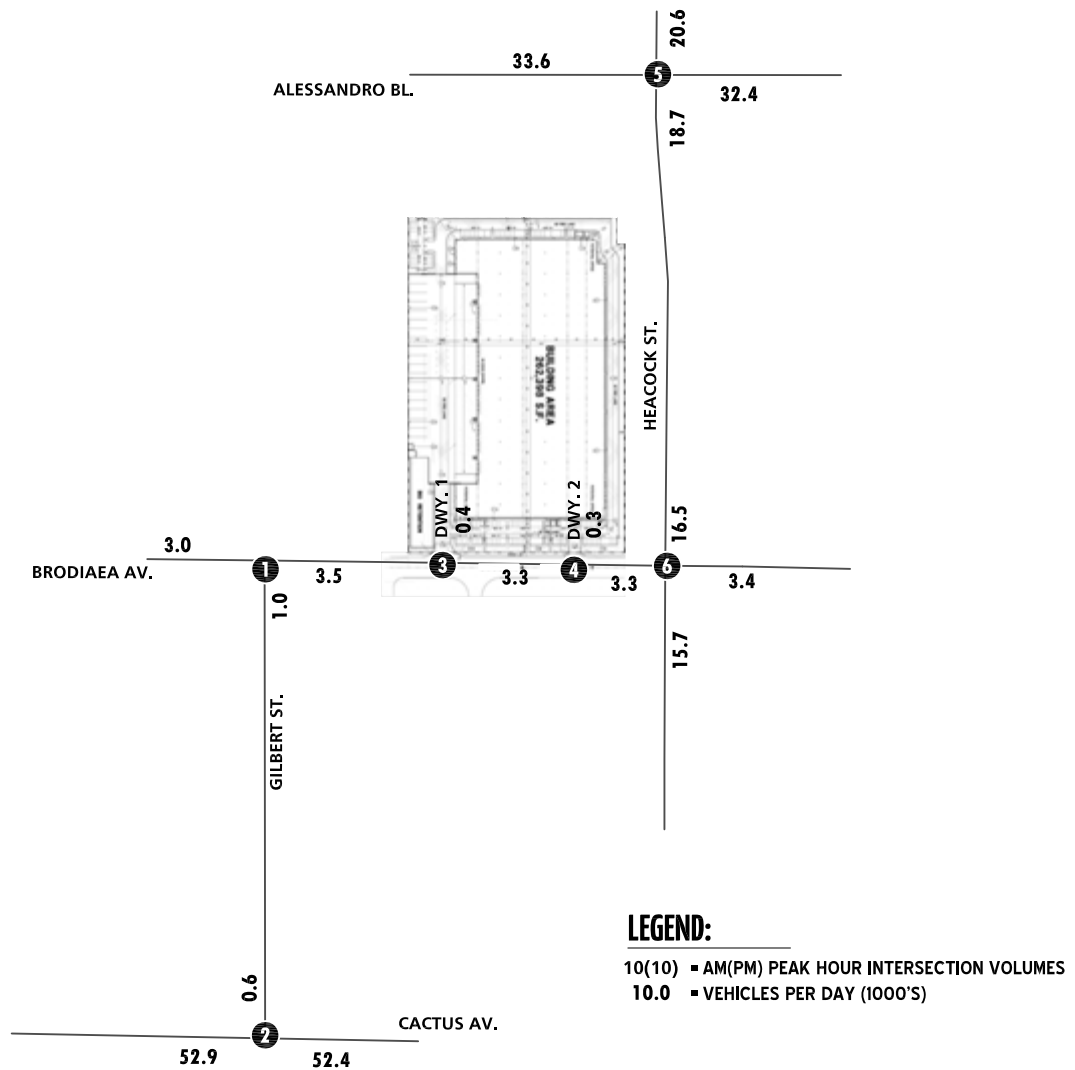
Figure 4.11-8



NOT TO SCALE



**EXISTING PLUS PROJECT TRAFFIC VOLUMES**



1	Gilbert St. & Brodiaea Av.	2	Gilbert St. & Cactus Av.	3	Dwy. 1 & Brodiaea Av.	4	Dwy. 2 & Brodiaea Av.	5	Heacock St. & Alessandro Bl.	6	Heacock St. & Brodiaea Av.
	← 164(116) ← 16(33) 48(124) → 6(9) → 17(9) → 37(27) →	29(23) ↓ 14(2) ↓ 12(2) ← 2982(1710) →	5(14) ↓ 1(4) ↓ 3(2) ← 174(134) ←	3(8) ↓ 3(6) ↓ 6(3) ← 174(128) ←	234(178) ↓ 439(690) ↓ 132(277) ↓ 152(176) ↓ 1450(850) ↓ 75(104) ↓	26(35) ↓ 538(909) ↓ 18(54) ↓ 43(37) ↓ 110(72) ↓ 13(21) ↓					
	177(9) → 37(27) →	43(12) → 1801(3586) →	11(6) → 73(144) →	8(4) → 66(144) →	92(167) → 451(1397) → 94(195) → 230(245) → 693(585) → 101(145) →	22(35) → 25(88) → 21(27) → 46(23) → 977(792) → 14(21) →					

Source: Urban Crossroads (10-13-2017)

Figure 4.11-9

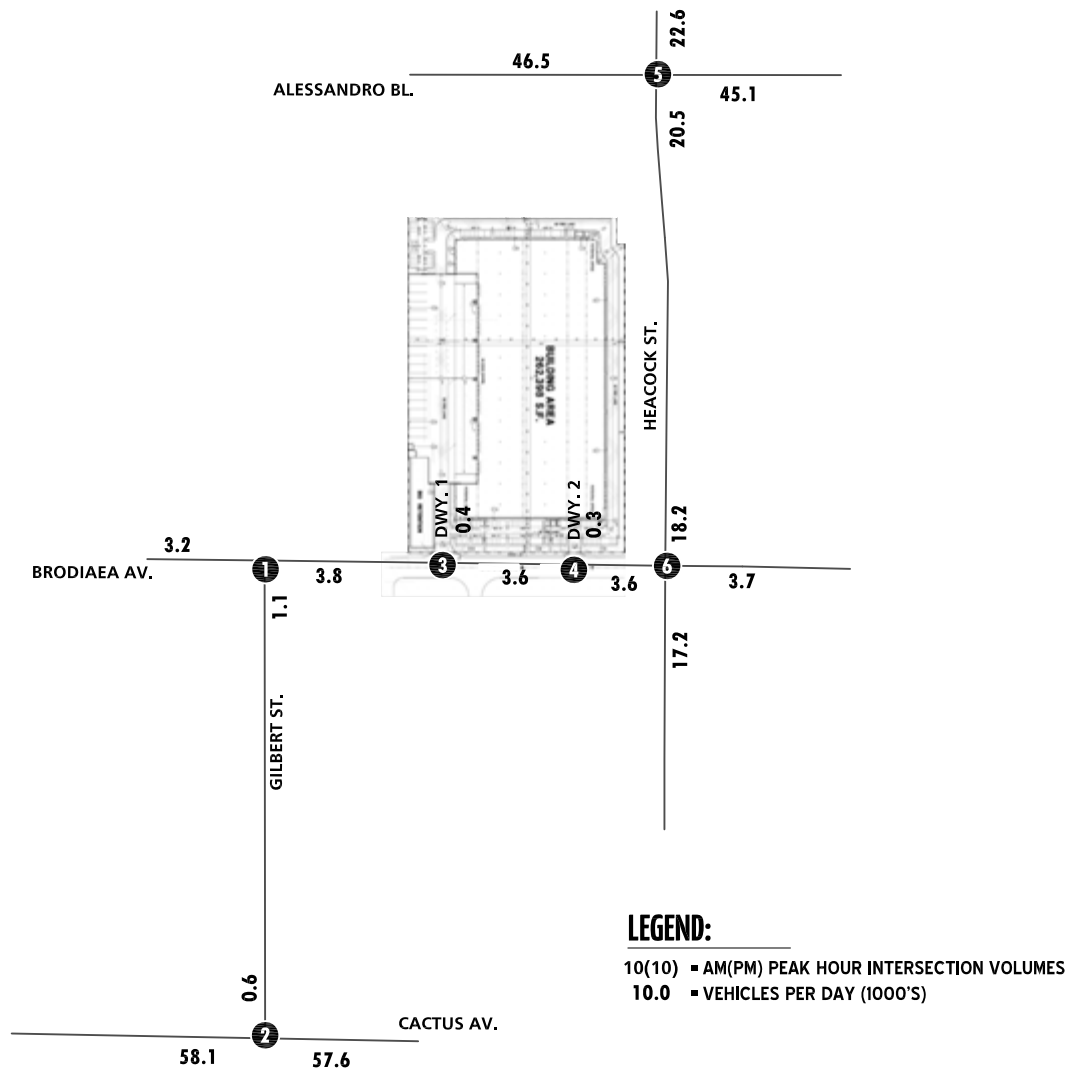


NOT TO SCALE



**OPENING YEAR (2022) TRAFFIC VOLUMES**





1	Gilbert St. & Brodiaea Av.	2	Gilbert St. & Cactus Av.	3	Dwy. 1 & Brodiaea Av.	4	Dwy. 2 & Brodiaea Av.	5	Heacock St. & Alessandro Bl.	6	Heacock St. & Brodiaea Av.
	← 181(128) ← 17(35) 53(136) → 10(10) → 18(10) ↓ 39(28) ↓	← 31(30) ← 13(10) ← 3280(1881) 46(19) → 1981(3945) →	← 5(14) ← 1(4) ← 3(2) ← 193(149) 11(6) → 80(158) →	← 3(8) ← 3(6) ← 6(3) ← 193(143) 8(4) → 73(158) →	← 258(195) ← 483(759) ← 282(425) ← 295(354) ← 1959(1452) ← 82(114) 126(184) → 902(1987) → 103(215) → 253(269) ↓ 763(643) ↓ 111(159) ↓	← 29(38) ← 592(1000) ← 19(59) ← 47(41) ← 121(80) ← 15(23) 25(38) → 28(97) → 23(29) → 50(27) ↓ 1075(872) ↓ 15(23) ↓					

Source: Urban Crossroads (10-13-2017)

Figure 4.11-10



NOT TO SCALE



**HORIZON YEAR (2040) TRAFFIC VOLUMES**



## 4.12 UTILITIES AND SERVICE SYSTEMS

This Subsection addresses the topics of water service and supply, wastewater collection and treatment, stormwater drainage management, and solid waste collection and disposal. The information contained herein is based, in part, on information contained in the Project's preliminary hydrology report (Thienes, 2017b), as well as information obtained from the Eastern Municipal Water District (EMWD) (EMWD, 2016b) and the California Department of Resources Recycling and Recovery (CalRecycle, El Sobrante Landfill, n.d.; CalRecycle, Badlands Sanitary Landfill, n.d.; CalRecycle, Lamb Canyon Sanitary Landfill, n.d.). A complete list of references can be found in EIR Section 7.0, *References*.

### 4.12.1 EXISTING CONDITIONS

#### A. Water Service

Domestic water service is provided to the Project area by the Eastern Municipal Water District (EMWD). EMWD's water service area is approximately 555 square miles, which encompasses a majority of the eastern portion of the Santa Ana River Basin. (EMWD, 2016b, p. xii) Under existing conditions, no water is consumed by the Project site, as the property is vacant and undeveloped. An existing 12-inch diameter water line is installed beneath the Brodiaea Avenue that abuts the Project site.

#### B. Wastewater Service and Treatment

Wastewater collection service to the Project area is provided by EMWD. EMWD owns and operates four (4) regional wastewater treatment plants, including the Moreno Valley Regional Water Reclamation Facility. The Moreno Valley Regional Water Reclamation Facility would receive all the wastewater from the proposed Project. Under existing conditions, the Moreno Valley Regional Water Reclamation Facility has a daily treatment capacity of 16 million gallons; but, only treats approximately 10.6 million gallons per day (excess daily treatment capacity of approximately 5.4 million gallons). (EMWD, 2016a)

No wastewater is produced by the Project site under existing conditions, as the property is vacant and undeveloped. An existing 15-inch diameter sewer line is installed beneath the Brodiaea Street segment that abuts the Project site.

#### C. Stormwater Conveyance Facilities

Stormwater drainage flows are conveyed through the Project area by facilities owned and maintained by the Riverside County Flood Control Water Conservation District (RCFCWCD). Runoff traveling through the Project site is intercepted by a valley gutter that runs along the northern edge of Brodiaea Avenue; the valley gutter conveys runoff easterly to a storm drain inlet located adjacent to the southeastern portion of the site. The storm drain inlet discharges to a storm drain line beneath Brodiaea Avenue (Line "F" of the *Sunnymead Master Drainage Plan*, refer to Subsection 4.12.2C), which ties into the Heacock Channel.

#### D. Solid Waste Collection and Disposal

Solid waste collection and disposal services are provided to the Project area by the City of Moreno Valley through private contact with Waste Management, Inc. Solid waste collected within the City of Moreno Valley is disposed at the El Sobrante Landfill, the Badlands Sanitary Landfill, and/or the Lamb Canyon Sanitary Landfill. Under existing conditions, no solid waste is produced by the Project site, as the property is vacant and undeveloped.



The El Sobrante Landfill is located east of I-15 and Temescal Canyon Road and to the south of the City of Corona at 10919 Dawson Canyon Road. The El Sobrante Landfill is permitted to receive 16,054 tons of solid waste per day and is estimated to reach capacity, at the earliest time, in the year 2045. Future landfill expansion opportunities exist at this site. (CalRecycle, El Sobrante Landfill, n.d.)

The Badlands Sanitary Landfill is located north of SR-60 and south of San Timoteo Canyon Road at 31125 Ironwood Avenue. The Badlands Sanitary Landfill is permitted to receive 4,800 tons of solid waste per day and is estimated to reach capacity no sooner than 2021. Future landfill expansion opportunities exist at this site. (CalRecycle, Badlands Sanitary Landfill, n.d.)

The Lamb Canyon Sanitary Landfill is located west of SR-79, east of Gilman Springs Road, and south of SR-60. The Lamb Canyon Sanitary Landfill is permitted to receive 5,500 tons of solid waste per day and is estimated to reach capacity, at the earliest time, in 2029. Future landfill expansion opportunities exist at this site. (CalRecycle, Lamb Canyon Sanitary Landfill, n.d.)

#### **4.12.2 APPLICABLE ENVIRONMENTAL PLANS, POLICIES, AND REGULATIONS**

The following is a brief description of the federal, State, and local environmental laws, regulations, and plans related to utilities and service systems.

##### **A. Federal Plans, Policies, and Regulations**

###### ***1. Clean Water Act***

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972. Under the CWA, the Environmental Protection Agency (EPA) has implemented pollution control programs such as setting wastewater standards for industry, and also has set water quality standards for all contaminants in surface waters. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. (EPA, 2017a)

###### ***2. Safe Drinking Water Act***

The Safe Drinking Water Act (SDWA) was established to protect the quality of drinking water in the U.S. This law focuses on all waters actually or potentially designed for drinking use, whether from above ground or underground sources. The Act authorizes EPA to establish minimum standards to protect tap water and requires all owners or operators of public water systems to comply with these primary (health-related) standards. The 1996 amendments to SDWA require that EPA consider a detailed risk and cost assessment, and best available peer-reviewed science, when developing these standards. State governments, which can be approved to implement these rules for EPA, also encourage attainment of secondary standards (nuisance-related). Under the Act, EPA also establishes minimum standards for state programs to protect underground sources of drinking water from endangerment by underground injection of fluids. (EPA, 2017b)



***B. State Plans, Policies, and Regulations***

***1. Porter-Cologne Water Control Act***

The Porter-Cologne Act is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act (California Water Code § 13000 *et seq.*), the policy of the State is as follows:

- That the quality of all the waters of the State shall be protected;
- That all activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason; and
- That the State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation. (SWRCB, 2014)

The Porter-Cologne Act established nine Regional Water Boards (based on hydrogeologic barriers) and the State Water Board, which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The State Water Board provides program guidance and oversight, allocates funds, and reviews Regional Water Boards decisions. In addition, the State Water Board allocates rights to the use of surface water. The Regional Water Boards have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The State Water Board and Regional Water Boards have numerous non-point source (NPS) related responsibilities, including monitoring and assessment, planning, financial assistance, and management.

The Regional Water Boards regulate discharges under the Porter-Cologne Act primarily through issuance of NPDES permits for point source discharges and waste discharge requirements (WDRs) for NPS discharges. Anyone discharging or proposing to discharge materials that could affect water quality (other than to a community sanitary sewer system regulated by an NPDES permit) must file a report of waste discharge. The Storm Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs) can make their own investigations or may require dischargers to carry out water quality investigations and report on water quality issues. The Porter-Cologne Act provides several options for enforcing WDRs and other orders, including cease and desist orders, cleanup and abatement orders, administrative civil liability orders, civil court actions, and criminal prosecutions. (SWRCB, 2014)

The Porter-Cologne Act also implements many provisions of the Clean Water Act, such as the NPDES permitting program. The Porter-Cologne Act also requires adoption of water quality control plans that contain the guiding policies of water pollution management in California. In addition, regional water quality control plans (basin plans) have been adopted by each of the Regional Water Boards and get updated as necessary and practical. These plans identify the existing and potential beneficial uses of waters of the State and establish water quality objectives to protect these uses. The basin plans also contain implementation, surveillance, and monitoring plans. (SWRCB, 2014) The Project site and vicinity are located in the Santa Ana River Watershed, which is within the purview of the Santa Ana RWQCB. The Santa Ana RWQCB's Santa Ana River Basin Water Quality Control Plan is the governing water quality plan for the region.



## **2. California Water Code**

The California Water Code is the principal state law regulating water quality in California. Water quality provisions must be complied with as contained in numerous code sections including: 1) the Health and Safety Code for the protection of ground and surface waters from hazardous waste and other toxic substances; 2) the Fish and Game Code for the prevention of unauthorized diversions of any surface water and discharge of any substance that may be deleterious to fish, plant, animal, or bird life; 3) the Harbors and Navigation Code for the prevention of the unauthorized discharge of waste from vessels into surface waters; and 4) the Food and Agriculture Code for the protection of groundwater which may be used for drinking water supplies. The California Department of Fish and Wildlife (CDFW), through provisions of the Fish & Game Code (§§ 1601 - 1603) is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by CDFW.

Surface water quality is the responsibility of the applicable RWQCB, water supply and wastewater treatment agencies, and city and county governments. The principal means of enforcement by the RWQCB is through the development, adoption, and issuance of water discharge permits. RWQCB basin plans establish water quality objectives that are defined as the limits or levels of water quality constituents or characteristics for the reasonable protection of beneficial uses of water.

## **3. California Toxics Rule (CTR)**

The California Toxics Rule (CTR) fills gap in California's water quality standards necessary to protect human health and aquatic life beneficial uses. The CTR criteria are similar to those published in the National Recommended Water Quality Criteria. The CTR supplements, and does not change or supersede, the criteria that EPA promulgated for California waters in the National Toxics Rule (NTR). The human health NTR and CTR criteria that apply to drinking water sources (those water bodies designated in the Basin Plans as municipal and domestic supply) consider chemical exposure through consumption of both water and aquatic organisms (fish and shellfish) harvested from the water. For waters that are not drinking water sources (e.g., enclosed bays and estuaries), human health NTR and CTR criteria only consider the consumption of contaminated aquatic organisms. The CTR and NTR criteria, along with the beneficial use designations in the Basin Plans and the related implementation policies, are the directly applicable water quality standards for toxic priority pollutants in California waters. (SWRCB, 2016)

## **4. Urban Water Management Planning Act**

The Urban Water Management Planning Act (UWMP Act) was proposed and adopted to ensure that water planning is conducted at the local level, as the State of California recognized that two water agencies in the same region could have very different impacts from a drought. The UWMP Act requires water agencies to develop Urban Water Management Plans (UWMPs) over a 20-year planning horizon, and further required UWMPs to be updated every five years. UWMPs are exempt from compliance with CEQA. (DWR, 2016, pp. 1-2)

The UWMPs provide a framework for long term water planning and inform the public of a supplier's plans for long-term resource planning that ensures adequate water supplies for existing and future demands. This part of the California Water Code (CWC) requires urban water suppliers to report, describe, and evaluate:

- Water deliveries and uses;
- Water supply sources;



- Efficient water uses;
- Demand management measures; and
- Water shortage contingency planning.

The UWMP Act has been modified over the years in response to the State's water shortages, droughts, and other factors. A significant amendment was made in 2009, after the drought of 2007-2009. This was the Water Conservation Act of 2009, also known as SB X7-7. This Act required agencies to establish water use targets for 2015 and 2020 that would result in statewide savings of 20 percent by 2020. Beginning in 2016, retail water suppliers are required to comply with the water conservation requirements in SB X7-7 in order to be eligible for State water grants or loans. Retail water agencies are required to set targets and track progress toward decreasing daily per capita urban water use in their service area, which will assist the State in meeting its 20 percent reduction goal by 2020. (DWR, 2016, pp. 1-2)

### **5. California Senate Bill 610**

The California Water Code (Water Code) §§ 10910 through 10915 were amended by the enactment of SB 610 in 2002. SB 610 requires an assessment of whether available water supplies are sufficient to serve the demand generated by a proposed project, as well as the reasonably foreseeable cumulative demand in the region over the next 20 years under average normal year, single dry year, and multiple dry year conditions. Under SB 610, water assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects (as defined in Water Code 10912 [a]) subject to CEQA. (DWR, 2003) For the purposes of SB 610, "project" means any of the following:

- A proposed residential development of more than 500 dwelling units.
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
- A proposed hotel or motel, or both, having more than 500 rooms.
- A proposed industrial, manufacturing, or processing plant, or industrial park 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.
- A mixed-use project that includes one or more of the projects specified in this subdivision.
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project. (DWR, 2003)

The Project does not meet the definition of a "project" under SB 610; therefore, a water supply assessment is not required for the Project.

### **6. Water Conservation in Landscaping Act**

The Water Conservation in Landscaping Act was established to ensure adequate water supplies are available for future uses. To promote the conservation and efficient use of water, the Act requires local agencies to



adopt a water efficient landscape ordinance. The City of Moreno Valley's water efficient landscape ordinance is contained in Chapter 9.17 of the City of Moreno Valley Municipal Code.

**7. *Executive Order B-37-16***

Signed on May 9, 2016, EO B-37-16 established a new water use efficiency framework for California. The order bolstered the state's drought resilience and preparedness by establishing longer-term water conservation measures that include permanent monthly water use reporting, new urban water use targets, reducing system leaks and eliminating clearly wasteful practices, strengthening urban drought contingency plans, and improving agricultural water management and drought plans. (DWR, 2017a)

**8. *Executive Order B-40-17***

Signed on April 7, 2017, EO B-40-17 ended the drought state of emergency in all California counties except Fresno, Kings, Tulare, and Tuolumne, where emergency drinking water projects will continue to help address diminished groundwater supplies. It maintains water reporting requirements and prohibitions on wasteful practices. The order was built on actions taken in Executive Order B-37-16, which remains in effect. In a related action, state agencies, including the Department of Water Resources (DWR), released a plan to continue making water conservation a way of life. (DWR, 2017a)

**9. *California Solid Waste Integrated Waste Management Act (AB 939, 1989)***

The Integrated Waste Management Act (IWMA) established an integrated waste management hierarchy to guide the California Integrated Waste Management Board (CIWMB) and local agencies in implementation, in order of priority: (1) source reduction, (2) recycling and composting, and (3) environmentally safe transformation and land disposal (it should be noted that the CIWMB no longer exists, and its duties have been assumed by CalRecycle). As part of the IWMA, the CIWMB was given a purpose to mandate the reduction of disposed waste. (CalRecycle, 1997a) The IWMA also required:

- The establishment of a task force to coordinate the development of city Source Reduction and Recycling Elements (SRREs) and a countywide siting element. (CalRecycle, 1997a)
- Each city, by July 1, 1991, to prepare, adopt and submit a SRRE to the county which includes the following components: waste characterization; source reduction; recycling; composting; solid waste facility capacity; education and public information; funding; special waste (asbestos, sewage sludge, etc.); and household hazardous waste. (CalRecycle, 1997a)
- Each county, by January 1, 1991, to prepare a SRRE for its unincorporated area, with the same components described above, and a countywide siting element, specifying areas for transformation or disposal sites to provide capacity for solid waste generated in the jurisdiction which cannot be reduced or recycled for a 15-year period.
- Each county to prepare, adopt, and submit to the Board an Integrated Waste Management Plan (IWMP), which includes all of the elements described above. (CalRecycle, 1997a)
- Each city or county plan to include an implementation schedule which shows: diversion of 25 percent of all solid waste from landfill or transformation facilities by January 1, 1995 through source reduction, recycling, and composting activities; and, diversion of 50 percent of all solid waste by January 1, 2000 through source reduction, recycling, and composting activities. (CalRecycle, 1997a)



- The CIWMB to review the implementation of each SRRE at least once every two years. (CalRecycle, 1997a)
- The IWMA required the CIWMB, in conjunction with an inspection conducted by a Lead Enforcement Agency (LEA), to conduct at least one inspection per year of each solid waste facility in the state. (CalRecycle, 1997a)

Additionally, the IWMA established a comprehensive statewide system of permitting, inspections, enforcement, and maintenance for solid waste facilities. (CalRecycle, 1997a)

#### **10. *Waste Reuse and Recycling Act (AB 1327)***

The Waste Reuse and Recycling Act (WRRRA) required the CIWMB to approve a model ordinance for adoption by any local government for the transfer, receipt, storage, and loading of recyclable materials in development projects by March 1, 1993. The WRRRA also required local agencies to adopt a local ordinance by September 1, 1993 or allow the model ordinance to take effect. The WRRRA requires all development projects that are commercial, industrial, institutional, or marina in nature and where solid waste is collected and loaded, to provide an adequate area for collecting and loading recyclable materials over the lifetime of the project. The area is required to be provided before building permits are issued. (CalRecycle, 1997b)

#### **11. *Mandatory Commercial Recycling Program (AB 341)***

Assembly Bill (AB) 341 (Chapter 476, Statutes of 2011 [Chesbro, AB 341]) directed CalRecycle to develop and adopt regulations for mandatory commercial recycling. CalRecycle initiated formal rulemaking with a 45-day comment period beginning Oct. 28, 2011. The final regulation was approved by the Office of Administrative Law on May 7, 2012. AB-341 was designed to help meet California's recycling goal of 75% by the year 2020. AB 341 requires all commercial businesses and public entities that generate 4 cubic yards or more of waste per week to have a recycling program in place. In addition, multi-family apartments with five or more units are also required to form a recycling program. (CalRecycle, 2017)

#### **12. *2016 California Green Building Standards Code (CALGreen, Part 11 of Title 24, California Code of Regulations)***

The most recent edition of CALGreen became effective January 1, 2017, and is applicable to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure throughout the State of California (including residential structures and elementary schools). CALGreen § 5.408.3 requires that 100 percent of trees, stumps, rocks, and associated vegetation and soils resulting from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on-site until the storage site is developed.

### **C. Local Plans, Policies, and Regulations**

#### **1. *EMWD Urban Water Management Plan***

The 2015 UWMP acts as the urban water management plan (UWMP) for the EMWD, is herein incorporated by reference, and is available for public review at 2270 Trumble Road, Perris, CA 92570. The UWMP includes a water system analysis, identifies improvements to correct existing deficiencies and serve projected future growth, and presents the estimated costs and phasing of the recommended improvements. As concluded in the UWMP, EMWD anticipates that it will be able to meet projected demand for water within its service





boundaries until at least the year 2040 in all types of climate situations, including normal, dry, and multiple consecutive dry weather years (EMWD, 2016b, Table 7-4 - 7-9).

A Water Shortage Contingency Plan is included in the UWMP, which EMWD is to implement in cases of future water deficiencies caused by limitations on supply or the EMWD's delivery system. At the time of long- or short-term drought conditions, or other emergencies, EMWD would inform their customers of the need to conserve water and impose penalties for non-compliance with mandatory water use reductions. Compliance with mandatory water use reductions would ensure that EMWD has the ability to meet present and projected demand within its service area during dry years. (EMWD, 2016b, p. 8-1)

## **2. *Sunnymead Master Drainage Plan***

The Project site is located within the RCFCWCD's *Sunnymead Master Drainage Plan* (MDP). The *Sunnymead MDP* was prepared by the Riverside County Flood Control and Water Conservation District (RCFCWCD), to identify master-planned drainage and flood control facilities that are needed in the Project area to safely convey the peak runoff of a 100-year frequency storm. (RCFCWCD, 1991) Per the *Sunnymead MDP*, drainage flows from the Project site are planned to outlet to the Line "F" storm drain, located beneath Brodiaea Avenue, which ties into Line "M" storm drain and the Heacock Channel at the Heacock Street/Brodiaea Avenue intersection.

## **3. *Riverside County Integrated Waste Management Plan***

The Countywide Integrated Waste Management Plan (CIWMP) was prepared in accordance with the California Integrated Waste Management Act of 1989, Chapter 1095 (AB 939). The CIWMP establishes a County-wide plan to reduce the volume and toxicity of solid waste that is landfilled and incinerated in the County and meet the minimum diversion goals of AB 939 (i.e., 25% diversion of solid waste by 1995 and a 50% diversion of the solid waste by 2000). (RCWRMD, 1996)

## **4. *City of Moreno Valley Construction Waste Ordinance***

Chapter 8.80, Recycling and Diversion of Construction and Demolition Waste, of the Moreno Valley Municipal Code requires at least 50% of waste tonnage from construction, demolition, and remodeling debris be diverted from the landfill. In addition, development projects are required to implement a construction site management plan to divert cardboard, wood, pallets, and other recyclable materials from the site. (City of Moreno Valley, 2017a)

### **4.12.3 BASIS FOR DETERMINING SIGNIFICANCE**

The proposed Project would result in a significant impact associated with utilities and service systems if the Project or any Project-related component would:

- a. *Exceed wastewater treatment requirements of the Santa Ana Regional Water Quality Control Board;*
- b. *Require or result in construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;*
- c. *Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;*
- d. *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;*



- e. *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;*
- f. *Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; or*
- g. *Comply with federal, State, and local statutes and regulations related to solid waste.*

The above-listed thresholds are derived directly from Appendix G to the CEQA Guidelines and address the typical, adverse effects that a development project could have on public utilities and service systems.

#### **4.12.4 IMPACT ANALYSIS**

***Threshold a: Would the Project exceed wastewater treatment requirements of the Santa Ana Regional Water Quality Control Board?***

Wastewater service is provided to the Project site by EMWD. EMWD is required to operate all of its treatment facilities in accordance with the waste treatment and discharge standards and requirements set forth by the Santa Ana Regional Water Quality Control Board (RWQCB). The Project would not install or utilize septic systems or alternative wastewater treatment systems; therefore, the Project would have no potential to exceed applicable wastewater treatment requirements established by the RWQCB. Accordingly, impacts would be less than significant.

***Threshold b: Would the Project require or result in construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?***

Refer to the response to Threshold "e" for an analysis of the Project's potential effects to regional wastewater treatment facilities.

The Project would construct an on-site network of water and sewer pipes that would connect to existing water and sewer lines beneath Brodiaea Avenue. The installation of water and sewer line connections as proposed by the Project would result in physical environmental impacts; however, these impacts are considered to be part of the Project's construction phase and are evaluated throughout this EIR accordingly. In instances where significant impacts have been identified for the Project's construction phase, mitigation measures are recommended in each applicable subsection of this EIR to reduce impacts to less-than-significant levels. The construction of water and sewer lines necessary to serve the proposed Project would not result in any significant physical effects on the environment that are not already identified and disclosed as part of this EIR. Accordingly, additional mitigation measures beyond those identified throughout this EIR would not be required.

***Threshold c: Would the Project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?***

The Project would involve the construction of stormwater drainage facilities on-site, including a bioretention basin, underground infiltration basins, storm drain pipes, and catch basins. The construction of stormwater drainage facilities proposed by the Project would result in physical impacts to the surface and subsurface of the Project site, as well as physical impacts within the rights-of-way of Brodiaea Avenue and the Heacock



Channel. These impacts are considered to be part of the Project's construction phase and are evaluated throughout the EIR accordingly. In instances where potentially significant impacts may occur during the Project's construction phase, such potential impacts have been identified under the appropriate issue area in this EIR. The construction of storm drain infrastructure as necessary to serve the proposed Project would not result in any potentially-significant physical effects on the environment that are not already identified and disclosed as part of this EIR; additional mitigation measures would not required.

***Threshold d: Would the Project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?***

As discussed in EMWD's 2015 UWMP, adequate water supplies are projected to be available to meet the EMWD's estimated water demand until at least 2040 under normal, historic single-dry and historic multiple-dry year conditions (EMWD, 2016b). EMWD's future year water demand forecasts are based on the population projections of the Southern California Association of Governments (SCAG), which rely on the adopted land use designations contained within the general plans that cover the geographic areas within EMWD's service area. Because the Project would be consistent with the City of Moreno Valley General Plan land use designation for the site, the water demand associated with the Project was considered in the demand anticipated by the 2015 UWMP and analyzed therein. As stated above, the EMWD expects to have adequate water supplies to meet all its demands until at least 2040; therefore, the EMWD has sufficient water supplies available to serve the Project from existing entitlements/resources and no new or expanded entitlements are needed. Accordingly, impacts would be less than significant and mitigation is not required.

***Threshold e: 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?***

Wastewater generated by the Project would be treated by the EMWD, which operates the Moreno Valley Regional Water Reclamation Facility. Based upon EMWD's wastewater generation rate of 1,700 gallons per day (gpd) per acre for industrial light land uses, the proposed Project would generate approximately 20,400 gallons of wastewater per day (1,700 gpd per acre × 12.0 Project acres = 20,400 gpd). Under existing conditions, the Moreno Valley Regional Water Reclamation Facility has an excess treatment capacity of approximately 5.4 million gallons per day. Implementation of the Project would utilize approximately 0.4% of the Moreno Valley Regional Water Reclamation Facility daily excess treatment capacity. (EMWD, 2016a). Accordingly, the Moreno Valley Regional Water Reclamation Facility has sufficient capacity to treat wastewater generated by the Project in addition to existing commitments. The Project would not create the need for any new or expanded wastewater facility (such as conveyance lines, treatment facilities, or lift stations). Because there is adequate capacity at existing treatment facilities to serve the Project's projected sewer demand, impacts would be less than significant and mitigation is not required.

***Threshold f: Would the Project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?***

Implementation of the proposed Project would generate an incremental increase in solid waste volumes requiring off-site disposal during short-term construction and long-term operational activities. The Project would be required to comply with City of Moreno Valley Ordinance No. 706, which requires a minimum of 50 percent of all construction waste and debris to be recycled (City of Moreno Valley, 2017). Additionally, the Project would be required to comply with mandatory waste reduction requirements as described below in



Threshold “g.” Solid waste generated by the Project would be disposed at the El Sobrante Landfill, the Badlands Sanitary Landfill, and/or the Lamb Canyon Sanitary Landfill.

**A. Construction Impact Analysis**

Solid waste requiring disposal would be generated by the construction process, primarily consisting of discarded materials and packaging. Based on the size of the Project (i.e., 261,807 s.f. building) and the United States Environmental Protection Agency’s (U.S. EPA) construction waste generation factor of 4.34 pounds per s.f. for non-residential uses, approximately 568.1 tons of waste is expected to be generated during the Project’s construction phase ( $[261,807 \text{ s.f.} \times 4.34 \text{ pounds per s.f.}] \div 2,000 \text{ pounds per ton} = 568.1 \text{ tons}$ ) (EPA, 2009, p. 10). California Assembly Bill 939 (AB 939) requires that a minimum of 50% of all solid waste be diverted from landfills (by recycling, reusing, and other waste reduction strategies); therefore, the Project is estimated to generate approximately 284.1 tons during its construction phase ( $568.1 \text{ tons per day} \times 50\% = 284.1 \text{ tons per day}$ ). The Project’s construction phase is estimated to last for 428 days; therefore, the Project is estimated to generate approximately 121,595 tons of solid waste per day requiring landfill during construction.

Non-recyclable construction waste generated by the Project would be disposed at the El Sobrante Landfill, the Badlands Sanitary Landfill, and/or the Lamb Canyon Sanitary Landfill. As described in Subsection 4.12.1D, these landfills receive well below their maximum permitted daily disposal volume; thus, the relatively minimal construction waste generated by the Project is not anticipated to cause the landfill to exceed its maximum permitted daily disposal volume. Furthermore, the El Sobrante Landfill, the Badlands Sanitary Landfill, and the Lamb Canyon Sanitary Landfill are not expected to reach its total maximum permitted disposal capacities during the Project’s construction period. The El Sobrante Landfill, the Badlands Sanitary Landfill, and the Lamb Canyon Sanitary Landfill have sufficient daily capacity to accept solid waste generated by the Project’s construction phase; therefore, impacts to landfill capacity associated with the Project’s near-term construction activities would be less than significant.

**B. Operational Impact Analysis**

Based on a daily waste generation factor of 1.42 pounds of waste per 100 square feet of industrial building area obtained from CalRecycle, long-term, on-going operation of the Project would generate approximately 1.86 tons of solid waste per day ( $[[1.42 \text{ pounds} \div 100 \text{ s.f.}] \times 261,807 \text{ s.f.}] \div 2,000 \text{ pounds} = 1.86 \text{ tons per day}$ ). Pursuant to AB 939, at least 50 percent of the Project’s solid waste is required to be diverted from landfills; therefore, the Project would generate a maximum of 0.93 tons of solid waste per day requiring landfilling ( $1.86 \text{ tons per day} \times 50\% = 0.93 \text{ tons per day}$ ). (CA Legislative Information, 2015)

Non-recyclable solid waste generated during long-term operation of the Project would be disposed at the El Sobrante Landfill, the Badlands Sanitary Landfill, and/or the Lamb Canyon Sanitary Landfill. As described above, these landfills receive well below their maximum permitted daily disposal volume; thus, waste generated by the Project’s operation is not anticipated to cause the landfill to exceed its maximum permitted daily disposal volume (CalRecycle, Multi-year County Destination, n.d.). Because the Project would generate a relatively small amount of solid waste per day as compared to the permitted daily capacities at receiving landfills, impacts to regional landfill facilities during the Project’s long-term operational activities would be less than significant.



***Threshold g: Would the Project comply with federal, state, and local statutes and regulations related to solid waste?***

The California Integrated Waste Management Act (AB 939), signed into law in 1989, established an integrated waste management system that focused on source reduction, recycling, composting, and land disposal of waste. In addition, the bill established a 50 percent waste reduction requirement for cities and counties by the year 2000, along with a process to ensure environmentally safe disposal of waste that could not be diverted. Per the requirements of the Integrated Waste Management Act, the Riverside County Board of Supervisors adopted the County of Riverside Countywide Integrated Waste Management Plan (CIWMP), which outlines the goals, policies, and programs the County and its cities implement to create an integrated and cost-effective waste management system that complies with the provisions of AB 939 and its diversion mandates. (CA Legislative Information, 2015)

In order to assist the City of Moreno Valley and the County of Riverside in achieving the mandated goals of the Integrated Waste Management Act, the Project's building user(s) would be required to work with future refuse haulers to develop and implement feasible waste reduction programs, including source reduction, recycling, and composting. Additionally, in accordance with the California Solid Waste Reuse and Recycling Act of 1991 (Cal Pub Res. Code § 42911), the Project is required to provide adequate areas for collecting and loading recyclable materials where solid waste is collected. The collection areas are required to be shown on construction drawings and be in place before occupancy permits are issued. (CA Legislative Information, 2005) Additionally, in compliance with AB 341 (Mandatory Commercial Recycling Program), the future occupant(s) of the proposed Project would be required to arrange for recycling services, if the occupant generates four (4) or more cubic yards of solid waste per week (CA Legislative Information, 2011). The implementation of these mandatory requirements would reduce the amount of solid waste generated by the Project and diverted to landfills, which in turn will aid in the extension of the life of affected disposal sites. The Project would be required to comply with all applicable solid waste statutes and regulations; as such, impacts related to solid waste statutes and regulations would be less than significant.

#### **4.12.5 CUMULATIVE IMPACT ANALYSIS**

The Project would require water and wastewater infrastructure, as well as solid waste disposal for building operation. Development of public utility infrastructure is part of an extensive planning process involving utility providers and jurisdictions with discretionary review authority. The coordination process associated with the preparation of infrastructure plans is intended to ensure that adequate public utility services and resources are available to serve both individual development projects and cumulative growth in the region. Each individual development project is subject to review for utility capacity to avoid unanticipated interruptions in service or inadequate supplies. Coordination with the utility providers would allow for the provision of utility services to the Project and other developments. The Project and other planned projects are subject to connection and service fees to offset increased demand and assist in facility expansion and service improvements (at the time of need). Because of the utility planning and coordination activities described above, cumulatively considerable impacts to utilities and service systems would not occur.

#### **4.12.6 SIGNIFICANCE OF IMPACTS BEFORE MITIGATION**

Threshold a: Less-than-Significant Impact. The Project would not exceed wastewater treatment requirements of the Santa Ana RWQCB. EMWD would provide wastewater treatment and collection services to the Project, and EMWD is required to operate all of its treatment facilities in accordance with applicable waste treatment and discharge standards and requirements set forth by the RWQCB.



Threshold b: Less-than-Significant Impact. The environmental effects associated with installing the Project's water and wastewater infrastructure is evaluated throughout this EIR and no impacts specific to the utilities and service systems issue area have been identified.

Threshold c: Less-than-Significant Impact. Stormwater would be collected on the Project site by an on-site drainage system. The environmental effects associated with installing the Project's water and wastewater infrastructure is evaluated throughout this EIR and no impacts specific to the utilities and service systems issue area have been identified.

Threshold d: Less-than-Significant Impact. The EMWD is expected to have sufficient water supplies to service the Project. The Project would not exceed EMWD's available supply of water, even during drought conditions through, at least, the year 2040.

Threshold e: Less-than-Significant Impact. EMWD would provide wastewater treatment services to the Project site via the Moreno Valley Regional Water Reclamation Facility. This facility has adequate capacity to service the Project and no new or expanded facilities would be needed.

Threshold f: Less-than-Significant Impact. There is adequate capacity available at the El Sobrante Landfill, Badlands Sanitary Landfill, and Lamb Canyon Sanitary Landfill to accept the Project's solid wastes during both construction and long-term operation. Landfill capacity would not be exceeded as a result of the proposed Project.

Threshold g: Less-than-Significant Impact. The Project would comply with all applicable federal, State, and local statutes and regulations related to solid waste disposal, reduction, and recycling.

#### **4.12.7 MITIGATION**

Impacts would be less than significant; therefore, mitigation is not required.



## 5.0 OTHER CEQA CONSIDERATIONS

### 5.1 SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

The CEQA Guidelines require that an EIR disclose the significant environmental effects of a project which cannot be avoided if the proposed project is implemented (CEQA Guidelines § 15126(b)). As described in detail in Section 4.0, *Environmental Analysis*, of this EIR, the proposed Project is anticipated to result in an impact to the environment that cannot be reduced to below a level of significance after implementation of relevant standard conditions of approval, compliance with applicable regulations, and application of feasible mitigation measures. The significant impact that cannot be mitigated to a level below significant consists of the following:

- Air Quality: Significant and Unavoidable Direct and Cumulatively-Considerable Impact. The Project would exceed the SCAQMD's daily threshold for NO<sub>x</sub> emissions during operation. Emissions of NO<sub>x</sub> also would contribute to an existing air quality violation in the SCAB (i.e., ozone – NO<sub>x</sub> is a precursor for ozone). As such, Project-related emissions would violate SCAQMD air quality standards and contribute to the non-attainment of a criteria pollutant (i.e., NO<sub>x</sub> and ozone). Potential effects to human health from NO<sub>x</sub> exposure are decreases in lung function, such as asthma and pulmonary diseases. Mitigation measures would reduce the Project's operational NO<sub>x</sub> emissions by reducing demand for energy resources to operate the proposed building. However, mobile source (tailpipe) emissions account for approximately 92 percent, by weight, of the Project's daily operational emissions. Mobile source emissions are regulated by standards imposed by federal and State agencies, not local governments. The types of vehicle engines and the types of fuel used by trucking companies and vehicle operators that may access the Project site are well beyond the direct control of the City of Moreno Valley. CEQA Guidelines § 15091 provides that mitigation measures must be within the responsibility and jurisdiction of the Lead Agency in order to be implemented. No other mitigation measures are available that are feasible for the Project Applicant to implement and the City of Moreno Valley to enforce that have a proportional nexus to the Project's level of impact.

### 5.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE CAUSED BY THE PROPOSED PROJECT SHOULD IT BE IMPLEMENTED

The CEQA Guidelines require EIRs to address any significant, irreversible environmental changes that would be involved in the proposed action should it be implemented (CEQA Guidelines § 15126.2(c)). An environmental change would fall into this category if: a) the project would involve a large commitment of non-renewable resources; b) the primary and secondary impacts of the project would generally commit future generations to similar uses; c) the project involves uses in which irreversible damage could result from any potential environmental accidents; or d) the proposed consumption of resources are not justified (e.g., the project results in the wasteful use of energy).

Determining whether the proposed Project may result in significant irreversible environmental changes requires a determination of whether key non-renewable resources would be degraded or destroyed in such a way that there would be little possibility of restoring them. Natural resources in the form of construction materials and energy resources would be used during construction of the proposed Project, but development of the Project site as proposed would have no measurable adverse effect on the availability of such resources, including resources that may be non-renewable (e.g., fossil fuels). Construction and operation of the proposed



Project would not involve the use of large quantities or sources of non-renewable energy. Additionally, the Project is required by law to comply with the California Building Standards Code (CalGreen), compliance with which reduces a building operation's energy volume that is produced by fossil fuels. A more detailed discussion of energy consumption is provided below in Subsection 5.4, *Energy Conservation*.

EIR Subsection 4.7, *Hazards & Hazardous Materials*, provides an analysis of the proposed Project's potential to transport or handle hazardous materials which, if released into the environment, could result in irreversible damage to the environment. As concluded in the analysis, compliance with federal, State, and local regulations related to hazardous materials would be required of all contractors working on the property during the Project's construction and of all users that occupy the Project's building. As such, construction and long-term operation of the proposed Project would not have the potential to cause significant irreversible damage to the environment, including damage that may result from hazardous materials upset or accident conditions.

As discussed in Subsection 5.4 below, the proposed Project would not result in the wasteful consumption of energy. Accordingly, the proposed Project would not result in a significant irreversible change to the environment related to energy use.

### **5.3 GROWTH-INDUCING IMPACTS OF THE PROPOSED PROJECT**

CEQA requires a discussion of the ways in which the proposed Project could be growth inducing. The CEQA Guidelines identify a project as growth inducing if it would foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment (CEQA Guidelines § 15126.2(d)). New employees and new residential populations represent direct forms of growth. These direct forms of growth have a secondary effect of expanding the size of local markets and inducing additional economic activity in the area.

A project could indirectly induce growth at the local level by increasing the demand for additional goods and services associated with an increase in population or employment and thus reducing or removing the barriers to growth. This typically occurs in suburban or rural environs where population growth results in increased demand for service and commodity markets responding to the new population of residents or employees.

According to regional population projections included in SCAG's 2016 RTP/SCS, the City of Moreno Valley's population is projected to increase 0.94% annually, between 2012 and 2040. Over this same time period, the number of households in the City is expected to increase 1.23% annually and employment is expected to increase 3.54% annually. (Urban Crossroads, 2018e, p. 45) Economic growth would likely take place as a result of the proposed Project's operation as a high-cube warehouse building. The Project's employees (short-term construction and long-term operational) would purchase goods and services in the region, but any secondary increase in employment associated with meeting these goods and services needs is expected to be marginal, accommodated by existing goods and service providers, and highly unlikely to result in any new physical impacts to the environment based on the amount of available commercial and retail services available in areas near the Project site. In addition, the Project would create jobs which would likely serve the housing units either already built or planned for development within the City of Moreno Valley and nearby areas. Accordingly, because it is anticipated that the Project's future employees would already be living in the area, the Project's on-site employment generation would not induce substantial growth in the area.

Under CEQA, growth inducement is not considered necessarily detrimental, beneficial, or of little significance to the environment. Typically, growth-inducing potential of a project would be considered significant if it fosters growth or a concentration of population in excess of what is assumed in pertinent master plans, land





use plans, or in projections made by regional planning agencies such as SCAG. Significant growth impacts also could occur if a project provides infrastructure or service capacity to accommodate growth beyond the levels currently permitted by local or regional plans and policies. In general, growth induced by a project is considered a significant impact if it directly or indirectly affects the ability of agencies to provide needed public services, or if it can be demonstrated that the potential growth significantly affects the environment in some other way.

The Project site and its immediate areas to the north, west, and south are an undeveloped island in an already developed (built-out) portion of the City of Moreno Valley. Property located north of Alessandro Boulevard is occupied by the Moreno Valley Commerce Center, which offers neighborhood shopping, food service, and personal and automotive service businesses, and property located in the northeast corner of Alessandro Boulevard and Heacock Street include commercial land uses. Property located southeast of the Project site (south of Brodiaea Avenue) includes large warehouse buildings. Property located immediately west of the Project site (west of Rebecca Street) is by two (2) large existing warehouse buildings and one large construction building that is under construction. Property east of the Project site (east of Heacock Street) is developed with single-family residential homes. Development of the Project site with one high-cube warehouse building may place short-term development pressure on the undeveloped parcels that abut the Project site; however, because the area is mostly built-out under existing conditions, the amount of additional growth that could occur in the Project area is relatively limited. Furthermore, the City of Moreno Valley General Plan designates the undeveloped properties abutting the Project site for development with business park and light industrial land uses, so any future development on these parcels is already anticipated by the City of Moreno Valley and can be accommodated by the existing improvements and utility infrastructure that services the Project area.

Based on the foregoing, the Project is not expected to directly or indirectly induce growth in the local area.

## **5.4 ENERGY CONSERVATION**

This Subsection is based in part on a technical report prepared by Urban Crossroads, Inc. titled, “Brodiaea Commerce Center Energy Analysis, City of Moreno Valley, dated January 29, 2018, and appended to this EIR as *Technical Appendix K*.

Federal and State agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation (DOT), the United States Department of Energy (DOE), and the United States Environmental Protection Agency (EPA) are three federal agencies with substantial influence over energy policies and programs. On the State level, the Public Utilities Commission (PUC) and the California Energy Commissions (CEC) are two agencies with authority over different aspects of energy. Relevant federal and State energy-related laws and plans are summarized below. Project consistency with applicable federal and State regulations is presented below each regulation.

### **5.4.1 APPLICABLE FEDERAL AND STATE POLICIES AND REQUIREMENTS**

#### **A. Federal Regulations**

##### **1. *Intermodal Surface Transportation Efficiency***

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) promoted the development of intermodal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs) were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA



requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values guiding transportation decisions. (Urban Crossroads, 2018f, p. 14)

Project Consistency: Access to/from the Project site is provided primarily by the local and regional roadway systems. The Project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be realized pursuant to the ISTEA because SCAG is not planning for intermodal facilities on or through the Project site. (Urban Crossroads, 2018f, p. 14)

## **2. *Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21)***

The Transportation Equity Act for the 21st Century (TEA-21) was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation, discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of wise transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety. (Urban Crossroads, 2018f, p. 14)

Project Consistency: The Project site is located to proximity to major transportation corridors with access to the Interstate freeway system. The site selected for the Project facilitates access, acts to reduce vehicle miles traveled, takes advantage of existing infrastructure systems, and promotes land use compatibilities through co-location of similar uses. The Project supports the strong planning processes emphasized under TEA-21. The Project is therefore consistent with, and would not otherwise interfere with, nor obstruct implementation of TEA-21. (Urban Crossroads, 2018f, p. 14)

## **B. California Regulations**

### **1. *Integrated Energy Policy Report***

Senate Bill 1389 (Bowen, Chapter 568, Statutes of 2002) requires the California Energy Commission (CEC) to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing California's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety (Public Resources Code § 25301a). The CEC prepares these assessments every two years with updates in alternate years, as part of the Integrated Energy Policy Report. (Urban Crossroads, 2018f, p. 15)

The *Final 2016 Integrated Energy Policy Report Update (Final 2016 IEPR Update)* was released on February 28, 2017. The report examines how the state is transforming its electricity sector and identifies other improvements that are still needed to achieve the state's energy and climate policy goals. The report covers a broad range of topics, including the environmental performance of the electricity generation system, landscape-scale planning, the response to the gas leak at the Aliso Canyon natural gas storage facility, transportation fuel supply reliability issues, updates on the Southern California electricity reliability, methane leakage, climate adaptation activities for the energy sector, climate and sea level rise scenarios, and the California Energy Demand Forecast. (CEC, 2016)



Project Consistency: The *Final 2016 IEPR Update* is a State Policy report. An individual project, such as the proposed Project, has no ability to comply with or conflict with the report.

## **2. State of California Energy Plan**

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled and accommodate pedestrian and bicycle access. (Urban Crossroads, 2018f, p. 16)

Project Consistency: The Project would comply with the energy efficiency building codes, appliance standards, and utility energy efficiency programs applicable to the Project. The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Project facilitates access and may reduce vehicle miles traveled, take advantage of existing infrastructure systems, and promote land use compatibilities through the introduction of commercial uses on a commercially-designated site. The Project therefore supports urban design and planning processes identified under the State of California Energy Plan, is consistent with, and would not otherwise interfere with, nor obstruct implementation of the State of California Energy Plan. (Urban Crossroads, 2018f, p. 16)

## **3. California Code Title 24, Part 6, Energy Efficiency Standards**

California Code Title 24, Part 6 (also referred to as the California Energy Code), was promulgated by the CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption. To these ends, the California Energy Code provides energy efficiency standards for residential and nonresidential buildings. California's building efficiency standards are updated on an approximately three-year cycle. The 2016 Standards for building construction, which went into effect on January 1, 2017 improved upon the former 2013 Standards for residential and nonresidential buildings. (CEC, 2015)

Project Consistency: The proposed Project is required by State law to be designed, constructed, and operated to meet or exceed Title 24 Energy Efficiency Standards. On this basis, the proposed Project is determined to be consistent with, and would not interfere with, nor otherwise obstruct implementation of Title 24 Energy Efficiency Standards. (Urban Crossroads, 2018f, p. 17)

## **4. Assembly Bill 1493, Pavley**

On September 24, 2009, the California Environmental Protection Agency (CalEPA) Air Resources Board (ARB) adopted amendments to the "Pavley" regulations that reduce GHG emissions in new passenger vehicles from 2009 through 2016. These amendments are part of California's commitment toward a nation-wide program to reduce new passenger vehicle GHGs from 2012 through 2016. ARB's September amendments will cement California's enforcement of the Pavley rule starting in 2009 while providing vehicle manufacturers with new compliance flexibility. The amendments will also prepare California to harmonize its rules with the federal rules for passenger vehicles. (CARB, 2017a)

Project Consistency: AB 1493 requires registry in consultation with the State ARB, to adopt procedures and protocols for the reporting and certification of reductions in greenhouse gas emissions from mobile sources for



use by the State ARB in granting emission reduction standards. (CARB, 2017a). An individual project, such as the proposed Project does not have the ability to comply with or conflict with AB 1493.

#### **5. California Renewable Portfolio Standards (SB 1078)**

California Renewable Portfolio Standards (SB 1078) requires electric corporations to increase the amount of energy obtained from eligible renewable energy resources to 20 percent by 2010 and 33 percent by 2020.

Project Consistency: Energy directly or indirectly supplied to the proposed Project by electric corporations is required by law to comply with SB 1078.

#### **5.4.2 ENERGY CONSUMPTION ANALYSIS**

In compliance with CEQA Guidelines Appendix F, this Subsection provides an analysis of the proposed Project's anticipated energy use to determine if the Project would result in the wasteful, inefficient or unnecessary consumption of energy, or result in a substantial increase in demand or transmission service, resulting in the need for new or expanded sources of energy supply or new or expanded energy delivery systems or infrastructure.

#### **A. Methodology**

Information from the CalEEMod (v. 2016.3.2) outputs for the Project's Air Quality Impact Analysis (*Technical Appendix B1*) was utilized in the Project's Energy Analysis (*Technical Appendix K*) and is summarized below. The Energy Analysis presents the calculated energy demands for the Project, including energy required for construction, transportation, and building operation. These outputs are referenced in Appendix 3.1 of the Project's Energy Analysis (*Technical Appendix K*). (Urban Crossroads, 2018f, p. 18)

#### **B. Project Construction Energy Use**

##### **1. Construction Equipment Electricity Usage**

Southern California Edison's (SCE) general service rate schedule (GS-1) for an industrial land use is \$.08 per kilowatt hours (kWh) of electricity, while the typical electricity cost per 1,000 s.f of building construction per month is estimated to be \$2.28 per month. Accordingly, construction of each 1,000 s.f. of building area would use 28.5 kWh of electricity per month ( $\$2.28 \text{ per } 1,000 \text{ s.f. per month} \div \$0.08 \text{ per kWh} = 28.5 \text{ kWh per } 1,000 \text{ s.f. per month}$ ). Accordingly, over the Project's 13-month construction period, the Project would use approximately 104,698 kWh of electricity. (Urban Crossroads, 2018f, p. 18)

##### **2. Construction Equipment Fuel Use**

Fuel consumed by construction equipment would be the primary energy resource expended over the course of the Project's construction. The aggregate fuel consumption rate for construction equipment is estimated at 18.5 hp-hr-gal., obtained from California Air Resources Board (CARB) 2013 Emissions Factors Tables and cited fuel consumption rate factors presented in Table D-24 of the Moyer guidelines. For the purposes of this analysis, the calculations of fuel use are based on all Project construction equipment being diesel-powered. Project construction activities would consume an estimated 71,022 gallons of diesel fuel. Refer to Table 4-3 of *Technical Appendix K* for the construction equipment fuel consumption estimates. (Urban Crossroads, 2018f, p. 19)



### **3. Construction Worker Fuel Use**

Urban Crossroads, Inc. estimated that construction worker trips to and from the Project site would travel approximately 1,070,454 miles. According to the Emissions FAcTtor model (EMFAC), light duty automobiles ranging from model year 1974 to model year 2018 are estimated to have a fuel efficiency of 26.77 miles per gallon (MPG). Urban Crossroads, Inc. calculated that 28,236 gallons of gasoline would be consumed by construction workers commuting to and from the Project site. Refer to Table 4-4 of *Technical Appendix K*, for the construction worker fuel consumption estimates. (Urban Crossroads, 2018f, p. 21)

### **4. Construction Vendor/Hauling Fuel Use**

The Project's construction vendor trips were calculated to travel 192,234 miles to and from the Project site. Urban Crossroads, Inc., applied a reasonable assumption that 50% of all vendor trips would be from medium-heavy duty trucks (MHD) and 50% would be from heavy-heavy duty trucks (HHD) and that 100% of all hauling trips would be from HHD. According to EMFAC, the aggregated fuel economy of MHD trucks ranging from model year 1974 to model year 2018 are estimated to have a fuel efficiency of 8.17 mpg. And the aggregated fuel economy for HHD trucks is estimated at 5.77 mpg. Based on these numbers, construction hauling and vendor trips to and from the Project site are calculated to consume approximately 39,420 gallons of fuel. Refer to Table 4-5 and 4-6 of *Technical Appendix K* for the construction vendor fuel consumption estimates for MHD and HHD trucks. (Urban Crossroads, 2018f, p. 22)

### **5. Conclusion**

The Project's construction phase would consume electrical energy and fuel. Project construction would represent a "single-event" electric energy and fuel demand and, for this reason, would not require any ongoing, permanent commitment of electricity or fuel resources. In summary, the proposed Project's construction process is calculated to consume approximately 104,698 kWh of electricity, 28,236 gallons of gasoline, and 110,442 gallons of diesel fuel. (Urban Crossroads, 2018f, p. 24)

Electricity would be provided to the Project site by Southern California Edison and gasoline and diesel fuel would be supplied by regional commercial vendors. The Project would not cause or result in the need for additional energy facilities or energy delivery systems. Construction equipment use of fuel would not be atypical for the type of construction proposed because there are no aspects of the Project's construction process that are unusual or energy-intensive, and Project construction equipment would conform to the applicable CARB emissions standards, acting to promote equipment fuel efficiencies. (Urban Crossroads, 2018f, pp. 24-25) Furthermore, the Project would be required to comply with applicable state and local regulations and mitigation measures from this EIR that would preclude unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment – including MM 4.2-4, which would restrict idling on the Project site for more than three (3) consecutive minutes and is more stringent than the State's five (5) minute limit on idling.

As supported by the information presented above and on the preceding pages, Project construction energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary. (Urban Crossroads, 2018f, pp. 24-25)



### **C. Project Operation Energy Use**

#### **1. Transportation Energy Demands**

Energy that would be consumed by Project-generated traffic is a function of total vehicle miles traveled and estimated fuel economies of vehicles accessing the Project site. Based on the annual vehicle miles traveled and the average vehicle fuel economies (mpg, by vehicle type) of Project traffic, the Project's annual fuel consumption is calculated to be 595,433 gallons. Refer to Tables 4-7 through 4-11 in *Technical Appendix K* for the annual fuel consumption for Project vehicles by vehicle classification. (Urban Crossroads, 2018f, p. 25)

#### **2. Facility Energy Demands**

Project building operations and Project site maintenance activities would result in the consumption of natural gas and electricity. As a Project design feature, all on-site outdoor cargo handling equipment (CHE) would be powered by non-diesel fueled engines (e.g., electric or natural gas) and all on-site indoor forklifts shall be powered by electricity, compressed natural gas, or propane. The Project's facility operational energy demands are calculated at 532,672 kBTU/year of natural gas and 707,625 kWh/year of electricity. Refer to Table 4-12 in *Technical Appendix K* for the Project's annual energy demand. (Urban Crossroads, 2018f, p. 27)

### **D. Energy Consumption Summary**

The Project proposes a conventional warehouse use that reflects and incorporates contemporary energy efficient/energy conserving designs and operational programs. The use proposed by the Project is not inherently energy intensive, and the Project energy demands in total are calculated to be comparable to, or less than, other warehouse projects of similar scale and configuration. The Project could be served by the existing energy transmission and supply network and would not cause or result in the need for additional energy producing or transmission facilities. In addition, the Project would be required to adhere to the current Title 24 energy efficiency and building standards in effect at the time of building construction. Based on the preceding, Project facility energy demands and energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary. (Urban Crossroads, 2018f, pp. 28-29)

## **5.5 EFFECTS FOUND NOT TO BE SIGNIFICANT AS PART OF THE INITIAL STUDY PROCESS**

CEQA Guidelines § 15128 requires that an EIR:

*"...contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR."*

An Initial Study was prepared for the proposed Project, which is included as *Technical Appendix A* to this EIR. Through the Initial Study process, the City of Moreno Valley determined that the proposed Project could potentially cause adverse effects, and an EIR is required. Five (5) environmental issue areas were determined by the City to have no potential to be significantly impacted by the Project, as concluded by the Project's Initial Study. Therefore, these issue areas are not required to be discussed in Section 4.0, *Environmental Analysis*, of this EIR. A brief summary of the five (5) environmental issue areas found not to be significant is presented below, with a more detailed analysis provided in the Project's Initial Study contained in *Technical Appendix A*.



**A. Agriculture and Forestry Resources**

According to mapping information available from the California Department of Conservation's (CDC) Important Farmland Time Series Map, the Project contains "Urban and Built-Up Land." Accordingly, the Project site does not contain any lands mapped by the State Department of Conservation as Farmland, Unique Farmland, or Farmland of Statewide Importance. As such, the Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

There are no properties zoned for agricultural land uses in the Project vicinity. Therefore, implementation of the Project has no potential to conflict with existing zoning for agricultural use.

No land within the City of Moreno Valley is under a Williamson Act Contract; therefore, implementation of the Project has no potential to affect land subject to a Williamson Act Contract.

The Project site is not zoned as forest land, timberland, or Timberland Production, nor is it surrounded by forest land, timberland, or Timberland Production land. Therefore, the Project has no potential to conflict with any areas currently zoned as forest, timberland, or Timberland Production and would not result in the rezoning of any such lands.

The Project site does not contain a forest and is not designated as forest land; thus, the proposed Project would not result in the loss of forest land or the conversion of forest land to non-forest use.

**B. Mineral Resources**

The Project site is not located within an area known to be underlain by regionally- or locally-important mineral resources or within an area that has the potential to be underlain by regionally- or locally-important mineral resources. Accordingly, implementation of the proposed Project would not result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State of California.

**C. Population and Housing**

The Project proposes to develop the subject property in accordance with the "Business Park/Light Industrial" land use designation applied to the site by the City of Moreno Valley General Plan Land Use Map. Accordingly, the proposed Project would not result in growth that was not already anticipated by the City of Moreno Valley General Plan and evaluated in the City of Moreno Valley General Plan FEIR. Furthermore, the Project site is served by existing public roadways, and utility infrastructure is already installed beneath public rights of way that abut the property. Accordingly, the Project and its required improvements would not induce direct or indirect substantial growth in the area. Impacts would be less than significant.

The Project site does not contain any residential structures under existing conditions; therefore, no people live on the subject property. Accordingly, implementation of the Project would not displace substantial numbers of existing housing nor substantial numbers of people, and would not necessitate the construction of replacement housing elsewhere. No impact would occur and no further analysis of this subject is required.

**D. Public Services**

**1. Fire Protection Services**

The Project would be adequately served by the Kennedy Park Fire Station (Station No. 65), located at 15111 Indian Avenue, and the Towngate Fire Station (Station No. 6), located at 22250 Eucalyptus Avenue. No new



or expanded unplanned facilities would be required. The Project is required to comply with the provisions of the City of Moreno Valley's Development Impact Fee (DIF) Ordinance (Ordinance No. 695), which requires a fee payment that the City applies to the funding of public facilities, including fire protection facilities. Mandatory compliance with the DIF Ordinance would be required prior to the issuance of a building permit. The Project also would feature a minimum of fire safety and fire suppression activities, including type of building construction, fire sprinklers, a fire hydrant system, and paved access.

Based on the foregoing, the proposed Project would receive adequate fire protection service and would not result in the need for new or physically altered fire protection facilities. Impacts to fire protection facilities would be less than significant.

## **2. *Police Protection Services***

The Project would introduce a new building structure and employees to the Project site, which would result in an incremental increase in demand for police protection services, but is not anticipated to require or result in the construction of new or physically altered police facilities. Furthermore, prior to the issuance of building permits, the Project Applicant would be required to comply with the provisions of Moreno Valley's Development Impact Fee (DIF) Ordinance (Ordinance No. 695), which requires a fee payment that the City applies to the funding of public facilities, including police protection facilities. Mandatory compliance with the DIF Ordinance would be required prior to the issuance of a building permit. Based on the foregoing, the proposed Project would receive adequate police protection service, and would not result in the need for new or physically altered fire protection facilities. Impacts to police protection facilities would therefore be less than significant.

## **3. *Schools***

Development of the Project site as proposed by the Project would not create a direct demand for public school services, as the subject property would contain non-residential uses that would not generate any school-aged children requiring public education. The addition of employment-generating uses on the Project site would assist the City in achieving its goal to provide a better jobs/housing balance within the City and the larger western Riverside County region. The proposed Project is not expected to draw a substantial number of new residents to the region and would therefore not indirectly generate school-aged students requiring public education. Because the Project would not directly generate students and is not expected to indirectly draw students to the area, the Project would not cause or contribute to a need to construct new or physically altered public school facilities. Although the Project would not create a demand for additional public school services, the Project Applicant would be required to contribute development impact fees to the Moreno Valley Unified School District in compliance with California Senate Bill 50 (Greene), which allows school districts to collect fees from new developments to offset the costs associated with increasing school capacity needs. Mandatory payment of school fees would be required prior to the issuance of building permits. Impacts to public schools would be less than significant and no further analysis of this subject is required.

## **4. *Parks***

The Project would not create a demand for public park facilities and would not result in the need to modify existing or construct new park facilities. Accordingly, implementation of the proposed Project would not adversely affect any park facility and impacts would be less than significant.





**5. *Other Public Services***

The Project is not expected to result in a demand for other public facilities/services, including libraries, community recreation centers, post offices, and animal shelters. As such, implementation of the proposed Project would not adversely affect other public facilities or require the construction of new or modified public facilities and no impact would occur.

***E. Recreation***

The Project proposes to develop the Project site with industrial land uses. The Project does not propose any type of residential use or other land use that may generate a population that would increase the use of existing neighborhood and regional parks or other recreational facilities. The Project also does not propose to construct any new on- or off-site recreation facilities. Accordingly, implementation of the proposed Project would neither result in the increased use or substantial physical deterioration of an existing neighborhood or regional park nor result in environmental effects related to the construction or expansion of recreational facilities.



## 6.0 ALTERNATIVES

CEQA Guidelines § 15126.6(a) indicates the scope of alternatives to a proposed project that must be evaluated:

*“An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. The lead agency is responsible for selection of a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.”*

As discussed in Section 4.0 of this EIR, the proposed Project would result in a significant adverse environmental effect that cannot be mitigated to below a level of significance after the implementation of Project design features, mandatory regulatory requirements, and feasible mitigation measures. The unavoidable significant impact is:

- Air Quality: Significant and Unavoidable Direct and Cumulatively-Considerable Impact. The Project would exceed the SCAQMD’s daily threshold for NO<sub>x</sub> emissions during operation. Emissions of NO<sub>x</sub> also would contribute to an existing air quality violation in the SCAB (i.e., ozone – NO<sub>x</sub> is a precursor for ozone). As such, Project-related emissions would violate SCAQMD air quality standards and contribute to the non-attainment of a criteria pollutant (i.e., NO<sub>x</sub> and ozone). Potential effects to human health from NO<sub>x</sub> exposure are decreases in lung function, such as asthma and pulmonary diseases. Mitigation measures would reduce the Project’s operational NO<sub>x</sub> emissions by reducing demand for energy resources to operate the proposed building. However, mobile source (tailpipe) emissions account for approximately 92 percent, by weight, of the Project’s daily operational emissions. Mobile source emissions are regulated by standards imposed by federal and State agencies, not local governments. The types of vehicle engines and the types of fuel used by trucking companies and vehicle operators that may access the Project site are well beyond the direct control of the City of Moreno Valley. CEQA Guidelines § 15091 provides that mitigation measures must be within the responsibility and jurisdiction of the Lead Agency in order to be implemented. No other mitigation measures are available that are feasible for the Project Applicant to implement and the City of Moreno Valley to enforce that have a proportional nexus to the Project’s level of impact.

### 6.1 ALTERNATIVES UNDER CONSIDERATION

CEQA Guidelines § 15126.6(e) requires that an alternative be included that describes what would reasonably be expected to occur on the property in the foreseeable future if the Project were not approved, based on current plans and consistent with available infrastructure and community services (i.e., “no project” alternative). For projects that include a revision to an existing land use plan, the “no project” alternative is considered to be the continuation of the existing land use plan into the future. For projects other than a land use plan (for example, a development project on an identifiable property), the “no project” alternative is considered to be a circumstance under which the project does not proceed (CEQA Guidelines § 15126(e)(3)(A-B)). Because the proposed Project includes both a change in zone and a reasonably foreseeable development project on an



identifiable property, this EIR includes two “no project” alternative analyses. The potential scenario where the Project does not proceed is considered to be the No Development Alternative. The potential scenario where the existing land use plan is continued into the future is considered to be the No Project Alternative.

The following scenarios are identified by the City of Moreno Valley as potential alternatives to implementation of the Project.

### **6.1.1 NO DEVELOPMENT ALTERNATIVE**

The No Development Alternative considers no development on the Project site beyond that which occurs under existing conditions. As such, the entire 12.0-acre site would remain vacant and undeveloped. Under this alternative, no improvements would be made to the Project site. This alternative was selected by the Lead Agency to compare the environmental effects of the proposed Project with an alternative that would leave the property in its existing condition.

### **6.1.2 NO PROJECT ALTERNATIVE – BUSINESS PARK OPTION**

The No Project Alternative – Business Park Option would develop the Project site in accordance with the site’s existing zoning designation, which permits business park land uses. Accordingly, this alternative evaluates the potential environmental impacts under a scenario where the Project site is developed with a 125,000 s.f. business park building that would support administrative and professional offices. This alternative was selected by the Lead Agency to compare the environmental effects of the proposed Project against what could reasonably occur on the Project site if the site were developed in accordance with the specifications provided in the City of Moreno Valley Zoning Ordinance.

### **6.1.3 NO PROJECT ALTERNATIVE – WAREHOUSE OPTION**

The No Project Alternative – Warehouse Option would develop the Project site in accordance with the site’s existing zoning designation, which permits smaller-scale warehouse land uses. Accordingly, this alternative evaluates the potential environmental impacts under a scenario where the Project site is developed with two (2) 50,000 s.f. warehouse buildings (for a combined total of 100,000 s.f. of warehouse uses on-site). This alternative was selected by the Lead Agency to compare the environmental effects of the proposed Project against what could reasonably occur on the Project site if the site were developed in accordance with the specifications provided in the City of Moreno Valley Zoning Ordinance.

## **6.2 ALTERNATIVES CONSIDERED AND REJECTED**

An EIR is required to identify any alternatives that were considered by the Lead Agency but were rejected as infeasible. Among the factors described by CEQA Guidelines § 15126.6 in determining whether to exclude alternatives from detailed consideration in the EIR are: a) failure to meet most of the basic project objectives, b) infeasibility, or c) inability to avoid significant environmental impacts. With respect to the feasibility of potential alternatives to the proposed Project, CEQA Guidelines § 15126.6(f)(1) notes:

*“Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries...and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site...”*



In determining an appropriate range of alternatives to be evaluated in this EIR, a number of possible alternatives were initially considered and, for a variety of reasons, rejected. Alternatives were rejected because either: 1) they could not accomplish the basic objectives of the Project, 2) they would not have resulted in a reduction of significant adverse environmental impacts, or 3) they were considered infeasible to construct or operate. A summary of the alternatives that were considered but rejected are described below.

### **6.2.1 ALTERNATIVE SITES**

CEQA does not require that an analysis of alternative sites always be included in an EIR. However, if the surrounding circumstances make it reasonable to consider an alternative site then this alternative should be considered and analyzed in the EIR. In making the decision to include or exclude analysis of an alternative site, the “key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR” (CEQA Guidelines § 15126.6(f)(2)).

Under existing conditions, the entire 12.0-acre Project site is vacant and undeveloped. The entire property is disturbed. The Project site does not contain any ornamental landscaping and the vegetation that exists on the property is characterized by non-native grasses and exotic forb species. No buildings, man-made structures/facilities, or other discernable man-made features are present on the Project site. Based on review of aerial photography and the Moreno Valley General Plan Land Use Map, there are no other available properties in the City of Moreno Valley of similar size and accessibility to the regional goods movement system that the Project Applicant has the reasonable possibility of controlling and that would have fewer developmental and environmental constraints than the Project site evaluated in this EIR.

Furthermore, development of the Project in an alternative location would have similar impacts as would occur with implementation of the Project at its proposed location because the Project’s sole significant impact (i.e., NO<sub>x</sub> emissions from vehicles traveling to/from the Project site) is not related to the presence/absence of sensitive resources on the Project site or its location near sensitive receptors; but, rather, is related to the the scope of expected operations on the site. In fact, if an alternative site were selected for the Project that was located farther from I-215 and/or SR-60 than the Project site under consideration, the severity of the Project’s impact would increase as miles traveled for vehicles accessing/exiting the site would increase.

For these reasons, an alternative sites analysis is not required for the Project.

### **6.3 ALTERNATIVE ANALYSIS**

The following discussion compares the impacts of each alternative considered by the Lead Agency with the impacts of the proposed Project (as disclosed in Section 4.0, *Environmental Analysis*, of this EIR). A conclusion is provided for each topic as to whether the alternative results in one of the following: (1) reduction of elimination of the proposed Project’s impact, (2) a greater impact than would occur under the proposed Project, (3) the same impact as the proposed Project, or (4) a new impact in addition to the proposed Project’s impacts. Table 6-1, *Alternative to the Proposed Project*, at the end of this section compares the impacts of the alternatives against those of the proposed Project and identifies the ability of the alternative to meet the basic objectives of the Project. As described in EIR Subsection 3.2, the proposed Project’s basic objectives are:

- A: To make efficient use of undeveloped property in Moreno Valley by maximizing its buildout potential for employment-generating uses.



- B: To attract new businesses and jobs to the City of Moreno Valley, thereby providing economic growth.
- C: To create employment-generating business in the City of Moreno Valley thereby reducing the need for members of the local workforce to commute outside the area for employment.
- D: To develop a vacant or underutilized property with a high-cube industrial warehouse building to help meet the substantial and unmet regional demands for this type of building space.
- E: To develop a warehouse building that can attract building occupants seeking modern warehouse building space in Moreno Valley constructed to contemporary design standards.
- F: To develop a property that has access to available infrastructure, including roads and utilities.
- G: To develop a vacant or underutilized property with a building that has architectural design and operational characteristics that complement other existing and planned buildings in the immediate vicinity and minimize conflicts with other nearby land uses.
- H: To develop a project that is economically competitive with similarly-sized projects in the local area and region.
- I: To develop light industrial uses in close proximity to designated truck routes and the State highway system to avoid or shorten truck-trip lengths on other roadways.

### **6.3.1 NO DEVELOPMENT ALTERNATIVE**

The No Development Alternative allows decision-makers to compare the environmental impacts of approving the proposed Project to the environmental impacts that would occur if the property were to be left in its existing conditions for the foreseeable future. Under existing conditions, the 12.0-acre Project site is vacant and undeveloped. The entire property is disturbed by on-going weed abatement (i.e., discing). The Project site does not contain any ornamental landscaping and the vegetation that exists on the property is characterized by non-native grasses and exotic forb species. No buildings, permanent man-made structures/facilities or other discernable man-made features are present on the Project site. Refer to the description of the Project site's existing physical conditions in Section 2.0 of this EIR.

#### ***A. Aesthetics***

The Project site does not contain any unique aesthetic resources, nor does it serve as a prominent scenic vista. The site is vacant and undeveloped and is bounded to the east by the Heacock Channel and Heacock Street and the south by Brodiaea Avenue. Under the No Development Alternative, the visual character and quality of the site would be maintained in its existing condition. No structures or landscaping would be introduced on the property. Buildout of the site with the proposed Project would create a cohesive development that would utilize the entire site. The Project would be fully landscaped. Selection of this alternative would result in a greater long-term aesthetic impact than the proposed Project because a large vacant lot would be less compatible with the character of surrounding land uses than would a logistics warehouse building that provides high-quality building materials and handsome architecture and landscaping.



***B. Air Quality***

The No Development Alternative would result in no short-term construction activities or long-term operational activities that have the potential to result in the emissions of air pollutants or odors. Under the No Development Alternative there would be no impacts due to emissions of criteria pollutants, exposure of sensitive receptors to substantial pollutant concentration, or the creation of objectionable odors. All of the Project's short- and long-term air quality effects would be avoided under this alternative.

***C. Biological Resources***

The No Development Alternative would leave the property in its existing condition; no grading would occur under this alternative and there would be no potential impacts to any wildlife or vegetation species that may be present on the Project site. This alternative would avoid all of the Project's impacts to biological resources.

***D. Cultural Resources & Tribal Cultural Resources***

The No Development Alternative would leave the property in its existing condition; no grading would occur under this alternative and there would be no potential impacts to subsurface archeological, paleontological, or tribal cultural resources that may exist beneath the ground surface. Therefore, selection of this alternative would avoid all site disturbances on the property and the Project's less-than-significant impacts to cultural resources and tribal cultural resources would not occur.

***E. Geology and Soils***

The No Development Alternative would result in no grading of the property; therefore, no impacts to geology or soils would occur. Because no structures would be constructed on-site, there would be no risks to humans associated with seismic ground shaking or geologic hazards. Selection of this alternative would avoid the Project's less-than-significant impacts to geology and soils.

***F. Greenhouse Gas Emissions***

Under the No Development Alternative, no development would occur on the Project site; therefore, there would be no sources of near-term or long-term GHG emissions. Selection of this alternative would avoid all of the Project's near- and long-term effects associated with GHG emissions.

***G. Hazards and Hazardous Materials***

Because no development would occur under the No Development Alternative, no impacts related to hazards or hazardous materials would occur. Routine discing would continue to occur on the Project site to remove dry/dead vegetation that has the potential to pose a fire hazard, as required by the Moreno Valley Fire Department. Selection of this alternative would avoid the Project's less-than-significant impacts related to hazards and hazardous materials.

***H. Hydrology and Water Quality***

No changes to existing hydrology and drainage conditions would occur under the No Development Alternative. No stormwater improvements would be constructed and rainfall would be discharged from the site as sheet flow, as occurs under existing conditions. However, under this alternative, much of the stormwater leaving the site would not be treated to minimize waterborne pollutants and would continue to contain sediment and other potential pollutants, as occurs under existing conditions. Selection of this alternative would reduce the Project's impacts to hydrology and water quality as compared to the proposed Project with the exception of



long-term sedimentation impacts, which would continue to occur and would be greater than impacts that would occur under the proposed Project.

***I. Land Use and Planning***

The No Development Alternative would result in no grading or development of the property; therefore, the Project site would remain vacant and undeveloped. Accordingly, selection of this alternative would result in no impacts to Land Use and Planning.

***J. Noise***

The No Development Alternative would not result in construction on-site and, therefore, would not generate any near-term noise associated with construction. Additionally, because the property would not be developed and no traffic trips would be generated, the No Development Alternative would not contribute to an incremental increase in area-wide noise levels. Selection of this alternative would avoid all of the Project's noise effects.

***K. Transportation and Traffic***

Under the No Development Alternative, no development would occur on the property and no traffic would be generated. Accordingly, the No Development Alternative would avoid the Project's less-than-significant impacts to study area roadways.

***L. Utilities and Service Systems***

No domestic water, sewer, or stormwater drainage facilities would be needed for the No Development Alternative, and there would be no demand for domestic water or wastewater treatment services. Also, this alternative would not demand solid waste collection and disposal services. Neither the proposed Project nor the No Development Alternative would result in significant or cumulatively-considerable impacts to utilities and service systems. Nonetheless, selection of this alternative would avoid all of the Project's demand placed on utilities and service systems.

***M. Conclusion***

Implementation of the No Development Alternative would result in no physical environmental impacts beyond those that have historically occurred on the property. All significant effects of the proposed Project would be avoided by the selection of this alternative. Because this alternative would avoid all of the Project's environmental impacts, it warrants consideration as the "environmentally superior alternative." However, pursuant to CEQA Guidelines § 15126.6(e)(2), if a no project alternative is identified as the "environmentally superior alternative" then the EIR shall also identify an environmentally superior alternative among the other alternatives. The No Project Alternative – Warehouse Option, as described in Subsection 6.3.3, is identified as the environmentally superior alternative. The No Development Alternative would fail to meet all of the Project's objectives.

**6.3.2 NO PROJECT ALTERNATIVE – BUSINESS PARK OPTION**

The No Project Alternative – Business Park Option would develop the Project site in accordance with the site's existing zoning designation, which permits business park land uses. Under this alternative, the Project site would be developed with an approximately 125,000 s.f. two-story business park building that would support professional and administrative offices. The remaining portions of the Project site would contain parking lots, drive aisles, and landscaping. As with the proposed Project, this alternative would construct a segment of the



Juan Bautista De Anza Multi-Use Trail along the site's frontage with Heacock Street. The No Project Alternative – Business Park option would represent a 52.2 percent reduction in the Project's building area (a 136,807 s.f. reduction).

***A. Aesthetics***

Under the No Project Alternative – Business Park Option, the visual character and quality of the site and the amount of artificial light that would be introduced on the property would be very similar to the proposed Project. As previously described in EIR Subsection 4.1, the Project site is not visible from any State- or locally-designated scenic highway. Accordingly, neither the proposed Project nor this alternative would negatively impact a scenic highway. Also, neither this alternative nor the proposed Project would damage scenic on-site resources, because such resources are not present on the property. The aesthetic quality and character of the property after development of this alternative would be similar to that of the proposed Project – less building area would be constructed under this alternative; but, the building height and building materials would be similar. Neither the proposed Project nor this alternative would result in significant direct or cumulatively-considerable impact to aesthetics.

***B. Air Quality***

Under this alternative, the construction schedule would be reduced as compared to the proposed Project, due to the approximately 52.2 percent reduction in building area. As such, the total amount of air pollutant emissions generated during the construction phase would be reduced under this alternative as compared to the Project. However, the daily intensity of construction activities on the subject property would be similar under both this alternative and the proposed Project. Therefore, the total daily emissions during the construction phase would be similar as Project-related development. As with the proposed Project, this alternative also would require mitigation measures to reduce short-term emissions of VOCs to less than significant levels.

Although the No Project Alternative – Business Park Option would construct approximately 52.2 percent less building area than the Project, this alternative would generate approximately 1,555 vehicle trips per day (utilizing Institute of Transportation Engineers [ITE] trip generation rate for business park, 12.44 vehicle trips per day per 1,000 s.f. of building area). For comparison, the Project would generate approximately 441 vehicle trips – 1,114 fewer trips than the No Project Alternative – Business Park Option. Therefore, the No Project Alternative – Business Park Option would produce more operational air pollutant emissions than the Project. Long-term operational-related NO<sub>x</sub> emissions under the No Project Alternative – Business Park Option would exceed the SCAQMD numerical thresholds for daily emissions, resulting in significant and unavoidable impacts.

The Project would expose nearby sensitive receptors to DPM emissions concentrations that fall below the SCAQMD significance threshold of 10 in one million. Thus, the Project's impacts associated with the exposure of sensitive receptors to substantial pollutant concentrations would be less than significant. Although the No Project Alternative – Business Park Options would generate more total traffic than the Project, business park uses attract fewer diesel truck trips than high-cube warehouse uses; therefore, DPM emissions would be reduced under this alternative.

Like the Project, the No Project Alternative – Business Park Option would generate odors during short-term construction activities (e.g., diesel exhaust, architectural coatings, asphalt) and long-term operation (e.g., diesel exhaust). However, and similar to the proposed Project, these odors would occur intermittently, be of short-term duration, and would not be substantial. Long-term operation of this alternative would not create





objectionable odors affecting a substantial number of people and impacts would be less than significant with compliance with mandatory regulatory requirements.

***C. Biological Resources***

The No Project Alternative – Business Park Option would develop the entire Project site and would result in identical impacts to biological resources as the Project. The No Project Alternative – Business Park Option would require similar mitigation as the proposed Project and, after mitigation, both the No Project Alternative – Business Park Option and the proposed Project would result in less-than-significant impacts.

***D. Cultural Resources & Tribal Cultural Resources***

The No Project Alternative – Business Park Option would develop the entire Project site and would result in identical impacts to cultural and tribal cultural resources as the Project. The No Project Alternative – Business Park Option would require similar mitigation as the proposed Project and, after mitigation, both the No Project Alternative – Business Park Option and the proposed Project would result in less-than-significant impacts.

***E. Geology and Soils***

This alternative would disturb the same physical area as the proposed Project and would, therefore, have the same potential for soil erosion during the construction phase than the proposed Project. Soil erosion impacts would be less significant under both the Project and this alternative due to mandatory compliance with federal, state, and local water quality standards. The No Project Alternative – Business Park Option would be required to comply with the same mandatory regulatory requirements as the proposed Project to preclude substantial hazards associated with seismic ground shaking.

***F. Greenhouse Gas Emissions***

Because the No Project Alternative – Business Park Option would reduce the Project’s building area by approximately 52.2 percent, the No Project Alternative – Business Park Option is expected to require less energy to construct and operate than the Project and, therefore, result in a reduction of non-mobile source GHG emissions as compared to the proposed Project. Notwithstanding, the No Project Alternative – Business Park Option would generate approximately 1,114 more daily vehicle trips than the proposed Project and would result in a substantial increase in mobile source GHG emissions. Based on the magnitude of the daily vehicle trips associated with the No Project Alternative – Business Park Option, this alternative is expected to result in a cumulatively considerable GHG impact.

***G. Hazards and Hazardous Materials***

Implementation of both the No Project Alternative – Business Park Option and the Project would not result in a significant impact related to hazards or hazardous materials. Land uses that would occur on-site under the No Project Alternative – Business Park Option would have the same or similar potential to handle and store hazardous materials as would the proposed Project. With mandatory regulatory compliance, neither the No Project Alternative – Business Park Option nor the proposed Project would be expected to pose a significant hazard to the public or the environment related to the use, handling, storage, and/or transport of hazardous materials.

***H. Hydrology and Water Quality***

The No Project Alternative – Business Park Option would disturb a similar physical area as the proposed Project and neither the proposed Project nor the No Project Alternative – Business Park Option would result



in substantial alterations to the drainage pattern of the site or would result in substantial erosion effects. Accordingly, implementation of the proposed Project and the No Project Alternative – Business Park Option would both result in less-than-significant impacts to existing drainage patterns.

In the long-term, potential hydrology and water quality effects on the Project site would be identical under both the No Project Alternative – Business Park Option and the Project. The proposed Project along with this alternative would be required to implement a long-term WQMP to ensure that storm water runoff leaving the site does not contain substantial pollutant concentrations. Selection of this alternative would result in similar, less-than-significant, operational impacts as the proposed Project to hydrology and water quality.

### ***I. Land Use and Planning***

The No Project Alternative – Business Park Option would develop the Project site in accordance with the site’s existing General Plan and zoning designations. Accordingly, this alternative would not conflict with the site’s existing land use and zoning designations.

### ***J. Noise***

Noise associated with this alternative would occur during short-term construction activities and under long-term operation. The types of daily construction activities conducted on the site would be similar under both the No Project Alternative – Business Park Option and the Project, although the length of construction activities on the site would be reduced under this alternative as less building area would be constructed on-site. Therefore, it is anticipated that the duration of noise impacts during the building construction phase would decrease under this alternative as compared to the proposed Project. Under long-term operational conditions, noise impacts from operations on the Project site (i.e., stationary noise) would be reduced compared to the Project due to a reduction in diesel truck and cargo loading/unloading activities on the site. However, traffic noise would substantially increase under the No Project Alternative – Business Park Option because this alternative would generate 252 percent more traffic than the Project.

### ***K. Transportation and Traffic***

The No Project Alternative would generate approximately 1,555 vehicle trips on a daily basis with 175 AM peak hour trips and 158 PM peak hour trips (utilizing the ITE trip generation rate for business park land uses). In comparison, the proposed Project would generate approximately 441 vehicle trips on a daily basis with 29 AM peak hour trips and 31 PM peak hour trips. Selection of this alternative would increase the daily traffic trips and increase the potential for direct and cumulatively-considerable and unavoidable impacts to study area intersections during Opening Year (2022) or Horizon Year (2040) traffic conditions (refer to EIR Subsection 4.11). The severity of impacts to study area intersections and roadway segments would be increased under the No Project Alternative – Business Park Option, as compared to the Project, and may not be avoided. This alternative would be required to implement more mitigation than the proposed Project.

### ***L. Utilities and Service Systems***

The No Project Alternative – Business Park Option would have a comparable demand for water, sewer, and storm water drainage service/facilities as the proposed Project. In addition, this alternative would result in a comparable demand for solid waste collection and disposal services as the proposed Project. In conclusion, the Project would result in less-than-significant utilities and service system impacts. Compared to the proposed Project, this alternative would result in the same impact; thus, the Project’s impacts would be reduced or avoided.



***M. Conclusion***

The No Project Alternative – Business Park Option would not avoid or lessen the Project’s significant and unavoidable impact (i.e., long-term NO<sub>x</sub> emissions from mobile sources). The No Project Alternative – Business Park Option would reduce the Project’s less-than-significant impact to Land Use and Planning; but, also has the potential to result in a significant impact to Transportation and Traffic that would not occur under the Project. All other impacts would be similar or identical to the Project.

The No Project Alternative – Business Park Option would fail to meet the Project’s Objectives “A,” “D,” and “E,” and would meet Objective “H” less effectively than the Project. Although this alternative would develop the site with employment-generating land uses, it would generate a land use (i.e., business park) that is not demanded by the marketplace to the same degree as modern, high-cube warehouse space. The No Project Alternative – Business Park Option would meet all of the Project’s other objectives.

**6.3.3 NO PROJECT ALTERNATIVE – WAREHOUSE OPTION**

The No Project Alternative – Warehouse Option would develop the Project site in accordance with the site’s existing zoning designation, which permits smaller-scale warehouse land uses. Under this alternative, the Project site would be developed with two (2) 50,000 s.f. warehouse buildings. The remaining portions of the Project site would contain parking lots, drive aisles, and landscaping. As with the proposed Project, this alternative would construct a segment of the Juan Bautista De Anza Multi-Use Trail along the site’s frontage with Heacock Street. The No Project Alternative – Warehouse Option would represent a 61.8 percent reduction in the Project’s building area (a 161,807 s.f. reduction).

***A. Aesthetics***

As previously described in EIR Subsection 4.1, the Project site is not visible from any State- or locally-designated scenic highway. Accordingly, neither the proposed Project nor this alternative would negatively impact a scenic highway. Also, neither this alternative nor the proposed Project would damage scenic on-site resources, because such resources are not present on the property. Under the No Project Alternative – Warehouse Option, the aesthetic quality and character site improvements would be similar to the proposed Project, with the exception that two smaller buildings would be constructed instead of one larger building. Although less building square footage would be constructed under this alternative, the reduction in building intensity would occur interior to the subject property and the aesthetics of the site, as seen from off-site, would be similar to that of the proposed Project. Therefore, the No Project Alternative – Warehouse Option would result in similar aesthetic impacts as compared to the proposed Project.

***B. Air Quality***

Under this alternative, the construction schedule would be reduced as compared to the proposed Project, due to the approximately 61.8 percent reduction in building area. As such, the total amount of air pollutant emissions generated during the construction phase would be reduced under this alternative as compared to the Project. However, the daily intensity of construction activities on the subject property would be similar under both this alternative and the proposed Project. Therefore, the total daily emissions during the construction phase would be similar as Project-related development. As with the proposed Project, this alternative also would require mitigation measures to reduce short-term emissions of VOCs to less than significant levels.

Although the No Project Alternative – Warehouse Option would construct approximately 61.8 percent less building area than the Project, this alternative would only generate approximately 19 percent less traffic than the Project because smaller warehouses are less efficient, and more traffic-intensive than larger, high-cube



warehouse buildings (utilizing the Institute of Transportation Engineers [ITE] trip generation rate for warehousing, 3.56 trips per 1,000 s.f. of building area). Accordingly, the No Project Alternative – Warehouse Option would reduce the Project’s significant and unavoidable impact related to long-term, mobile source NO<sub>x</sub> emissions; however, the Project’s impact would not be avoided under this alternative.

The Project would expose nearby sensitive receptors to DPM emissions concentrations that fall below the SCAQMD significance threshold of 10 in one million. Thus, the Project’s impacts associated with the exposure of sensitive receptors to substantial pollutant concentrations would be less than significant. Due to a slight reduction in total truck traffic at the site, the No Project Alternative – Warehouse Option would slightly reduce the Project’s less-than-significant air quality impact related to DPM emissions.

Like the Project, the No Project Alternative – Warehouse Option would generate odors during short-term construction activities (e.g., diesel exhaust, architectural coatings, asphalt) and long-term operation (e.g., diesel exhaust). However, and similar to the proposed Project, these odors would occur intermittently, be of short-term duration, and would not be substantial. Long-term operation of this alternative would not create objectionable odors affecting a substantial number of people and impacts would be less than significant with compliance with mandatory regulatory requirements.

***C. Biological Resources***

The No Project Alternative – Warehouse Option would develop the entire Project site and would result in identical impacts to biological resources as the Project. The No Project Alternative – Warehouse Option would require similar mitigation as the proposed Project and, after mitigation, both the Project and this alternative would result in less-than-significant impacts.

***D. Cultural Resources & Tribal Cultural Resources***

The No Project Alternative – Warehouse Option would develop the entire Project site and would result in identical impacts to cultural and tribal cultural resources as the Project. The No Project Alternative – Warehouse Option would require similar mitigation as the proposed Project and, after mitigation, both the Project and this alternative would result in less-than-significant impacts.

***E. Geology and Soils***

This alternative would disturb the same physical area as the proposed Project and would, therefore, have the same potential for soil erosion during the construction phase than the proposed Project. Soil erosion impacts would be less significant under both the Project and this alternative due to mandatory compliance with federal, state, and local water quality standards. The No Project Alternative – Warehouse Option would be required to comply with the same mandatory regulatory requirements as the proposed Project to preclude substantial hazards associated with seismic ground shaking.

***F. Greenhouse Gas Emissions***

Because the No Project Alternative – Warehouse Option would reduce the Project’s building area by approximately 61.8 percent, the No Project Alternative – Business Park Option is expected to require less energy to construct and operate than the Project and, therefore, result in a reduction of non-mobile source GHG emissions as compared to the proposed Project. The No Project Alternative – Warehouse Option also would generate slightly less traffic than the Project (85 less daily traffic trips); therefore, this alternative would reduce the Project’s GHG emissions from mobile sources. Both the Project and the No Project Alternative – Warehouse Option would result in less-than-significant GHG impacts.



***G. Hazards and Hazardous Materials***

Both the No Project Alternative – Warehouse Option and the Project would result in less-than-significant impacts related to hazards or hazardous materials. Land uses that would occur on-site under the No Project Alternative – Warehouse Option would have the same or similar potential to handle and store hazardous materials as would the proposed Project. With mandatory regulatory compliance, neither the No Project Alternative – Warehouse Option nor the proposed Project would be expected to pose a significant hazard to the public or the environment related to the use, handling, storage, and/or transport of hazardous materials.

***H. Hydrology and Water Quality***

The No Project Alternative – Warehouse Option would disturb a similar physical area as the proposed Project and neither the proposed Project nor the No Project Alternative – Warehouse Option would result in substantial alterations to the drainage pattern of the site or would result in substantial erosion effects. Accordingly, implementation of the proposed Project and the No Project Alternative – Warehouse Option would both result in less-than-significant impacts to existing drainage patterns.

In the long-term, potential hydrology and water quality effects on the Project site would be identical under both the No Project Alternative – Warehouse Option and the Project. The proposed Project along with this alternative would be required to implement a long-term WQMP to ensure that storm water runoff leaving the site does not contain substantial pollutant concentrations. Selection of this alternative would result in similar, less-than-significant, operational impacts as the proposed Project to hydrology and water quality.

***I. Land Use and Planning***

The No Project Alternative – Warehouse Option would develop the Project site in accordance with the site’s existing General Plan and zoning designations. Accordingly, this alternative would not conflict with the site’s existing land use and zoning designations.

***J. Noise***

Noise associated with this alternative would occur during short-term construction activities and under long-term operation. The types of daily construction activities conducted on the site would be similar under both the No Project Alternative – Warehouse Option and the Project, although the length of construction activities on the site would be reduced under this alternative as less building area would be constructed on-site. Therefore, it is anticipated that the duration of noise impacts during the building construction phase would decrease under this alternative as compared to the proposed Project. Under long-term operational conditions, noise impacts from operations on the Project site (i.e., stationary noise) would be similar compared to the Project due to similar cargo loading/unloading activities on the site. However, traffic noise would be slightly reduced under the No Project Alternative – Warehouse Option because this alternative would generate approximately 19 percent less traffic than the Project.

***K. Transportation and Traffic***

The No Project Alternative – Warehouse Option would generate approximately 356 vehicle trips on a daily basis with 30 AM peak hour trips and 32 PM peak hour trips (utilizing the ITE trip generation rate for warehousing land uses). In comparison, the proposed Project would generate approximately 441 vehicle trips on a daily basis with 29 AM peak hour trips and 31 PM peak hour trips. Although this alternative would generate less total daily traffic than the Project, the No Project Alternative – Warehouse Option would generate virtually identical peak hour traffic volumes as the Project. Based on the City of Moreno Valley’s traffic



impact analysis guidelines, traffic impacts are determined based on peak hour traffic volumes. Therefore, the Project and the No Project Alternative – Warehouse Option would result in identical, less-than-significant traffic impacts.

***L. Utilities and Service Systems***

The No Project Alternative – Warehouse Option would have a comparable demand for water, sewer, and storm water drainage service/facilities as the proposed Project. In addition, this alternative would result in a comparable demand for solid waste collection and disposal services as the proposed Project. In conclusion, the Project would result in less-than-significant utilities and service system impacts. Compared to the proposed Project, this alternative would result in the same impact; thus, the Project’s impacts would be reduced or avoided.

***M. Conclusion***

The No Project Alternative – Warehouse Option would slightly lessen the Project’s significant and unavoidable impact (i.e., long-term NO<sub>x</sub> emissions from mobile sources), and also would slightly lessen the Project’s less-than-significant GHG, Land Use and Planning, and Noise impacts. All other impacts would be similar or identical to the Project. The No Project Alternative – Warehouse Option is identified as the environmentally superior alternative.

The No Project Alternative – Warehouse Option would fail to meet the Project’s Objectives “A” and “D” and would meet Objectives “B,” “C,” “E,” and “H” to a lesser degree than the Project. The No Project Alternative – Warehouse Option would meet the Project’s Objectives “F,” “G,” and “I.”



**Table 6-1 Alternatives to the Proposed Project – Comparison of Environmental Impacts**

ENVIRONMENTAL TOPIC	PROPOSED PROJECT SIGNIFICANCE OF IMPACTS AFTER MITIGATION	LEVEL OF IMPACT COMPARED TO THE PROPOSED PROJECT		
		NO DEVELOPMENT ALTERNATIVE	NO PROJECT ALTERNATIVE – BUSINESS PARK OPTION	NO PROJECT ALTERNATIVE – WAREHOUSE OPTION
<b>Aesthetics</b>	Less-than-Significant Impact	Increased	Similar	Similar
<b>Air Quality</b>	Significant and Unavoidable Direct and Cumulatively-Considerable Impact	No Impact	Increased	Reduced, Not Avoided
<b>Biological Resources</b>	Less-than-Significant Impact	No Impact	Similar	Similar
<b>Cultural Resources</b>	Less-than-Significant Impact	No Impact	Similar	Similar
<b>Geology and Soils</b>	Less-than-Significant Impact	No Impact	Similar	Similar
<b>Greenhouse Gas Emissions</b>	Less-than-Significant Impact	No Impact	Increased	Reduced
<b>Hazards and Hazardous Materials</b>	Less-than-Significant Impact	No Impact	Similar	Similar
<b>Hydrology and Water Quality</b>	Less-than-Significant Impact	Increased	Similar	Similar
<b>Land Use and Planning</b>	Less-than-Significant Impact	No Impact	Reduced	Reduced
<b>Noise</b>	Less-than-Significant Impact	No Impact	Increased	Reduced
<b>Transportation and Traffic</b>	Less-than-Significant Impact	No Impact	Increased	Similar
<b>Utilities Service and Systems</b>	Less-than-Significant Impact	No Impact	Similar	Similar
<b>ABILITY TO MEET THE BASIC OBJECTIVES OF THE PROJECT</b>				
<b>Objective A:</b> To make efficient use of undeveloped property in Moreno Valley by maximizing its buildout potential for employment-generating uses.		No	No	No
<b>Objective B:</b> To attract new businesses and jobs to the City of Moreno Valley, thereby providing economic growth.		No	Yes	Yes, but less effectively than Project
<b>Objective C:</b> To create employment-generating business in the City of Moreno Valley thereby reducing the need for members of the local workforce to commute outside the area for employment.		No	Yes	Yes, but less effectively than Project
<b>Objective D:</b> To develop a vacant or underutilized property with a high-cube industrial warehouse building to help meet the substantial and unmet regional demands for this type of building space.		No	No	No



**Table 6-1 Alternatives to the Proposed Project – Comparison of Environmental Impacts**

ENVIRONMENTAL TOPIC	PROPOSED PROJECT SIGNIFICANCE OF IMPACTS AFTER MITIGATION	LEVEL OF IMPACT COMPARED TO THE PROPOSED PROJECT		
		NO DEVELOPMENT ALTERNATIVE	NO PROJECT ALTERNATIVE – BUSINESS PARK OPTION	NO PROJECT ALTERNATIVE – WAREHOUSE OPTION
<b>Objective E:</b> To develop a warehouse building that can attract building occupants seeking modern warehouse building space in Moreno Valley constructed to contemporary design standards.		No	Yes	Yes, but less effectively than Project
<b>Objective F:</b> To develop a property that has access to available infrastructure, including roads and utilities.		No	Yes	Yes
<b>Objective G:</b> To develop a vacant or underutilized property with a building that has architectural design and operational characteristics that complement other existing and planned buildings in the immediate vicinity and minimize conflicts with other nearby land uses.		No	Yes	Yes
<b>Objective H:</b> To develop a project that is economically competitive with similarly-sized projects in the local area and region.		No	Yes, but less effectively than Project	Yes, but less effectively than Project
<b>Objective I:</b> To develop light industrial uses in close proximity to designated truck routes and the State highway system to avoid or shorten truck-trip lengths on other roadways.		No	Yes	Yes





## **7.0 REFERENCES**

### **7.1 PERSONS INVOLVED IN THE PREPARATION OF THIS EIR**

#### **7.1.1 CITY OF MORENO VALLEY COMMUNITY DEVELOPMENT DEPARTMENT, PLANNING DIVISION**

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### **7.2 DOCUMENTS INCORPORATED BY REFERENCE IN THIS EIR**

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## **7.4 DOCUMENTS APPENDED TO THIS EIR**

The following reports, studies, and supporting documentation were used in preparing the Altitude Business Centre Project EIR and are bound separately as Technical Appendices. A copy of the Technical Appendices is available for review at the City of Moreno Valley Community Development Department, Planning Division at 14177 Frederick Street, Moreno Valley, CA 92553.

- Appendix A Initial Study for Brodiaea Commerce Center, Notice of Preparation, and Written Comments
- Appendix B1 Urban Crossroads, 2018a. *Brodiaea Commerce Center Air Quality Impact Analysis*. January 23, 2018.
- Appendix B2 Urban Crossroads, 2018b. *Brodiaea Commerce Center Mobile Source Health Risk Assessment*. January 25, 2018.
- Appendix C Alden Environmental (Alden). 2017a. *General Biological Resources Assessment for the Brodiaea Commerce Center Project*. November 6, 2017.
- Appendix D1 Brian F. Smith and Associates (BFSA). 2017a. *Phase I Cultural Resources Survey for the Brodiaea Commerce Center Project*. September 26, 2017.
- Appendix D2 Brian F. Smith and Associates (BFSA). 2017b. *Paleontological Resource and Monitoring Assessment, Brodiaea Commerce Center Project*. September 14, 2017.
- Appendix E1 Norcal Engineering. 2017a. *Geotechnical Investigation Proposed Warehouse Building Development Northwest Corner Heacock Street and Brodiaea Street Moreno Valley, California*. August 16, 2017.
- Appendix E2 Norcal Engineering. 2017b. *Soil Infiltration Study*. August 18, 2017.
- Appendix F Urban Crossroads, 2018c. *Brodiaea Commerce Center Greenhouse Gas Analysis*. January 19, 2018.
- Appendix G SCS Engineers. *Phase I Environmental Site Assessment 16.37-Acres of Undeveloped Land Southwest Corner of Alessandro Boulevard and Heacock Street Moreno Valley, California 92553*. August 31, 2017.



- Appendix H1 Thienes Engineering (Thienes). 2017a. *Project Specific Preliminary Water Quality Management Plan (P-WQMP)*. November 16, 2017.
- Appendix H2 Thienes Engineering (Thienes). 2017b. *Preliminary Hydrology Calculations for Brodiaea Business Park Southwest Corner of Alessandro Blvd. and Heacock Street Moreno Valley, California*. December 14, 2017.
- Appendix I Urban Crossroads. 2018d. *Brodiaea Commerce Center Noise Impact Analysis*. January 22, 2018.
- Appendix J Urban Crossroads. 2018e. *Brodiaea Commerce Center Traffic Impact Analysis*. January 3, 2018.
- Appendix K Urban Crossroads. 2018f. *Brodiaea Commerce Center Energy Analysis*. January 25, 2018.