DRAFT ENVIROMENTAL IMPACT REPORT

November 2022

Prepared for:

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(DRAFT)

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Printed on 30% post-consumer recycled material.

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AAQS	ambient air quality standards
AB	Assembly Bill
ACC	Advanced Clean Cars
ADMRT	Air Dispersion Modeling and Risk Tool
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
AFY	acre-feet per year
amsl	above mean sea level
APN	Assessor's Parcel Numbers
BAP	Base Annual Production
BenMAP	Benefits Mapping and Analysis Program
BenMAP-CE	BenMAP–Community Edition
bgs	below ground surface
BMP	best management practice
BSA	biological survey area
BUG	backlight, uplight, and glare
CAAQS	California Ambient Air Quality Standards
CAISO	California Independent System Operator
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
CalEEMod	California Emissions Estimator Model
CALGreen Code	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CBC	California Building Code
CDFW	California Department of Fish and Wildlife
CDNPA	California Desert Native Plants Act
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFC	chlorofluorocarbon
CFC	California Fire Code
CFR	Code of Federal Regulations
CH_4	methane
CIBP	Commercial/Industrial Business Park
CIWMB	California Integrated Waste Management Board
CNEL	community noise equivalent level
CNRA	California Natural Resources Agency

Acronym/Abbreviation	Definition
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CUP	Conditional Use Permit
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DIF	development impact fee
DPM	diesel particulate matter
DPR	Department of Parks and Recreation
DWR	California Department of Water Resources
EIR	Environmental Impact Report
EISA	Energy Independence and Security Act
EMFAC	EMissions FACtor model
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
ESCP	erosion and sediment control plan
EV	electric vehicle
EVSE	electric vehicle supply equipment
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHSZ	fire hazard severity zone
FICON	Federal Interagency Committee on Noise
FIRM	Flood Insurance Rate Map
FPA	Free Production Allowance
FRA	Federal Responsibility Area
FRAP	Fire and Resource Assessment Program
FTA	Federal Transit Administration
GHG	greenhouse gas
GIS	geographic information system
GSA	Groundwater Sustainability Agency
GWP	global warming potential
HAP	hazardous air pollutant
HARP2	Hotspots Analysis and Reporting Program Version 2
HCFC	hydrochlorofluorocarbon
HFC	hydrofluorocarbon
HHDT	heavy heavy-duty trucks
HIA	health impact assessment
HMBP	hazardous materials business plan

Acronym/Abbreviation	Definition
HMMP	Habitat Mitigation and Monitoring Plan
hp	horsepower
HRA	health risk assessment
HVAC	heating, ventilation, and air conditioning
I	Interstate
IEPR	Integrated Energy Policy Report
IESNA	Illuminating Engineering Society of North America
IFC	International Fire Code
IPCC	Intergovernmental Panel on Climate Change
ips	inches per second
IS/NOP	Initial Study/Notice of Preparation
ITE	Institute of Transportation Engineers
kBTU	thousand British thermal units
kV	kilovolt
LACM VP	Los Angeles County Museum Vertebrate Paleontology
LCFS	Low Carbon Fuel Standard
L_{dn}	day–night average noise level
L_{eq}	equivalent continuous sound level
LEV	low-emission vehicle
LHDT	light heavy-duty trucks
LID	low-impact development
L_{max}	maximum sound level during the measurement interval
L_n	statistical sound level
LOS	level of service
LRA	Local Responsibility Area
LT	long-term
LZ	lighting zone
MBTA	Migratory Bird Treaty Act
MDAB	Mojave Desert Air Basin
MDAQMD	Mojave Desert Air Quality Management District
mgd	million gallons per day
MHDT	medium heavy-duty trucks
MLD	most likely descendant
MM	Mitigation Measure
MMT	million metric ton
MPO	metropolitan planning organization
MS4	Municipal Separate Storm Sewer System
MSFCSP	Main Street and Freeway Corridor Specific Plan
MT CO_2e	metric tons of carbon dioxide equivalent
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NF_3	nitrogen trifluoride
NHMLA	Natural History Museum of Los Angeles County
NHTSA	National Highway Traffic Safety Administration

Acronym/Abbreviation	Definition
NO	nitric oxide
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NO_x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_3	ozone
OD	origin–destination
OPR	California Governor's Office of Planning and Research
PAR	Property Analysis Record
PDF	Project Design Feature
PFC	perfluorocarbon
PM	particulate matter
PM_{10}	coarse particulate matter
$PM_{2.5}$	fine particulate matter
ppm	parts per million
PPV	peak particle velocity
PRC	California Public Resources Code
PSY	Production Safe Yield
RCNM	Roadway Construction Noise Model
RCRA	Resource Conservation and Recovery Act
RFS	Renewable Fuel Standard
RPS	Renewables Portfolio Standard
RTP	Regional Transportation Plan
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
RWWTP	Regional Wastewater Treatment Plant
SAFE-1	Safer Affordable Fuel-Efficient Vehicles Rule Part One: One National Program
SBCFD	San Bernardino County Fire Department
SBCTA	San Bernardino County Transportation Authority
SBTAM	San Bernardino Transportation Analysis Model
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCS	Sustainable Communities Strategy
SF_6	sulfur hexafluoride
SGMA	Sustainable Groundwater Management Act
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO_2	sulfur dioxide
SoCalGas	Southern California Gas Company
SPCC	spill prevention, control, and countermeasure plan
SRA	State Responsibility Area
ST	short-term
SWMP	stormwater management program

Acronym/Abbreviation	Definition
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TAZ	traffic analysis zone
TCR	Tribal Cultural Resource
TIA	Transportation Impact Analysis
TMDL	total maximum daily load
TPA	Transit Priority Area
UNFCCC	United Nations Framework Convention on Climate Change
USFWS	U.S. Fish and Wildlife Service
UWMP	Urban Water Management Plan
VdB	vibration decibel
VMT	vehicle miles traveled
VOC	volatile organic compound
VVTA	Victor Valley Transit Authority
VVWRA	Victor Valley Wastewater Reclamation Authority
WEAP	Worker Environmental Awareness Program
WQMP	Water Quality Management Plan
WSA	Water Supply Assessment
WUI	wildland–urban interface
ZEV	zero-emission vehicle

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1 Executive Summary

1.1 Introduction

This Environmental Impact Report (EIR) has been prepared by the City of Hesperia (City) as lead agency pursuant to the California Environmental Quality Act (CEQA) and the CEQA Guidelines. This EIR has been prepared to evaluate the environmental impacts associated with implementation of the Poplar 18 Project (Project).

This EIR is an informational document intended for use by the City, other public agencies, and members of the public in evaluating the potential environmental effects of the Project.

CEQA requires that local government agencies consider the environmental consequences of such projects, before taking action on projects which have discretionary approval authority. An EIR is a document designed to provide the public and local and state governmental agency decision-makers an analysis of potential environmental consequences of a project to support informed decision making.

The City prepared this EIR to provide the public and responsible agencies information about the potential adverse impacts on the local and regional environment associated with implementation of the Project. This EIR was prepared pursuant to CEQA, codified as California Public Resources Code Section 21000 et seq., and the CEQA Guidelines in the California Code of Regulations, Title 14, Section 15000 et seq.

This summary provides a brief synopsis of the Project, results of the environmental analysis contained within this environmental document, alternatives to the Project that were considered, and major areas of controversy and issues to be resolved by decision-makers. This summary does not contain the extensive background and analysis found throughout the individual chapters within the EIR. Therefore, the reader should review the entire document to fully understand the Project and its environmental effects.

1.2 Project Location

The Project site is located in the western part of the City of Hesperia (City), which is located in the Victor Valley/High Desert region in western San Bernardino County. The City is bordered by the City of Victorville to the north, City of Apple Valley to the east, unincorporated San Bernardino County land to the south, and the unincorporated community of Oak Hills to the west. Locally, the Project site is located on the southwest quadrant of I-15 and Main Street, south of Main Street, west of Mesa Linda Street, north of I-15 and Poplar Street, and east of U.S. Highway 395 and Lassen Road. The Project site consists of two parcels: Assessor's Parcel Numbers (APNs) 3064-581-04-0000 and 3064-581-05-0000. Specifically, the Project site is located in Section 22, Township 4 North, Range 5 West, as depicted on the U.S. Geological Survey Baldy Mesa, California 7.5-minute topographic quadrangle map (see Figure 1-1, Project Overview).

Regional access to the Project site is provided via I-15, directly east of the project site, and U.S. Highway 395, directly west of the project site. Local access to the project site is provided via Poplar Street, Lassen Road, Sultana Road or Mesa Linda Street.

1.3 Project Description

Project Summary

The Project would include construction of an industrial/warehouse building and associated improvements on 17.87 acres of vacant land. The proposed Project would provide 414,700 square feet of industrial/warehouse space and include associated improvements, such as loading docks, tractor-trailer stalls, passenger vehicle parking spaces, stormwater detention basins, and landscape area (see Figure 1-1, Project Overview).

The Project would include off-site improvements along Mesa Linda Street, Lassen Street, and Poplar Street, including frontage landscaping and pedestrian improvements. A variety of trees, shrubs, plants, and land covers would be planted within the Project frontage's landscape setback area, as well as within the landscape areas found around the proposed industrial/warehouse buildings and throughout the Project site. Off-site improvements include possible lateral connections for utilities and other roadway and pedestrian improvements (e.g., road repaving or installation of sidewalks along building frontages).

The Project would support a variety of activities associated with the industrial/warehouse building, including the ingress and egress of passenger vehicles and trucks, the loading and unloading of trucks with designated truck courts/loading areas, and the internal and external movement of materials around the Project site via forklifts, pallet jacks, yard hostlers, and similar equipment. The Project's office and mezzanine space would support general office activities related to business operations.

At this time, no refrigeration is being proposed as part of the Project, and the Project Applicant currently has no plans to lease to any tenant needing refrigerated space. Because an end user of the building has not yet been identified, specific details regarding future operational activities on the Project site are not yet available. However, for the purposes of CEQA and to ensure full disclosure on all potential allowable uses on the Project site, this environmental impact assessment assumes development of a "blend" of industrial uses. Thus, the modeling assumptions used for the air quality, health risk assessment, greenhouse gas, energy, noise, and transportation analyses summarized in subsequent chapters of this EIR assume a blend of "high-cube" warehouse and general light industrial uses. Under this modeling scenario, approximately 269,555 square feet would be high-cube fulfillment center use and 145,145 square feet would be general light industrial land use.

Project Construction

The construction schedule used in the analysis is assumed to commence in or around January 2023 and last approximately 10 months, ending in or around October 2023. The duration of construction activity was estimated based on consultation with the Project Applicant and past project experience. This schedule represents a conservative analysis should construction occur any time after the respective dates, since emissions factors for construction decrease as the analysis year increases due to emissions regulations becoming more stringent. A development agreement was also contemplated as part of the Project approvals.

1.4 Project Objectives

Consistent with the Project's purpose and need, the primary objectives sought by the Project are as follows:

- **Objective 1:** Develop a jobs-producing and tax generating land use near transportation corridors within the housing-rich Victor Valley/High Desert region that is constructed to high standards of quality and provides diverse economic opportunities for those residing and wishing to invest within the City of Hesperia.

- **Objective 2:** Concentrate non-residential uses near existing roadways, highways, and freeways in an effort to isolate and reduce any potential environmental impacts related to truck traffic congestion, air emissions, and industrial noise to the greatest extent feasible.
- **Objective 3:** Develop a fiscally sound and employment generating land use that maximizes utilization of industrial zoned areas.
- **Objective 4:** Create a project that takes advantage of and enhances existing infrastructure, including the proximity to major regional roadways such as I-15 and U.S. Highway 395, railroad service corridors, and other similar infrastructure that will help promote the site and its use as an industrial business park development.
- **Objective 5**: Fulfill the existing and growing demand for logistics and warehouse uses in the region.

1.5 Discretionary Actions

Consistent with the City's General Plan, the Main Street and Freeway Corridor Specific Plan (MSFCSP), and Municipal Code, the Project requires certain entitlements be submitted, reviewed, and approved by the City. The requested entitlements include:

Discretionary Approvals

Development Review Committee

- **Administrative Review.** An administrative review by the Development Review Committee is held in order to review the Project. Such review will yield a recommendation and/or ruling by City administrative staff.

Planning Commission

- **Project Review.** A review by the Planning Commission is held in order to review the Project, including all requested entitlements. Such review will yield a recommendation to the City Council.
- **Recommendation Certification of EIR.** The Planning Commission will review the EIR and make a recommendation to the City Council to certify or reject this EIR, along with appropriate CEQA Findings and the mitigation monitoring and reporting program.

City Council

- **Conditional Use Permit.** Project implementation would require approval of a Conditional Use Permit (CUP21-00010) by the Planning Commission. The MSFCSP requires review and approval of a Conditional Use Permit (CUP) for warehousing and wholesale distribution centers over 200,000 square feet located in the Main Street/I-15 District of the Specific Plan. The building includes more than 200,000 square feet of total building area, and thus, a CUP would be required.
- **Parcel Merger.** Project implementation would require merging the two APNs within the project boundary into one, 17.87-acre lot.
- **Certification of EIR.** Certify or reject this EIR, along with appropriate CEQA Findings and the mitigation monitoring and reporting program.
- **Development Agreement.** The potential for the Approval of a Development Agreement between the City and the Project Applicant pursuant to Section 16.12.085 of the Hesperia Municipal Code.

Ministerial Approvals

City of Hesperia Subsequent Implementing Approvals

- Approvals for water, sewer, and storm drain infrastructure
- Remove and relocate on-site protected native desert plants
- Issue grading permits
- Issue building permits
- Issue encroachment permits

The City would use this EIR and associated documentation in its decision to approve or deny the required discretionary permits. Other responsible and/or trustee agencies can use this EIR and supporting documentation in their decision-making process to issue additional approvals. These additional approvals may include approvals such as a site-specific Stormwater Pollution Prevention Plan.

1.6 Summary of Impacts

Table 1-1 presents a summary of the Project's significant environmental impacts and mitigation measures that would reduce or avoid those effects, and the level of significance of the impact after implementation of the mitigation measures. With the exception of those specific impacts identified in Table 1-1, the Project would result in less than significant or no impacts with regard to all other resource areas evaluated.

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
Biological Resources			
Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Potentially significant impact	**MM-BIO-1. Conservation of Western Joshua Tree Lands.** Based on a literature review completed by the California Department of Fish and Wildlife (CDFW), CDFW indicated that western Joshua tree locations shall be buffered by 186 feet to account for the take of seed bank for western Joshua trees and their associated habitat. Therefore, a 186-foot buffer (or radius) shall be applied to each western Joshua tree location. The direct impacts to this 186-foot buffer were analyzed, and the Project would result in 10.9 acres of impacts to western Joshua trees, their seed bank, and their associated habitat. Mitigation for direct impacts to 10.9 acres of western Joshua trees and their 186-foot buffer shall be fulfilled through conservation of western Joshua trees at a 2:1 habitat replacement of equal or better functions and values to those impacted by the Project, for a total of 21.8 acres. Mitigation shall be accomplished either through off-site conservation or through a CDFW-approved mitigation bank. If mitigation is not purchased through a mitigation bank and lands are conserved separately, a cost estimate shall be prepared to estimate the initial start-up costs and ongoing annual costs of management activities for the management of the conservation easement(s) area in perpetuity. The funding source shall be in the form of an endowment to help the qualified natural lands management entity that is ultimately selected to hold the conservation easement(s). The endowment amount shall be established following the completion of a Project-specific Property Analysis Record (PAR) to calculate the costs of in-perpetuity land management. The PAR shall consider all the management activities required in the Incidental Take Permit to fulfill the requirements of the conservation easement(s), which are currently in review and development. Additionally, no take of western Joshua tree shall occur without authorization from CDFW in the form of an Incidental Take Permit pursuant to California Fish and Game Code 2081. The Project applicant shall adhere to measures and conditions set forth within the Incidental Take Permit.	Less-than-significant impact with mitigation incorporated

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		MM-BIO-2. Relocation of Desert Native Plants. Prior to the issuance of grading permits, the Project applicant shall submit an application and applicable fee paid to the City of Hesperia for removal or relocation of protected native desert plants under Hesperia Municipal Code Chapter 16.24 as required and schedule a pre-construction site inspection with the Planning Division and the Building Division. The application shall include certification from a qualified western Joshua tree and native desert plant expert(s) to determine that proposed removal or relocation of protected native desert plants are appropriate, supportive of a healthy environment, and in compliance with the City of Hesperia Municipal Code. Protected plants subject to Hesperia Municipal Code Chapter 16.24 may be relocated on site, or within an area designated as an area for species to be adopted later. The application shall include a detailed plan for removal of all protected plants on the Project site. The Joshua Tree Preservation, Protection, and Relocation Plan and Desert Native Plant Relocation Plan shall be prepared by a qualified western Joshua tree and native desert plant expert(s). The plan shall include the following measures: ▪ Salvaged plants shall be transplanted expeditiously to either their final on-site location, or to an approved off-site area. If the plants cannot be expeditiously taken to their permanent relocation area at the time of excavation, they may be transplanted in a temporary area (stockpiled) prior to being moved to their permanent relocation site(s). ▪ Western Joshua trees shall be marked on their north facing side prior to excavation. Transplanted western Joshua trees shall be planted in the same orientation as they currently occur on the Project site, with the marking on the north side of the trees facing north at the relocation site(s).	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		▪ Transplanted plants shall be watered prior to and at the time of transplantation. The schedule of watering shall be determined by the qualified tree expert and desert native plant expert(s) to maintain plant health. Watering of the transplanted plants shall continue under the guidance of qualified tree expert and desert native plant expert(s) until it has been determined that the transplants have become established in the permanent relocation site(s) and no longer require supplemental watering. MM-BIO-3. Pre-Construction Surveys for Burrowing Owl and Avoidance. One preconstruction burrowing owl survey shall be completed no more than 14 days before initiation of site preparation or grading activities, and a second survey shall be completed within 24 hours of the start of site preparation or grading activities. If ground-disturbing activities are delayed or suspended for more than 30 days after the pre-construction surveys, the Project site shall be resurveyed. Surveys for burrowing owl shall be conducted in accordance with protocols established in the 2012 (or current version) Staff Report on Burrowing Owl Mitigation prepared by the California Department of Fish and Game [now California Department of Fish and Wildlife (CDFW). If burrowing owls are detected, a Burrowing Owl Relocation Plan shall be implemented in consultation with the CDFW. As required by the Burrowing Owl Relocation Plan, disturbance to burrows shall be avoided during the nesting season (February 1 through August 31). Buffers shall be established around occupied burrows in accordance with guidance provided in the Staff Report on Burrowing Owl Mitigation or current version. No Project activities shall be allowed to encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until it is determined that occupied burrows have been vacated or the nesting season has completed. Outside of the nesting season, passive owl relocation techniques approved by CDFW shall be implemented. Owls shall be excluded from burrows in the immediate Project area and within a buffer zone by installing one-way doors in burrow entrances. These doors shall be placed at least 48 hours prior to ground-disturbing activities. The Project	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		area shall be monitored daily for 1 week to confirm owl departure from burrows prior to any ground-disturbing activities. Compensatory mitigation for permanent loss of owl habitat shall be provided following the guidance in the Staff Report on Burrowing Owl Mitigation (current version). Where possible, burrows shall be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe shall be inserted into the tunnels during excavation to maintain an escape route for any wildlife inside the burrow. **MM-BIO-4. Pre-Construction Nesting Bird Surveys and Avoidance.** Construction activities shall avoid the migratory bird nesting season (typically February 1 through August 31) to reduce any potential significant impact to birds that may be nesting in the survey area. If construction activities must occur during the migratory bird nesting season, an avian nesting survey of the Project site and within 500 feet of all impact areas must be conducted to determine the presence/absence of protected migratory birds and active nests. The avian nesting survey shall be performed by a qualified wildlife biologist within 72 hours prior to the start of construction in accordance with the Migratory Bird Treaty Act (16 USC 703–712) and California Fish and Game Code Sections 3503, 3503.5, and 3513. If an active bird nest is found, the nest shall be flagged and mapped on the construction plans along with an appropriate buffer established around the nest, which shall be determined by a biologist based on the species' sensitivity to disturbance (typically 300 feet for passerines and 500 feet for raptors and special-status species). The nest area shall be avoided until the nest is vacated and the juveniles have fledged. The nest area shall be demarcated in the field with flagging and stakes or construction fencing. On-site construction monitoring shall also be conducted when construction occurs in proximately to an active nest buffer. No Project activities shall encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until it is determined that nestlings have fledged and the nest is no longer active.	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		MM-BIO-5. Pre-Construction Survey for American Badger and Desert Kit Fox and Avoidance. A pre-construction survey for American badger and desert kit fox shall be conducted on the Project site and Off-Site Improvement Area within 10 days prior to the start of construction to determine the presence/absence of either species. If either species is discovered during the survey, an American badger/desert kit fox mitigation and monitoring plan shall be developed. The mitigation and monitoring plan shall include avoidance and minimization measures to reduce potential impacts to either species, as well as compensatory mitigation to offset direct or indirect impacts. The plan shall be developed in consultation with California Department of Fish and Wildlife. At a minimum, the plan shall contain the following: ▪ Identify pre-construction survey methods for American badger and desert kit fox ▪ Describe feasible pre-construction and construction-phase avoidance methods ▪ Describe pre-construction and construction-phase relocation methods, including the possibility for passive relocation ▪ For burrows that will not be impacted by the Project, identify an appropriate construction exclusion zones for active and natal burrows ▪ Coordinate survey findings prior to and during construction to meet the information needs of wildlife health officials in monitoring the health of kit fox populations. **MM-BIO-6. Designated Biologist Authority.** The Designated Biologist shall have authority to immediately stop any activity that does not comply with the biological resources mitigation measures and/or to order any reasonable measure to avoid the unauthorized take of an individual western Joshua tree. **MM-BIO-7. Compliance Monitoring.** The Designated Biologist shall be on site daily when impacts occur. The Designated Biologist shall conduct compliance inspections to minimize incidental take of western Joshua trees and impacts to other sensitive biological resources; prevent	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		unlawful take of western Joshua trees; and ensure that signs, stakes, and fencing are intact, and that impacts are only occurring outside the permitted impact footprint. Weekly written observation and inspection records that summarize oversight activities and compliance inspections and monitoring activities required by the Incidental Take Permit shall be prepared. **MM-BIO-8. Education Program.** An education program (Worker Environmental Awareness Program [WEAP]) for all persons employed or otherwise working in the Project area shall be administered before impacts occur. The WEAP shall consist of a presentation from the Designated Biologist that includes a discussion of the biology and status of western Joshua tree, burrowing owl, and loggerhead shrike; and other biological resources mitigation measures described in the California Environmental Quality Act document. Interpretation for non-English-speaking workers shall be provided, and the same instruction shall be provided to any new workers before they are authorized to perform work in the Project area. Upon completion of the WEAP, employees shall sign a form stating they attended the program and understand all protection measures. This training shall be repeated at least once annually for long-term and/or permanent employees who will be conducting work in the Project area. **MM-BIO-9. Construction Monitoring Notebook.** The Designated Biologist shall maintain a construction-monitoring notebook on site throughout the construction period, which shall include a copy of the biological resources mitigation measures with attachments and a list of signatures of all personnel who have successfully completed the education program. The permittee shall ensure that a copy of the construction monitoring notebook is available for review at the Project site upon request by the California Department of Fish and Wildlife. **MM-BIO-10. Delineation of Property Boundaries.** Before beginning activities that will cause impacts, the contractor shall, in consultation with the Designated Biologist, clearly delineate the boundaries with fencing, stakes, or flags, consistent with the grading plan, within which the impacts will take place. All impacts outside the fenced, staked, or	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		flagged areas shall be avoided, and all fencing, stakes, and flags shall be maintained until the completion of impacts in that area. **MM-BIO-11. Hazardous Waste.** The Project applicant shall immediately stop work and, pursuant to pertinent state and federal statutes and regulations, arrange for repair and clean up by qualified individuals of any fuel or hazardous waste leaks or spills at the time of occurrence, or as soon as it is safe to do so. **MM-BIO-12. Herbicides.** The Project applicant shall limit herbicide use for invasive plant species and shall use herbicides only if it has been determined that hand or mechanical efforts are infeasible. To prevent drift, the permittee shall apply herbicides only when wind speeds are less than 7 miles per hour. All herbicide application shall be performed by a licensed applicator and in accordance with all applicable federal, state, and local laws and regulations. **MM-BIO-13. Lighting.** Lighting for construction activities and operations within 50 feet of the outside edge of the impact footprint containing habitat for special-status wildlife shall be directed away from natural areas. **MM-BIO-14. Trash and Debris.** The following avoidance and minimization measures shall be implemented during Project construction: (1) Fully covered trash receptacles that are animal-proof shall be installed and used by the operator to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash. Trash contained within the receptacles shall be removed at least once a week from the Project site. (2) Construction work areas shall be kept clean of debris, such as cable, trash, and construction materials. All construction/contractor personnel shall collect all litter, vehicle fluids, and food waste from the Project site on a daily basis. **MM-BIO-15. Invasive Plant Management**. To reduce the spread of invasive plant species, landscape plants within 200 feet of native vegetation communities shall not be on the most recent version of the	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		California Invasive Plant Council's Inventory of Invasive Plants (http://www.cal-ipc.org/ip/inventory/index.php). Post-construction, the Project applicant shall continually remove invasive plant species on site by hand or mechanical methods, as feasible.	
Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Potentially significant impact	MM-BIO-1 MM-BIO-2 MM-BIO-6 MM-BIO-7 MM-BIO-8 MM-BIO-9 MM-BIO-10 MM-BIO-11 MM-BIO-12	Less-than-significant impact with mitigation incorporated
Would the Project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Potentially significant impact	MM-BIO-16. Aquatic Resources Mitigation. The Project site supports aquatic resources that are jurisdictional under the Regional Water Quality Control Board (RWQCB) and California Department of Fish and Wildlife (CDFW). Prior to construction activity, the Project applicant shall coordinate with the Lahontan RWQCB (Region 6) to ensure conformance with the requirements of Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act. Prior to activity within CDFW jurisdictional streambeds or associated riparian habitat, the applicant shall coordinate with CDFW (Inland Deserts Region 6) relative to conformance with the Lake and Streambed Alteration permit requirements. The Project shall mitigate to ensure no-not-loss of waters at a minimum of 1:1 with re-establishment credits (0.06 acres RWQCB/CDFW) for impacts to aquatic resources as part of an overall strategy to ensure no net loss. Mitigation shall be completed through the use of a mitigation bank (e.g., West Mojave Mitigation Bank) or other applicant-sponsored mitigation. Final mitigation ratios and credits shall be determined in consultation with the RWQCB and/or CDFW based on agency evaluation of current resource functions and values and through each agency's respective permitting process.	Less-than-significant impact with mitigation incorporated

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		Should applicant-sponsored mitigation be implemented, a Habitat Mitigation and Monitoring Plan (HMMP) shall be prepared in accordance with State Water Resources Control Board guidelines and approved by the agencies in accordance with the applicable permits. The HMMP shall include a conceptual planting plan, including planting zones, grading, and irrigation, as applicable; a conceptual planting plant palette; a long-term maintenance and monitoring plan; annual reporting requirements; and proposed success criteria. Any off-site applicant-sponsored mitigation shall be conserved and managed in perpetuity. Best management practices shall be implemented to avoid any indirect impacts on jurisdictional waters, including the following: ▪ Vehicles and equipment shall not be operated in ponded or flowing water except as described in permits. ▪ Water containing mud, silt, or other pollutants from grading or other activities shall not be allowed to enter jurisdictional waters or be placed in locations that may be subjected to high storm flows. ▪ Spoil sites shall not be located within 30 feet from the boundaries of jurisdictional waters or in locations that may be subject to high storm flows, where spoils might be washed back into drainages. Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources resulting from Project-related activities shall be prevented from contaminating the soil and/or entering avoided jurisdictional waters. ▪ No equipment maintenance shall be performed within 100 feet of jurisdictional waters, including wetlands and riparian areas, where petroleum products or other pollutants from the equipment may enter these areas. Fueling of equipment shall not occur on the Project site.	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Potentially significant impact	MM-BIO-13	Less-than-significant impact with mitigation incorporated
Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Potentially significant impact	MM-BIO-1 MM-BIO-2	Less-than-significant impact with mitigation incorporated
Would the Project have a cumulative effect on biological resources?	Potentially significant impact	MM-BIO-1 MM-BIO-2 MM-BIO-3 MM-BIO-4 MM-BIO-5 MM-BIO-6 MM-BIO-7 MM-BIO-8 MM-BIO-9 MM-BIO-10 MM-BIO-11 MM-BIO-12 MM-BIO-13 MM-BIO-14 MM-BIO-15 MM-BIO-16	Less-than-significant impact with mitigation incorporated

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
Cultural, Tribal Cultural, and Paleontological Resources			
Would the Project cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?	Potentially significant impact	**MM-CUL-1. Workers Environmental Awareness Program (WEAP) Training.** All construction personnel and monitors who are not trained archaeologists should be briefed regarding unanticipated discoveries prior to the start of construction activities. A basic presentation should be prepared and presented by a qualified archaeologist to inform all personnel working on the Project about the archaeological sensitivity of the area. The purpose of the WEAP training is to provide specific details on the kinds of archaeological materials that may be identified during construction of the Project and explain the importance of and legal basis for the protection of significant archaeological resources. Each worker should also learn the proper procedures to follow in the event that cultural resources or human remains are uncovered during ground-disturbing activities. These procedures include work curtailment or redirection, and the immediate contact of the on-call archaeologist and if appropriate, tribal representative. Necessity of training attendance should be stated on all construction plans. **MM-CUL-2. On-Call Archaeological Construction Monitoring.** In consideration of the general sensitivity of the Project site for cultural resources, a qualified archaeologist should be retained to conduct spot monitoring as well as on-call response in the case of an inadvertent discovery of archaeological resources. A qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, should oversee and adjust monitoring efforts as needed (increase, decrease, or discontinue monitoring frequency) based on the observed potential for construction activities to encounter cultural deposits. The archaeologist should be responsible for maintaining monitoring logs. Following the completion of construction, the qualified archaeologist should provide an archaeological monitoring report to the lead agency and the South Central Coastal Information Center with the results of the archaeological monitoring program. **MM-CUL-3. Inadvertent Discovery of Archaeological Resources.** In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities for the Project, all construction	Less-than-significant impact with mitigation incorporated

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		work occurring within 100 feet of the find should immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find and determine whether or not additional study is warranted. Depending upon the significance of the find under the California Environmental Quality Act (CEQA; 14 CCR 15064.5(f); California PRC Section 21082), the archaeologist may simply record the find and allow work to continue. If the discovery proves significant under CEQA, additional work, such as preparation of an archaeological treatment plan, testing, or data recovery, may be warranted. If the discovery is Native American in nature, consultation with and/or monitoring by a tribal representative may be necessary.	
Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	Potentially significant impact	MM-CUL-1 MM-CUL-2 MM-CUL-3	Less-than-significant impact with mitigation incorporated
Would the Project disturb any human remains, including those interred outside of dedicated cemeteries?	Potentially significant impact	**MM-CUL-4. Inadvertent Discovery of Human Remains.** In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are found, the County Coroner shall be notified within 24 hours of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined, within two working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the remains are determined to be Native American, the Coroner shall notify the NAHC in Sacramento within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the NAHC must immediately notify those persons it believes to be the MLD from the deceased Native American. The MLD shall complete their inspection within 48 hours of being granted access to the site. The MLD would then determine, in consultation with the property owner, the disposition of the human remains.	Less-than-significant impact with mitigation incorporated

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is 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)? *AND* Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is	Potentially significant impact	MM-CUL-3 MM-CUL-4 **MM-CUL-5.** In the event that cultural resources are discovered during project activities, all work in the immediate vicinity of the discovery (within a 60-foot buffer) shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the other portions of the project outside of the buffered area may continue during this assessment period. Additionally, the Yuhaaviatam of San Manuel Nation Cultural Resources Department (YSMN) shall be contacted, as detailed within MM-CUL-8, regarding any pre-contact and/or historic-era resources of a Native American origin and be provided information after the archaeologist makes his/her initial assessment of the nature of the discovery.t. **MM-CUL-6.** If significant pre-contact and/or historic-era tribal cultural resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the archaeologist shall develop a Monitoring and Treatment Plan, the drafts of which shall be provided to YSMN for review and comment, as detailed within MM-CUL-8. The archaeologist shall monitor the remainder of the project and implement the Plan accordingly. **MM-CUL-7.** If human remains or funerary objects are encountered during any activities associated with the project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 and that code enforced for the duration of the project. **MM-CUL-8.** The Yuhaaviatam of San Manuel Nation Cultural Resources Department (YSMN) shall be notified, as detailed in MM-CUL-5, of any pre-contact and/or historic-era cultural resources discovered during project implementation and be provided information regarding the nature of the discovery, so as to provide Tribal input with regards to significance and treatment. Should the discovery be deemed significant, as defined by CEQA (as amended, 2015), a cultural resources Monitoring and Treatment Plan shall be created by the archaeologist, in coordination	Less-than-significant impact with mitigation incorporated

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a 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?		with YSMN, and all subsequent discoveries shall be subject to this Plan. This Plan shall allow for a monitor to be present representing YSMN for the remainder of the project, should YSMN elect to place a monitor on-site. **MM-CUL-9.** Any and all archaeological/cultural documents created as a part of the project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the applicant and Lead Agency for dissemination to YSMN. The Lead Agency and/or applicant shall, in good faith, consult with YSMN throughout the life of the project.	
Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Potentially significant impact	**MM-CUL-10.** If paleontological resources are exposed during Project construction activities, all construction work occurring within 100 feet of the find shall immediately stop until a qualified paleontologist, as outlined in the Society of Vertebrate Paleontology (2010) guidelines, can evaluate the significance of the find and determine whether or not additional study is warranted. If the discovery proves significant under the California Environmental Quality Act, discovered fossils or samples of such fossils shall be collected and identified by the qualified paleontologist. Significant specimens recovered shall be properly recorded, treated, and donated to the San Bernardino County Museum, Division of Geological Sciences, or other repository with permanent retrievable paleontological storage. A final report shall be prepared and submitted to the City of Hesperia that itemizes any fossils recovered, with maps to accurately record the original location of recovered fossils and evidence that the resources were curated by an established museum repository.	Less-than-significant impact with mitigation incorporated

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
Would the Project result in a cumulatively considerable impact to cultural, tribal cultural, or paleontological resources?	Potentially significant impact	**MM-CUL-1** **MM-CUL-2** **MM-CUL-3** **MM-CUL-4** **MM-CUL-5** **MM-CUL-6** **MM-CUL-7** **MM-CUL-8** **MM-CUL-9** **MM-CUL-10**	Less-than-significant impact with mitigation incorporated
Greenhouse Gas Emissions			
Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Potentially significant impact	**MM-GHG-1.** The Project shall implement the following measures in order to reduce construction equipment GHG emissions to the extent feasible ▪ Provide infrastructure for zero-emission off-road construction equipment if the contractors selected to construct the Project plan to use zero-emission off-road construction equipment. ▪ Provide electrical hook ups to the power grid, rather than diesel-fueled generators, for contractors' electric construction tools, such as saws, drills and compressors. In applicable bid documents and contracts with contractors selected to construct the Project, include language requiring all off-road equipment with a power rating below 19 kilowatts (e.g., plate compactors, pressure washers, etc.) used during Project construction to be electric. ▪ Require construction equipment to be turned off when not in use. ▪ Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with Section 5.408.1 of the California Green Building Standards Code Part 11.	Significant and unavoidable impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		MM-GHG-2. The Project shall implement the following measures in order to reduce operational mobile source GHG emissions to the extent feasible: ▪ Prior to tenant occupancy, provide documentation to the City of Hesperia demonstrating that occupants/tenants of the Project site have been provided documentation that: - For occupants with more than 250 employees, require the establishment of a transportation demand management program to reduce employee commute vehicle emissions. ▪ Include contractual language in tenant lease agreements requiring that any facility operator shall: - Ensure that site enforcement staff in charge of keeping the daily log and monitoring for excess idling will be trained/certified in diesel health effects and technologies, for example, by requiring attendance at California Air Resources Board-approved courses (such as the free, one-day Course #512); - Be required to train managers and employees on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks. The building manager or their designee shall be responsible for enforcing these requirements; and - Be in, and monitor compliance with, all current air quality regulations for on-road trucks including CARB's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation, Periodic Smoke Inspection Program (PSIP), and the Statewide Truck and Bus Regulation 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 5 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	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		manager and CARB to report violations. Prior to the issuance of an occupancy permit, the City of Hesperia shall conduct a site inspection to ensure that the signs are in place. ▪ Prior to tenant occupancy, the Project Applicant or successor in interest shall provide documentation to the City of Hesperia demonstrating that occupants/tenants of the Project site have been provided documentation on funding opportunities, such as the Carl Moyer Program, that provide incentives for using cleaner-than-required engines and equipment. ▪ In anticipation of a transition to zero emissions truck fleets during the lifetime of the Project, install at least four heavy-duty truck vehicle charging stations on-site by 2030. ▪ Prior to certificate of occupancy, install conduit and infrastructure for Level 2 (or faster) electric vehicle charging stations on-site for employees for the percentage of employee parking spaces commensurate with Title 24 requirements in effect at the time of building permit issuance plus additional charging stations equal to 5% of the total employee parking spaces in the building permit, whichever is greater. By 2030 install Level 2 (or faster) electric vehicle charging stations for 25% of the employee parking spaces required. ▪ Conduit shall be installed to tractor trailer parking areas in logical locations determined by the Project Applicant during construction document plan check, for the purpose of accommodating the future installation of EV truck charging stations at such time this technology becomes commercially available. **MM-GHG-3.** The Project shall implement the following measure in order to reduce operational energy source GHG emissions to the extent feasible: ▪ Commit to on-site solar generation sufficient to meet at least 75% of the Project's total operational energy requirements from within the building envelope. ▪ Install Energy Star-rated heating, cooling, lighting, and appliances.	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		▪ Provide information on energy efficiency, energy-efficient lighting and lighting control systems, energy management, and existing energy incentive programs to future tenants of the Project. ▪ Structures shall be equipped with outdoor electric outlets in the front and rear of the structures to facilitate use of electrical lawn and garden equipment. ▪ Require no construction or operation of cold storage within the project facilities. ▪ Provide documentation to the City of Hesperia demonstrating that the Project could achieve Leadership in Energy and Environmental Design (LEED) certification and meet or exceed CALGreen Tier 2 standards in effect at the time of building permit application. **MM-GHG-4.** The Project shall include the following language within tenant lease agreements in order to reduce operational GHG emissions to the extent feasible: ▪ Require tenants to use the cleanest technologies available and to provide the necessary infrastructure to support zero-emission vehicles, equipment, and appliances that would be operating on site. This requirement shall apply to equipment such as handheld landscaping equipment, office appliances, etc. ▪ Require future tenants to exclusively use zero-emission light and medium-duty delivery trucks and vans, when economically feasible. ▪ Tenants shall be in, and monitor compliance with, all current air quality regulations for on-road trucks including the California Air Resources Board's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation, Periodic Smoke Inspection Program, and the Statewide Truck and Bus Regulation.	
Would the Project have a cumulative effect on greenhouse gas emissions?	Potentially significant impact	**MM-GHG-1** **MM-GHG-2** **MM-GHG-3** **MM-GHG-4**	Significant and unavoidable impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
Hazards and Hazardous Materials			
Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Potentially significant impact	**MM-HAZ-1.** Prior to the issuance of a grading permit, the Project Applicant shall retain a qualified environmental specialist that has documented experience in the identification, characterization, and removal of hazardous materials, such as a California licensed professional engineer, geologist, or hydrogeologist, to remove and dispose of all refuse located on the Project site, including but not limited to, the illegally dumped tires and oil containers currently found on site. The removal, transport, and disposal of refuse shall be done in accordance with all applicable local, state, and federal guidelines related to hazardous materials handling. Prior to the removal of refuse deposits from the site, the environmental specialist shall inspect each refuse pile for indications that the refuse may contain, or may have once contained, hazardous materials, including, but not limited to, motor oil, solvents, paints, and/or other petroleum products. In addition, the environmental specialist shall inspect the soils surrounding each refuse deposit for evidence of any contamination (staining) or volatilization of contaminants (odors). If contamination indicators are identified, work shall stop in the immediate proximity of the potential contamination. The Project Applicant and/or their construction contractor shall be responsible for engaging a qualified environmental specialist to design and perform an investigation to verify the presence and extent of contamination on the Project site. Subsurface investigation shall determine appropriate worker protection and hazardous material and disposal procedures appropriate for the Project site. Contaminated soil or groundwater determined to be hazardous shall be removed by personnel who have been trained through the Occupational Safety and Health Administration–recommended 40-hour safety program with an approved plan for groundwater extractions, soil excavation, control of contaminant releases to the air, and off-site transport or on-site treatment.	Less-than-significant impact with mitigation incorporated
Would the Project create a significant hazard to the public or the environment	Potentially significant impact	**MM-HAZ-1**	Less-than-significant impact with mitigation incorporated

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			
Would the Project have a cumulative effect on hazards or hazardous materials?	Potentially significant impact	MM-HAZ-1	Less-than-significant impact with mitigation incorporated
Transportation			
Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Potentially significant impact	The Project could result in potentially significant impacts associated with increasing hazards due to a geometric design feature related to queuing. Improvement measures required to mitigate Project's impact would include fair-share contribution to Intersections #1, #3, #5, #6, and #7. Since the City does not have jurisdiction over these facilities, these improvements cannot be assumed to be in place prior to Project's occupancy.	Significant and unavoidable impact
Would the Project have a cumulative effect with regard to transportation?	Potentially significant impact	The Project could result in potentially significant impacts with regard to cumulatively considerable transportation impacts. The Project may increase a hazardous condition due to queuing impacts at the intersections #1, #3, #5, #6, and #7 under the Horizon Year (2040) plus Project analysis scenario. Since the City does not have jurisdiction over these facilities, these improvements cannot be assumed to be in place prior to Project's occupancy.	Significant and unavoidable impact

Significant and Unavoidable Impacts

As identified in Table 1-1, the Project would result in significant and unavoidable impacts with regard to air quality, greenhouse gas emissions, and transportation. These impacts are discussed in further detail below.

- **Greenhouse Gas Emissions.** Even with applicable regulatory requirements and Project Design Features, the Project would result in approximately 6,292 metric tons of carbon dioxide equivalent (MT CO_2e) per year, which would exceed the numerical greenhouse gas threshold established by the South Coast Air Quality Management District of 3,000 MT CO_2e per year. While the Project is located within the jurisdiction of the Mojave Desert Air Quality Management District, because the South Coast Air Quality Management District's thresholds are more stringent and are backed by substantial evidence from an expert agency, the South Coast Air Quality Management District's recommended thresholds have been utilized for determining the significance of the Project's greenhouse gas emission impacts. Implementation of Mitigation Measure (MM) GHG-1, MM-GHG-2, and MM-GHG-3 would also reduce operation-related GHG emissions. However, the effectiveness of the mitigation and the associated emission reductions cannot be accurately quantified at this time and GHG emissions impacts are inherently cumulative in nature. As such, impacts on the project-level and cumulatively would remain significant and unavoidable.
- **Transportation.** The Project could result in potentially significant impacts associated with increasing hazards due to a geometric design feature related to queuing. Several intersections in the vicinity of the Project site currently experience periodic queuing issues during peak hours, which can lead to potential safety concern if a significant speed differential exists between queue vehicles and vehicles proceeding beyond the queue. The Project would result in additional traffic that would exacerbate these conditions under the Existing Plus Project Conditions, Opening Year (2024) Plus Project Conditions, and Horizon Year (2040) Plus Project Conditions (queueing issues would continue to occur without Project-generated traffic for many intersections regardless of the Project). Improvement measures required to mitigate the Project's impact would include fair-share contribution to Intersections of US Hwy 395 and Phelan Road – Main Street, US Hwy 395 and Poplar Street, US Hwy 395 and Three Flags Avenue, US Hwy 395 and Joshua Street – I-15 Ramps, and I-15 SB Off-Ramp and Joshua Street. However, these intersections are not within the City's jurisdiction, but rather within the jurisdiction of other agencies, such as the California Department of Transportation. Since the City does not have jurisdiction over these facilities, these improvements cannot be assumed to be in place prior to Project's occupancy, and these impacts are considered significant and unavoidable.

1.7 Alternatives to the Project

Section 15126.6(a) of the CEQA Guidelines states that 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," as well as provide an evaluation of "the comparative merits of the alternatives." Under CEQA Guidelines Section 15126.6(a), an EIR does not need to consider alternatives that are not feasible, nor does it need to address every conceivable alternative to the project. The range of alternatives "is governed by the 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice" (14 CCR 15126.6[f]).

No Project/No Development Alternative (Alternative 1)

Under Alternative 1, construction of the Project would not occur. The Project site would remain unchanged, and development activities related to construction and operation of the proposed industrial/warehouse building, associated office spaces, surface parking and loading areas, and all other proposed on- and off-site improvements would not occur.

In the short term, consistent with the existing conditions, the Project site would continue to be undeveloped. Under Alternative 1, the Project site would remain vacant, undeveloped land, although the site would presumably continue to be subject to illegal dumping, trespassing, and unpermitted off-road vehicle use, similar to the existing conditions.

Other Development Project Alternative (Alternative 2)

Under Alternative 2, the Project site would be redeveloped with other land uses, consistent with the Project site's existing Commercial/Industrial Business Park (CIBP) zoning designation. As described above, Project site has a land use and zoning designation of CIBP. Therefore, the Alternative 2 scenario involves a land use allowed under the CIBP designation.

The CIBP zone is intended to provide for service commercial, light industrial, light manufacturing and industrial support uses, mainly conducted in enclosed buildings. The MSFCSP lists several different uses that are either permitted by right or conditionally permitted in the CIBP zone. These include commercial storage facilities/mini-warehouses (i.e., self-storage facilities), offices, manufacturing, small and large equipment sales and rental, schools, vehicle rental and sales, minor and major vehicle repair, and vehicle wash facilities.

It is assumed that Alternative 2 would involve development of a land use that would be permissible either by right or by a conditional use permit, including the aforementioned land uses listed above. It is also assumed that those uses would share a similar development intensity, floor-area-ratio, and site coverage as the Project. Land uses that are expressly not allowed in the CIBP zone—specifically residential—would not be considered under Alternative 2.

Moreover, given the Project site's proximity to major regional transportation routes (e.g., I-15, U.S. Highway 395, and other local truck routes), and because of the continued demand for new industrial/warehouse operations in the Project region, it is assumed that the Project constructed under Alternative 2 would consist of warehouse, distribution, logistics, or other similar type industrial (or industrial-supporting) land use of similar size as the Project. Such an alternative could take the form of a similar square footage of industrial space, but warehouse space could be split up into many smaller buildings instead of one larger building.

Reduced Development Intensity Alternative (Alternative 3)

Presently, the only approach to reducing the Project's operational-related GHG emissions and transportation impacts would be to reduce the total number of daily trips and employees generated by the Project. As such, in an effort to reduce the Project's significant and unavoidable impacts, the City considered a Reduced Development Intensity Alternative (Alternative 3).

Under Alternative 3, the Project would be constructed and operated as planned on the Project site, with the exception that the size of the proposed development would be reduced by 15%, equating to an industrial/ warehouse project consisting of approximately 352,495 square feet, compared to the Project's 414,700 square feet. Since the building footprint would be reduced by 62,205 square feet (approximately 1.4 acres), this extra

space on the Project site would remain vacant. All other on- and off-site improvements proposed as part of the Project are assumed to still be required under Alternative 3.

Environmentally Superior Alternative

Section 15126(e)(2) of the State CEQA Guidelines requires an EIR to identify an "environmentally superior alternative." If the No Project/No Development Alternative is the environmentally superior alternative, the EIR must also identify an environmentally superior alternative from among the other Project alternatives.

Each of the three Project alternatives considered herein would lessen at least one environmental impact relative to the Project. As previously addressed, if the No Project/No Development Alternative is the environmentally superior alternative—which is the case in this analysis—the EIR must also identify another environmentally superior alternative among the remaining alternatives.

Based on a comparison of Alternative 2 and Alternative 3, environmental impacts associated with aesthetics, air quality, energy, GHG emissions, and noise would be less under Alternative 3 compared to Alternative 2. Impacts associated with biological resources, cultural, tribal cultural, and paleontological resources, hazards and hazardous materials, hydrology and water quality, transportation, and utilities and services systems would be similar under Alternative 3 compared to Alternative 2. Overall, based on these findings, Alternative 3 would be considered the environmentally superior alternative.

1.8 Areas of Controversy/Issues to Be Resolved

The scope of this EIR includes the potential environmental impacts identified in the Initial Study/Notice of Preparation (IS/NOP) that was available for public review from August 11, 2022, through September 9, 2022, and agency and public written comment received in response to the NOP. No comments were received during the public scoping meeting held on August 24, 2022, at the Hesperia City Hall.

A summary of these written comment letters is provided in Table 2-1. The written comments and the NOP are included as Appendix A of this EIR.

Table 1-2. Summary of Initial Study/Notice of Preparation Comments

Commenter	Date	Summary of Environmental Issues Raised	EIR Chapter/Section Where Comment is Addressed
State Agency			
Native American Heritage Commission	August 24, 2022	▪ Recommendations for tribal consultation and consulting legal counsel regarding compliance with Assembly Bill 52, Senate Bill 18, and other applicable laws.	Section 4.4, Cultural, Tribal Cultural, and Paleontological Resources

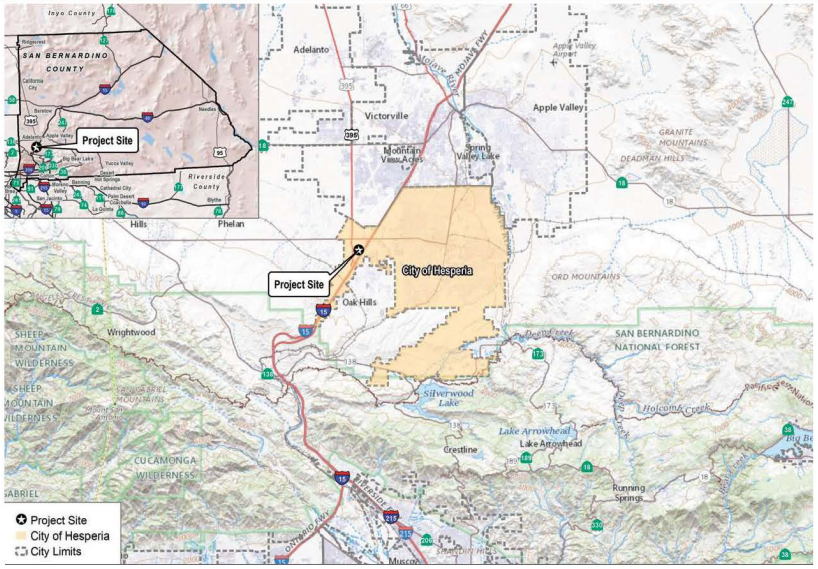
Table 1-2. Summary of Initial Study/Notice of Preparation Comments

Commenter	Date	Summary of Environmental Issues Raised	EIR Chapter/Section Where Comment is Addressed
State Agency			
Mojave Desert Air Quality Management District	August 17, 2022	▪ Recommendations for mitigation measures to be implemented during Project construction, such as a dust control plan, routine watering, permitter fencing, and maintenance of dirt access roads. ▪ Requests analysis of Project's potential impacts to sensitive receptors and inclusion of mitigation measures, if necessary.	Section 4.2, Air Quality
Private Organizations and Members of the Public			
Center for Biological Diversity	August 23, 2022	▪ Potential impacts relating to western Joshua trees, and recommendations for what should be included within any relocation plan prepared for Joshua trees.	Section 4.3, Biological Resources

Issues to be Resolved by Lead Agency

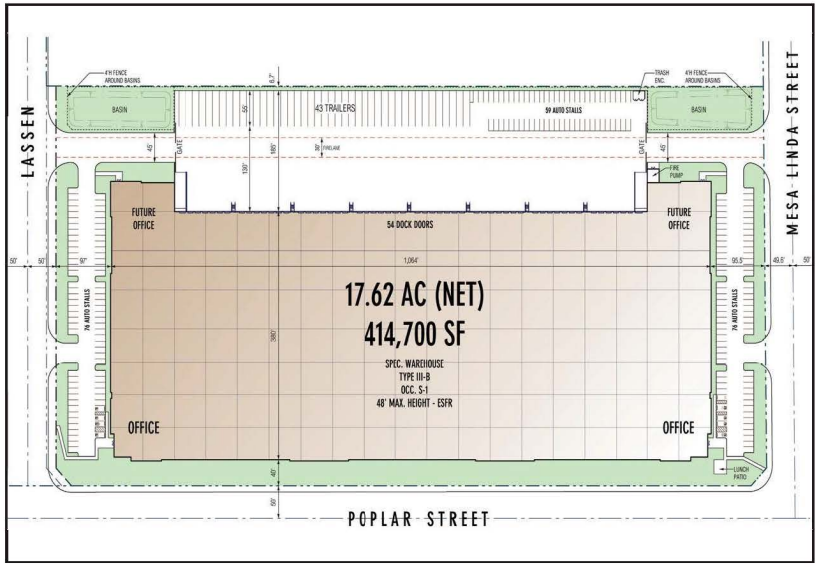
Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain a discussion of issues to be resolved. With respect to the proposed project, the key issues to be resolved include decisions by the City, as lead agency, as to the following:

- Whether this environmental document adequately describes the environmental impacts of the Project.
- Whether the recommended mitigation measures should be modified and/or adopted.
- Whether there are other mitigation measures or alternatives that should be considered for the Project besides those identified in the Draft EIR.



Panel A - Project Location Map. The Project is located within the eastern portion of the City of Hesperia, in the southwestern portion of San Berndino County. See Figure 3-1 in Chapter 3.

Panel B - Representative Photo of Project Site. Ground cover consists of moderare native brush and scrub cover with occassional juniper and Joshua trees. Photo taken from Poplar Street looking northward at the project site. See Figure 3-4 in Chapter 3.



Panel C - Site Plan. The Project would include construction of one industrial/warehouse building totaling 414,700 square feet of industrial/warehouse space and associated improvements, including loading docks, tractor-trailers, passenger vehicle parking spaces, and landscape area.
See Figure 3-11 in Chapter 3.

Panel D - Conceptual Rendering. The Project would feature a contemporary design with a variety of building materials, a neutral color palette, and drought-tolerant landscaping.
See Figure 3-15 in Chapter 3.

DUDEK

FIGURE 1-1

Project Overview

Poplar 18 Project

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2 Introduction

2.1 Purpose of the California Environmental Quality Act Process

This Environmental Impact Report (EIR) was prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental effects associated with implementation of the Poplar 18 Project (Project). It was prepared in accordance with Title 14, Section 15000 et seq. of the California Code of Regulations (CEQA Guidelines), and the rules, regulations, and procedures for implementing CEQA as adopted by the City of Hesperia (City). Consistent with CEQA Guidelines Section 15161, this document is a project-level EIR and evaluates the potential environmental impacts associated with a specific project. As the lead agency for the Project, the City must complete an environmental review to determine if the Project could potentially result in significant adverse environmental effects. A detailed description of the Project is provided in Chapter 3, Project Description.

CEQA Guidelines Section 15002 states that the basic purposes of CEQA are to:

- Inform governmental decision makers and the public about the potential significant environmental effects of proposed government actions (including the discretionary approval of development projects);
- Identify the ways that environmental damage can be avoided or significantly reduced; and
- 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.

If a project will be approved involving significant environmental effects, the lead agency must also disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose.

This EIR provides project-level analysis of the potential environmental effects related to implementation of the Project. The level of impact analysis in this EIR corresponds to the degree of specificity deemed appropriate in accordance with CEQA Guidelines Section 15146. This EIR addresses the potentially significant environmental impacts that could occur as a result of construction and operation of the Project. This document also identifies appropriate and feasible mitigation measures, where necessary, and includes Project alternatives that could be adopted to reduce or avoid potential significant environmental effects.

This EIR provides project-level analysis of the potential environmental effects related to implementation of the Project. The level of impact analysis in this EIR corresponds to the degree of specificity deemed appropriate in accordance with CEQA Guidelines Section 15146. This EIR addresses the potentially significant environmental impacts that could occur as a result of construction and operation of the Project. This document also identifies appropriate and feasible mitigation measures, where necessary, and includes Project alternatives that could be adopted to reduce or avoid potential significant environmental effects.

This EIR is an informational document for public agencies and members of the public, allowing informed decisions to be made regarding the purpose, objectives, and components of the Project. This EIR is the primary reference document for the formulation and implementation of a mitigation monitoring and reporting program for the Project, in compliance with California Public Resources Code (PRC), Section 21081.6.

2.2 Legal Authority and Lead Agency

This EIR was prepared in accordance with all criteria, standards, and procedures of CEQA (PRC Section 21000 et seq.) and the CEQA Guidelines (14 CCR 15000 et seq.).

Pursuant to CEQA Section 21067 and CEQA Guidelines Article 4 and Section 15367, the City 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 has the obligation to (1) ensure that this EIR was 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's independent judgment; (4) ensure that all significant impacts 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 Project that outweigh its unavoidable adverse effects (14 CCR 15090–15093).

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

- Approve the Project;
- Require feasible changes in any or all activities involved in the Project to substantially lessen or avoid significant effects on the environment;
- Disapprove the Project, if necessary, to avoid one or more significant effects on the environment that would occur if the Project was approved as proposed; or
- Approve the Project even though the Project will 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 Conditional Use Permits (CUP21-00004 and CUP21-00005), Tentative Parcel Map (TPM 20315), Specific Plan Amendment (SPLA 21-00001), Development Agreement, and all other governmental discretionary and ministerial actions related to the Project.

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

2.3 Responsible and Trustee Agencies

Responsible and Trustee Agencies

PRC Section 21104 requires that all EIRs be reviewed by state responsible and trustee agencies (see also 14 CCR 15082 and 15086[a]). As defined by CEQA Guidelines Section 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 Section 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 this Project, the California Department of Fish and Wildlife is a trustee agency, because the Project has the potential to impact plant and wildlife species that are managed and protected by the state.

Other Agencies from Whom Ministerial Approvals May Be Required

An encroachment permit from the California Department of Transportation would be required to accommodate off-site roadway improvements within U.S. Highway 395.

2.4 Summary of Project Analyzed in this Environmental Impact Report

The proposed Project would provide 414,700 square feet of industrial/warehouse space and include associated improvements, such as loading docks, tractor-trailer stalls, passenger vehicle parking spaces, stormwater detention basins, and landscape area. It is anticipated that the facilities would be operated 24 hours a day, 7 days a week. At this time, the project applicant does not anticipate leasing any portion of the buildings to a tenant that would require refrigerated space. The Project would include off-site improvements along Mesa Linda Street, Lassen Street, and Poplar Street, including frontage landscaping and pedestrian improvements. A variety of trees, shrubs, plants, and land covers would be planted within the Project frontage's landscape setback area, as well as within the landscape areas found around the proposed industrial/warehouse buildings and throughout the Project site.

2.4.1 Requested Approvals

The following discretionary and ministerial actions under the jurisdiction of the City would be required. This EIR covers all state and local government, and quasi-government approvals that may be needed to implement the Project, whether or not they are explicitly listed in this section or elsewhere in this EIR (14 CCR 15124[d]). Details regarding each of these approvals is provided in Chapter 3, Project Description.

Discretionary Approvals

Development Review Committee

- **Administrative Review.** An administrative review by the Development Review Committee is held in order to review the Project. Such review will yield a recommendation and/or ruling by City administrative staff.

Planning Commission

- **Project Review.** A review by the Planning Commission is held in order to review the Project, including all requested entitlements. Such review will yield a recommendation to the City Council.
- **Recommendation Certification of EIR.** The Planning Commission will review the EIR and make a recommendation to the City Council to certify or reject this EIR, along with appropriate CEQA Findings and the mitigation monitoring and reporting program.

City Council

- **Conditional Use Permit.** Project implementation would require approval of a Conditional Use Permit (CUP21-00010) by the Planning Commission. The Main Street and Freeway Corridor Specific Plan (MSFCSP) requires review and approval of a Conditional Use Permit (CUP) for warehousing and wholesale distribution centers over 200,000 square feet located in the Main Street/I-15 District of the Specific Plan. The building includes more than 200,000 square feet of total building area, and thus, a CUP would be required.
- **Parcel Merger.** Project implementation would require merging the two APNs within the project boundary into one, 17.87-acre lot.
- **Certification of EIR.** Certify or reject this EIR, along with appropriate CEQA Findings and the mitigation monitoring and reporting program.
- **Development Agreement.** The potential for the Approval of a Development Agreement between the City and the Project Applicant pursuant to Section 16.12.085 of the Hesperia Municipal Code.

Ministerial Approvals

City of Hesperia Subsequent Implementing Approvals

- Approvals for water, sewer, and storm drain infrastructure
- Remove and relocate on-site protected native desert plants
- Issue grading permits
- Issue building permits
- Issue encroachment permits

2.4.2 Project of Statewide, Regional, or Area-Wide Environmental Significance

CEQA Guidelines Section 15206 identifies the types of projects considered to be of statewide, regional, or area-wide significance. When a project is so classified, its EIR must be submitted to the State Clearinghouse of the Governor's Office of Planning and Research, and the appropriate metropolitan area council of governments. This Project meets the following criteria of a project of statewide, regional, or area-wide significance:

- The Project has the potential for causing significant environmental effects extending beyond the City of Hesperia.

2.5 Scope of this Environmental Impact Report

2.5.1 Notice of Preparation Scoping Process

The purpose of this EIR is to evaluate the potential environmental impacts associated with implementation of the Project. The City concluded that the Project could potentially have direct or indirect adverse effects on the environment. Accordingly, the City determined the need for preparation of an EIR for the Project. The scope of this EIR includes the potential environmental impacts identified in the Initial Study/Notice of Preparation (IS/NOP) that was available for public review from August 11, 2022, through September 9, 2022, and agency and public written comment received in response to the NOP. No comments were received during the public scoping meeting held on August 24, 2022. at the Hesperia City Hall.

A summary of these written comment letters is provided in Table 2-1. The written comments and the NOP are included as Appendix A of this EIR.

Table 2-1. Summary of Initial Study/Notice of Preparation Comments

Commenter	Date	Summary of Environmental Issues Raised	EIR Chapter/Section Where Comment is Addressed
State Agency			
Native American Heritage Commission	August 24, 2022	• Recommendations for tribal consultation and consulting legal counsel regarding compliance with Assembly Bill 52, Senate Bill 18, and other applicable laws.	Section 4.4, Cultural, Tribal Cultural, and Paleontological Resources
Mojave Desert Air Quality Management District	August 17, 2022	▪ Recommendations for mitigation measures to be implemented during Project construction, such as a dust control plan, routine watering, permitter fencing, and maintenance of dirt access roads. ▪ Requests analysis of Project's potential impacts to sensitive receptors and inclusion of mitigation measures, if necessary.	Section 4.2, Air Quality
Private Organizations and Members of the Public			
Center for Biological Diversity	August 23, 2022	▪ Potential impacts relating to western Joshua trees, and recommendations for what should be included within any relocation plan prepared for Joshua trees.	Section 4.3, Biological Resources

2.5.2 Environmental Issues Determined not to Be Significant

Pursuant to CEQA, the discussion of potential environmental impacts is focused on those impacts that could be significant or potentially significant. CEQA allows the lead agency to limit the detail of discussion of the environmental impacts that are not considered potentially significant (PRC Section 21100; 14 CCR 15126.2[a] and 15128). CEQA requires that the discussion of any significant environmental effect be limited to substantial, or potentially substantial, adverse changes in physical conditions that exist within the affected area, as defined in PRC Section 21060.5. In accordance with CEQA Guidelines Section 15143, environmental impacts dismissed in an analysis as clearly insignificant and unlikely to occur need not be discussed further in the EIR unless the lead agency subsequently receives information inconsistent with the finding.

As part of the NOP scoping process, environmental issue areas identified in the IS prepared for the Project that were found to have no impact or a less-than-significant impact are provided in the IS (Appendix A), and Chapter 5, Effects Found Not to Be Significant of this EIR. Thus, with the exception of the impact discussion in the IS Study and Chapter 5 of this EIR, these environmental issues are not discussed at further length in this EIR:

- Agricultural and Forestry Resources
- Geology and Soils (with the exception of paleontological resources, which is discussed in Section 4.4, Cultural, Tribal Cultural, and Paleontological Resources, of this EIR)
- Hazards and Hazardous Materials (with regard to hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school; hazardous materials sites compiled pursuant to Government Code Section 65962.5; airport land use plans; and emergency response plans or emergency evacuation plans)
- Hydrology and Water Quality (with regard to flood hazard, tsunami, or seiche zones)
- Land Use and Planning
- Mineral resources
- Population and Housing
- Public Services
- Recreation

2.5.3 Environmental Issues Determined to Be Potentially Significant

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

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

- Aesthetics
- Air Quality
- Biological Resources
- Cultural, Tribal Cultural, and Paleontological Resources
- Energy

- Greenhouse Gas Emissions
- Hazards, Hazardous Materials, and Wildfire
- Hydrology and Water Quality
- Noise
- Transportation
- Utilities and Service Systems

2.6 Organization of this Environmental Impact Report

This EIR contains all of the information required to be included in an EIR, as specified by the CEQA Statutes and Guidelines (PRC Section 21000 et seq.; 14 CCR 15000 et seq.). CEQA requires that an EIR contain, at a minimum, specified content. The following provides a quick reference in locating the CEQA-required sections within this document:

- **Chapter 1: Executive Summary.** The Executive Summary provides a summary of the Project and Project alternatives, including a summary of the Project and cumulative impacts, recommended mitigation measures, and the level of significance after mitigation for each environmental issue.
- **Chapter 2: Introduction.** The Introduction provides an overview of the Project and the CEQA process, and describes the purpose, scope, and components of this EIR.
- **Chapter 3: Project Description.** The Project Description provides a detailed description of the Project, including the location and Project characteristics. The intended uses of this EIR, Project background, Project objectives, and required Project approvals are also addressed.
- **Chapter 4: Environmental Analysis.** The Environmental Analysis chapter analyzes the environmental impacts of the Project. Impacts are organized into major environmental topic areas. Each topic area includes a description of the environmental setting, regulatory setting, significance criteria, individual and cumulative impacts, mitigation measures, and level of significance after mitigation. The following specific environmental areas are addressed in Chapter 4:
  - Section 4.1 – Aesthetics
  - Section 4.2 – Air Quality
  - Section 4.3 – Biological Resources
  - Section 4.4 – Cultural, Tribal Cultural, and Paleontological Resources
  - Section 4.5 – Energy
  - Section 4.6 – Greenhouse Gas Emissions
  - Section 4.7 – Hazards, Hazardous Materials, and Wildfire
  - Section 4.8 – Hydrology and Water Quality
  - Section 4.9 – Noise
  - Section 4.10 – Transportation
  - Section 4.11 – Utilities and Service Systems
- **Chapter 5: Effects Found Not to Be Significant.** The Effects Found Not to Be Significant chapter provides a summary of Project impacts that have been determined, through preparation of the IS/NOP, to result in less-than-significant or no impact, and therefore, further discussion is not warranted. A brief discussion of these Project impacts is provided in this chapter.
- **Chapter 6: Other CEQA Considerations.** The Other CEQA Considerations chapter provides a summary of significant environmental impacts, including unavoidable, irreversible, and growth-inducing impacts.
- **Chapter 7: Alternatives.** The Alternatives chapter provides a comparison between the Project impacts and three Project alternatives: (1) the No Project/No Development Alternative, (2) No Project/Other Development Project Alternative, and (3) the Reduced Development Intensity Alternative.

- **Chapter 8: List of Preparers.** The List of Preparers chapter provides a list of the organizations, persons consulted, and various individuals who contributed to the preparation of this EIR. This section also includes a list of the lead agency personnel and technical consultants used to prepare this EIR.
- **Appendices.** The technical appendices contain the NOP (including public comments) and technical studies prepared to support the analyses and conclusions in this EIR.

The Final EIR will be prepared after the public review period for this EIR has been completed. The Final EIR will include comments and recommendations received on the EIR during the public review period; a list of persons, organizations, and public agencies commenting on the EIR; written responses to significant environmental issues identified in the comments received; and any other relevant information added by the City.

2.7 Documents Incorporated by Reference

Pursuant to CEQA Guidelines Section 15150, this EIR has referenced several technical studies, analyses, and previously certified environmental documents. Information from these documents, incorporated by reference, is briefly summarized in the appropriate chapters and sections. The documents that were used to prepare this EIR include the following:

- City of Hesperia General Plan Update (2010)
- City of Hesperia Main Street and Freeway Corridor Specific Plan (2021 [Updated])
- Hesperia Municipal Code (Code of Ordinances) (2021 [Updated])
- County of San Bernardino Countywide Plan (General Plan) (2020)

These reference documents, in accordance with CEQA Guidelines Section 15150(b), are available for review at the following online locations:

City of Hesperia General Plan

https://www.cityofhesperia.us/DocumentCenter/View/15728/General-Plan-Update-August-2019

City of Hesperia Main Street and Freeway Corridor Specific Plan

https://www.cityofhesperia.us/DocumentCenter/View/15940/MSFCSP-update

Hesperia Code of Ordinances

https://library.municode.com/ca/hesperia/codes/code_of_ordinances

County of San Bernardino Countywide Plan (General Plan)

http://countywideplan.com/

2.8 Documents Prepared for the Project

The following technical studies and analyses were prepared for the Project and Project site and are incorporated into the technical appendices of this EIR:

- Initial Study, Notice of Preparation, and Scoping Comments (Appendix A)
- Air Quality and GHG Emission Estimates, prepared by Dudek in October 2022 (Appendix B-1)
- Health Risk Assessment, prepared by Dudek in October 2022 (Appendix B-2)
- South Coast Air Quality Management District and the San Joaquin Valley Air Pollution Control District full amicus briefs, various dates (Appendix B-3)
- Biological Technical Report, prepared by Dudek in August 2022 (Appendix C)
- Cultural Resources Assessment Report, prepared by Dudek in August 2022 (Appendix D)
- Geotechnical Reports, prepared by Southern California Geotechnical in April 2022 (Appendix E)
- Phase I Environmental Site Assessment, prepared by Consolidated Consulting Group LLC in October 2020 (Appendix F)
- Preliminary Drainage Report, prepared by WestLAND Group Inc. in September 2022 (Appendix G-1)
- Preliminary Water Quality Management Plan, prepared by WestLAND Group in May 2022 (Appendix G-2)
- Water Supply Assessment Report, prepared by KEC Engineers, Inc. in August 2022 (Appendix G-3)
- Field Noise Data, prepared by Dudek in October 2021 (Appendix H-1)
- Construction Noise Modeling Data, prepared by Dudek in October 2021 (Appendix H-2)
- Traffic Noise Modeling Data, prepared by Dudek in October 2021 (Appendix H-3)
- On-Site Noise Modeling Data, prepared by Dudek in October 2021 (Appendix H-4)
- Transportation Attachments, prepared by Dudek in October 2022 (Appendix I).

2.9 Review of the Draft Environmental Impact Report

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

In Person:

Hesperia City Hall, Planning Department
9700 Seventh Avenue
Hesperia, California 92345

Hesperia Branch Library
9650 Seventh Avenue
Hesperia, California 92345

Online:

https://www.cityofhesperia.us/312/Planning

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

Ryan Leonard, Senior Planner
City of Hesperia Planning Department
9700 Seventh Avenue
Hesperia, California 92345
Phone: 760.947.1651
Email: rleonard@cityofhesperia.us

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

3 Project Description

This chapter describes the objectives of the Poplar 18 Project (Project) and the Environmental Impact Report (EIR) and provides a detailed description of the Project characteristics. This chapter also discusses the required development approvals and discretionary actions necessary to implement the Project.

3.1 Project Location

The approximately 17.87-acre Project site is located in the western part of the City, which is within the Victor Valley region of San Bernardino County (Figure 3-1, Regional Map; Figure 3-2, Vicinity Map; Figure 3-3, Project Site Aerial). The Project site is located on the southwest quadrant of I-15 and Main Street, south of Main Street, west of Mesa Linda Street, north of I-15 and Poplar Street, and east of U.S. Highway 395 and Lassen Road. The Project site consists of two parcels: Assessor's Parcel Numbers (APNs) 3064-581-04-0000 and 3064-581-05-0000. Specifically, the Project site is located in Section 22, Township 4 North, Range 5 West, as depicted on the U.S. Geological Survey Baldy Mesa, California 7.5-minute topographic quadrangle map.

Regional access to the Project site is provided via I-15, directly east of the Project site, and U.S. Highway 395, directly west of the Project site. Local access to the Project site is provided via Poplar Street, Lassen Road, Sultana Road or Mesa Linda Street.

3.2 Environmental Setting

City of Hesperia

The City is approximately 110 square miles in the Victor Valley region of San Bernardino County. The City is located within the Mojave Desert, which is a region containing desert plains, dry lakebeds, and scattered mountains. The southern portion of the City lies at the foothills of the San Bernardino Mountains and National Forest. The City contains a variety of slope conditions, with the foothill areas containing significant slopes and the majority of the City being primarily level. The central and northern portions of the City lie upon a moderate to gentle slope with elevations ranging from 2,900 feet to 4,200 feet above mean sea level. Generally, the City is an urban community with a broad mix of land uses, including housing, commercial, office, industrial, agriculture, and public-serving uses. The eastern and southern portions of the City contain generally rural residential uses. Commercial uses follow Main Street, Bear Valley Road, and Hesperia Road, and the freeway corridor. Industrial uses are generally divided into two areas: west of I-15 and east of U.S. Highway 395, and the eastern area between the BNSF railroad lines and I Avenue north of Main Street.

The City is bordered by the City of Victorville to the north, the City of Apple Valley to the east, unincorporated San Bernardino County land to the south, and the unincorporated community of Oak Hills to the west. Three highways provide direct access to the City: I-15 runs north–south on the west side of the City; U.S. Highway 395 connects to I-15 on the west side; and State Route 138 passes through the southeastern corner of the City (City of Hesperia 2010).

Existing Project Site

The Project site is comprised of two parcels, APNs 3064-581-04-0000 and 3064-581-05-0000, totaling approximately 17.87 acres. The Project site is currently vacant undeveloped property bound to the west by Lassen Road, to the east by Mesa Linda Street, and to the south by Poplar Street. It should be noted that Lassen Road has not yet been constructed but is a planned arterial road in the City's Circulation Element (City of Hesperia 2010).

Ground surface cover consists of moderate native brush and shrub growth with occasional Joshua and Juniper trees located throughout the site. The Project site is subject to disturbance as a result of illegal dumping and trespassing. These unpermitted activities have led to areas of exposed bare soils (where trails have formed) and several debris piles. Figure 3--4, Existing Conditions, provide representative photographs of the Project site.

The site's surface elevation ranges between approximately 3,590 and 3,615 feet above mean sea level. The local topographic gradient is approximately 2% downward towards the northeast (Figure 3-5, Topographic Map).

The Project site is located within the Main Street and Freeway Corridor Specific Plan (MSFCSP), which became effective October 16, 2008. According to the City's General Plan Land Use Map and the MSFCSP, the land use and zoning designations for the Project site are Commercial/Industrial Business Park (CIBP) (City of Hesperia 2020). (Figure 3-6, Existing Land Use Designation and Figure 3-7, Existing Zoning). The goals, policies, and development standards within the MSFCSP applicable to the proposed Project are detailed in the regulatory sections of each resources section.

The MSFCSP employs a district concept to guide development and shape the character of areas within the Specific Plan Area. The Project is located within the Highway 395/I-15 District (Figure 3-8, Main Street and Freeway Corridor Specific Plan Land Use Districts).

According to the Specific Plan, the Highway 395/Interstate-15 District is intended to provide enhanced vehicular, truck, and rail accessibility for commercial/industrial business park uses by taking advantage of its location along the I-15 corridor with its connection to U.S. Highway 395, and its linkage to the Southern California Logistics Airport, a major logistics hub, located approximately 11 miles north of the Project site via U.S. Highway 395 in the City of Victorville. Per the MSFCSP, the recommended district land uses build upon the presence of a major truck stop and other existing and planned light industrial uses. The purpose of this district is to create employment-generating uses in a business park setting. The kind of industrial uses envisioned in this District include light industrial, light manufacturing, and industrial support uses, mainly conducted in enclosed buildings, with minimal environmental impacts. The Project is consistent with these types of uses.

Land uses surrounding the Project site primarily consist of vacant land, along with some scattered residential, commercial, light industrial, and utility uses. Specific land uses located in the immediate vicinity of the Project site include the following:

- **North:** Sultana Road
- **East:** Mesa Linda Street and I-5
- **South:** Poplar Street
- **West:** Lassen Road and U.S. Highway 395

In the broader Project vicinity, development includes commercial uses, trucking-related uses (i.e., truck stops), lodging accommodations, big-box retail developments, and residential subdivisions. Figure 3-9, Project Development Setting, depicts existing development within the vicinity of the Project site.

As discussed in further detail below in Section 3.4.1, utility infrastructure currently exists along Phelan Road and U.S. Highway 395 to serve the Project site. Existing infrastructure in the Project vicinity includes water and sanitary sewer transmission mains, electrical transmission and distribution lines, and cable and telephone lines. The Project would require the installation of new utility infrastructure to connect to the existing infrastructure that is present adjacent to the Project site and meet the needs of the proposed Project.

Local connectivity to the Project site from the center of the City and surrounding urban communities is provided via Main Street, U.S. Highway 395, and I-15, all of which are located in the immediate vicinity of the Project site. Additionally, as discussed in Section 4.10, Transportation, the Project is currently served by the Victor Valley Transit Authority, a public transit agency serving the Victor Valley area within San Bernardino County, with bus service along Mariposa Road, Main Street, Bear Valley Road, and Escondido Avenue (City of Hesperia 2019).

Cumulative Setting

In many cases, the impact of an individual project may not be significant, but its cumulative impact may be significant when combined with impacts from other related projects. California Environmental Quality Act (CEQA) Guidelines Section 15355 defines cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." CEQA Guidelines Section 15130(b) states that "the discussion [of cumulative impacts] need not provide as great detail as is provided for the effects attributable to the project alone." Section 15130(b) further states that a cumulative impacts discussion "should be guided by standards of practicality and reasonableness."

Cumulative impacts can also occur from the interactive effects of a single project. For example, the combination of noise and dust generated during construction activities can be additive and can have a greater impact than either noise or dust alone. However, substantial cumulative impacts more often result from the combined effect of past, present, and future projects located in proximity to a proposed project. Thus, it is important for a cumulative impacts analysis to be viewed over time and in conjunction with other related past, present, and reasonably foreseeable future projects, the impacts of which might compound or interrelate with those of the project under review.

As provided by CEQA Guidelines Section 15130(b), the following elements are necessary to an adequate discussion of cumulative impacts:

- Either: (A) a list of past, present, and reasonably anticipated future projects producing related or cumulative impacts, including those projects outside the control of the agency; or (B) a summary of projections contained in an adopted general plan or related planning document that is designed to evaluate regional or area wide conditions. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.
- A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available.
- A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable options for mitigating or avoiding any significant cumulative effects of the proposed projects.

For the analysis of cumulative impacts associated with the Project, a cumulative project list was developed through consultation with the City staff, including but not limited to the City's Transportation Engineering Division staff during the traffic scoping process, as well as research and the understanding of other past, present, or reasonably foreseeable project that might be cumulative considerable for the Project. Table 3-1 provides a list of these cumulative projects and their associated land use. Cumulative project locations are shown in Figure 3-10, Cumulative Projects.

Table 3-1. Cumulative Projects

ID[1]	Project Name[2]	Use	Size (square feet)
H1	CUP21-00006	Automotive Care Center	13,813
H2	U.S. Cold Storage (CUP21-00003)	High-Cube Cold Storage Warehouse	491,000
H3	CUP21-00001	Automobile Care Center	12,800

Table 3-1. Cumulative Projects

ID[1]	Project Name[2]	Use	Size (square feet)
H4	CUP20-00007	Automobile Care Center	12,765
H5	Pixior Warehouse (CUP20-00006)	High-Cube Fulfillment Center Warehouse	440,000
H6	Hesperia Commerce Center II (CUP19-00010)	General Light Industrial	1,383,781
		High-Cube Fulfillment Center Warehouse	2,361,648
H7	CUP19-00006	Automobile Parts and Service Center	3,100
		General Office Building	3,100
		Automobile Care Center	6,000
		Car Wash and Detail Center	7,200
H8	CUP18-00003	Convenience Market	4,631
		Fast-food Restaurant without Drive-Through Window	1,858
		Gasoline/Service Station	5,110
		Automated Car Wash	1,343
		Food Cart Pod	2,330
H9	Hesperia Commerce Center	High-Cube Fulfillment Center Warehouse	3,500,000
H10	I-15 Industrial Park Project	High-Cube Fulfillment Center Warehouse	647,500
H11	Buddhist-Town at Holy Heavenly Lake	Recreational Community Center	—
H12	Tapestry Specific Plan	—	—
H13	CUP22-00003	High-Cube Fulfillment Center Warehouse	750,000
H14	CUP22-00004	High-Cube Fulfillment Center Warehouse	400,000
H15	CUP22-00006	RV Storage	97,250
H16	Kaiser Permanente – Hesperia	Medical Office	55,000

Source: City of Hesperia 2022.
Notes:
1 Corresponds with Figure 3-10, Cumulative Projects.
2 Common project names and conditional use permit (CUP) case numbers provided if available.

3.3 Project Objectives

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

Purpose and Need

The High Desert/Victor Valley region has long been identified as an area having a low jobs–housing ratio (i.e., an area that has more potential workers living in a community than there are jobs for them),[1] resulting in high numbers of residents commuting out of the region for work. The City of Hesperia has estimated that approximately 73% of workers residing in Hesperia commute out of the area to the Inland Empire cities and the broader Los Angeles region (City of Hesperia 2016). Although these conditions can be attributed to a number of factors, the most notable variable in the jobs-to-housing ratio is the lack of jobs growth in the region. From 2010 to 2015, the region's job growth rate was 7.0% compared to a population growth rate of 25.5%. A low jobs-to-housing ratio can result in adverse environmental and economic effects on local communities. Long-distance commutes result in increased traffic and air quality and greenhouse gas emissions, and out-of-region commuters often take a share of their purchasing power with them when they make purchases away from home.

Recognizing these trends, community leaders and officials have long sought to stimulate economic development within the High Desert region and provide residents with local employment opportunities. One strategy that community leaders and planners have used is to attract development of warehousing and distribution centers, which can provide hundreds of jobs per million square feet of development. Conventional and e-commerce retailers are continuing to embrace the strategy of creating and staffing large regional fulfillment centers, with the goal of quickly responding to online consumers. Because of its available land and infrastructure for large logistics facilities, many companies are locating their regional operations to the High Desert area.

As such, the Project would help meet the needs of the growing logistics sector while producing new jobs in a region that is typically viewed as housing rich and jobs poor.

Project Objectives

Consistent with the Project's purpose and need, the primary objectives sought by the Project are as follows:

- **Objective 1:** Develop a jobs-producing and tax generating land use near transportation corridors within the housing-rich Victor Valley/High Desert region that is constructed to high standards of quality and provides diverse economic opportunities for those residing and wishing to invest within the City of Hesperia.
- **Objective 2:** Concentrate nonresidential uses near existing roadways, highways, and freeways in an effort to isolate and reduce any potential environmental impacts related to truck traffic congestion, air emissions, industrial noise, and biological resources to the greatest extent feasible.
- **Objective 3:** Develop a fiscally sound and employment-generating land use that maximizes use of industrial zoned areas.
- **Objective 4:** Create a project that takes advantage of and enhances existing infrastructure, including the proximity to major regional roadways such as Interstate 15 and U.S. Highway 395, railroad service corridors, and other similar infrastructure that will help promote the site and its use as an industrial business park.
- **Objective 5:** Fulfill the existing and growing demand for logistics and warehouse uses in the region.

[1] A jobs–housing ratio is a commonly used economic metric used to determine whether or not a community or region provides a sufficient number of jobs for its residents. The metric is calculated by finding the relationship between where people work ("jobs") and where they live ("housing"). As of 2016, the City had a jobs/housing ratio of 0.44, well off of regional targets ranging from 1.25–1.50 (City of Hesperia 2016).

3.4 Project Characteristics

3.4.1 Project Components

The Project would include construction of an industrial warehouse building and associated improvements on 17.87 acres of vacant land (see Figure 3-11, Site Plan and Figure 3-12, Detailed Site Plan). It should be noted the net acreage of 17.62 acres shown on Figure 3-11, Site Plan represents the total site acreage minus the required setbacks from the centerlines of the adjacent roadways. The proposed Project would provide 414,700 square feet of industrial/warehouse space and include associated improvements, such as loading docks, tractor-trailer stalls, passenger vehicle parking spaces, stormwater detention basins, and landscape area. Office space within the building would be distributed among four individual office spaces in each of the corners of the building. The building would have a maximum height of 50 feet, measured from the finished floor to the top of the building parapets and would have a gross floor area ratio of 53.3%.

The Project would include off-site improvements along Mesa Linda Street, Lassen Street, and Poplar Street, including frontage landscaping and pedestrian improvements. A variety of trees, shrubs, plants, and land covers would be planted within the Project frontage's landscape setback area, as well as within the landscape areas found around the proposed industrial/warehouse buildings and throughout the Project site.

To account for the maximum potential disturbance associated with all on-site and off-site improvements, a maximum disturbance footprint has been developed, as shown on Figure 3-11, Site Plan. Specific, known improvements are depicted on this figure. Areas in which lateral utility connections may occur or where other roadway and pedestrian improvements may be necessary are also depicted. Together, these off-site improvements are referred to as the Off-Site Street and Utility Improvements. Table 3-2 provides a summary of these improvements.

Table 3-2. Project Improvement Areas

Improvement Area	Project Components
Project Site	Industrial warehouse building totaling 414,700 square feet and associated on-site roadways, trailer/automobile parking, and landscaping
Off-Site Street and Utility Improvements	Possible lateral connections for utilities and other roadway and pedestrian improvements (e.g., road repaving or installation of sidewalks along building frontages)

Note: See Figures 3-11, Site Plan and 3-12, Detailed Site Plan.

Site Access, Circulation, and Parking

Access to the Project site would be provided by four driveways (Figure 3-13, Vehicular Circulation and Access Plan):

- Lassen Road North Driveway – 45-foot-wide, full-access (passenger cars and trucks) driveway with stop sign
- Lassen Road South Driveway – 30-foot-wide, full-access (passenger cars only) driveway with stop sign
- Mesa Linda Street North Driveway – 45-foot-wide, full-access (passenger cars and trucks) driveway with stop sign
- Mesa Linda Street South Driveway – 30-foot-wide, full-access (passenger cars only) driveway with stop sign

Consistent with Hesperia Fire Department access requirements, all Project driveways have been designed to allow for minimum turning radii. Signage and striping would be provided to demarcate fire lanes and clear spaces

throughout the site. All gated entryways to truck courts would include rapid-access Knox boxes to provide emergency access to gated areas.

Paved passenger vehicle parking areas would be provided within areas west, northeast, and east of the building, while tractor-trailer stalls and loading docks would be located north of the building. In total, the Project would provide approximately 54 loading dock positions, approximately 54 tractor-trailer stalls, and approximately 182 passenger vehicle parking spaces (including accessible and electric vehicle [EV] charging stalls). Parking areas would include designated areas for EVs and these spaces would be equipped with automobile EV charging stations with Level 2 or faster chargers.

Off-Site Roadway Improvements

To facilitate adequate on-site circulation, sufficient site access for both passenger vehicles and trucks, and to ensure efficient off-site circulation on nearby roadway facilities, the Project would include off-site improvements that include street improvements along the frontage of the Project on Poplar Street, Lassen Road, and Mesa Linda Street.

Utility Improvements

Given the vacant, undeveloped nature of the Project site, both wet and dry utilities, including domestic water, sanitary sewer, and electricity, would need to be extended onto the Project site. These utilities are described in detail below.

Domestic Water

Domestic water service would be provided by the Hesperia Water District Company. Within the immediate vicinity of the Project site, existing water lines include water lines within Poplar Street and Mesa Linda Street.

Sanitary Sewer

Sanitary sewer service would be provided the Hesperia Water District. Within the immediate vicinity of the Project site, existing sewer lines include a gravity line starting east of Highway 395 in line with Sultana Street (to the north of the Project site) and another also going from east to west along Poplar Street.

Storm Drainage

A new engineered stormwater drainage system would be constructed on the Project site to collect and treat on-site stormwater (see Figure 3-12, Detailed Site Plan). Post-development, stormwater flows would be captured on site and treated within a series of aboveground and underground infiltration facilities. At-grade stormwater detention basins would be located in the northwest and northeast corners of the Project site. Stormwater flows would be conveyed via sheet flows away from buildings and where possible, through below-grade, landscaped areas prior to entering the nearest catch basin and subsequently being conveyed to the infiltration and retention facilities. The landscaped areas would act as the first filter for detaining suspended solids in stormwater flows. The detention basins would be planted with native grasses and erosion control vegetation along their side banks. Concrete forebays or riprap would accumulate a majority of the trash and sediment within the stormwater prior to entering the earthen basins.

The Project and its new stormwater drainage system would capture and attenuate stormwater consistent with City and County stormwater requirements, including requirements in the San Bernardino County Hydrology Manual and Mojave Watershed Technical Guidance. In addition, it would attenuate flows beyond what is required. Specifically, the

Project's stormwater system has been designed such that it would retain and infiltrate the entire volume generated from a 100-year storm event, and no stormwater runoff would be released off site during this event. For additional information, refer to Section 4.8, Hydrology and Water Quality.

Gas, Electric, and Telecommunication Facilities

Upgrades would be required with respect to electric power, natural gas, and telecommunication facilities (i.e., cable television services). These utilities would be part of a dry utility package that would be installed on site from their locations immediately fronting the Project site to provide service to the Project.

Architecture

The Project's design employs a variety of architectural strategies to create a contemporary, unified, and high-quality business park campus environment. Building facades would feature a complementary neutral color palette and a variety of building materials, similar to other industrial development located throughout the City and region (Figure 3-14, Schematic Rendering). Building elevations include vertical and horizontal elements that would break up the overall massing of the buildings (Figure 3-15, Architectural Elevations).

In an effort to ensure that current and future development within the City is designed and constructed to conform to existing visual character and quality of the surrounding built environment, the City of Hesperia Development Code (Title 16 of the City's Municipal Code) includes design standards related to building size, height, floor area ratio, and setbacks, as well as landscaping, signage, and other development standards that have an effect on visual considerations. These design standards help adjacent land uses to be visually consistent with one another and their surroundings and reduces the potential for aesthetic conflict. The design specifications of all development proposals submitted to the City are reviewed for compliance with all applicable provisions set forth by the Development Code, and in the case of the Project (because it is subject to the Specific Plan), the provisions of the Specific Plan. As part of the City's development review process, the Project's architectural plans are reviewed by City staff and the Planning Commission to determine whether Project design conforms to the Development Code and Specific Plan and promotes the visual character and quality of the surrounding area.

Landscaping and Lighting Improvements

As depicted in Figure 3-16, Landscape Plan, landscaping is proposed for the passenger vehicle parking areas, around the portions of the buildings visible from off-site areas, as well as the site's frontages with Poplar Street, Lassen Road, and Mesa Linda Street. Landscaping along the site's frontages would include a mixture of trees, shrubs, and groundcover. Proposed trees include 15-gallon Blue Palo Verde, Desert Willow, Coulter Pine, Chinese Elm, Southern Live Oak, and Chilean Mesquite. Approximately 15 western Joshua trees currently on the Project site would be incorporated into the Project's landscape plan. The planting of these trees would be done in accordance with the Joshua Tree Preservation, Protection, and Relocation Plan and Desert Native Plant Relocation Plan for the Poplar 18 Project, included as Attachment B to the Biological Resources Technical Report (Appendix C).

Joshua trees that are proposed to be removed have been transplanted or stockpiled for future transplanting wherever possible. In the instance of stockpiling the permittee has posted a bond to ensure such Joshua trees are transplanted appropriately.

The landscaping materials along the Project frontages incorporate a layering concept to provide different height trees and border or accent shrubs and low ground cover. Plant material is selected for low water and low

maintenance. Landscaping is designed to be consistent with Section 16.20.610 of the City's Municipal Code (City of Hesperia 2021b).

Project lighting would feature a mix of pole-mounted and wall-mounted lighting fixtures. Consistent with Section 16.16.415 of the City's Municipal Code, exterior lighting would be located and designed to avoid direct glare onto adjacent properties and public rights-of-way (City of Hesperia 2021b).

Rooftop Solar

At a minimum, the roofs of the Project's warehouse buildings would be designed to provide the structural capacity to accommodate roof-top solar panels. Additionally, each building would be equipped with rooftop solar panels to the extent feasible, with a capacity that matches the maximum allowed for distributed solar connections to the grid. As the capacity for solar connections increase, additional solar panels would be added to the Project.

Operational Characteristics

A tenant for the Project has not been identified and the industrial warehouse building is considered speculative. Business operations would be expected to be conducted within the enclosed building, with the exception of the ingressing and egressing of trucks and passenger vehicles accessing the site, passenger and truck parking, the loading and unloading of trailers within designated truck courts/loading areas, and the internal and external movement of materials around the Project site via forklifts, pallet jacks, yard hostlers, and similar equipment. It is anticipated that the facilities would be operated 24 hours a day, 7 days a week. Cold storage would not be permitted.

In general, the Project has been designed such that business operations would be conducted within the enclosed building, with the exception of traffic movement, passenger and truck parking, the loading and unloading of trailers within designated truck courts/loading areas, and the internal and external movement of materials around the Project site via forklifts, pallet jacks, yard hostlers, and similar equipment. 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 non-diesel powered per contemporary industry standards. Within the gated truck court area, up to 54 trailers would be in designated trailer storage stalls. The Project's office and mezzanine space would support general office activities related to business operations.

Because an end user of the building has not yet been identified, specific details regarding future operational activities on the Project site are not yet available. However, for the purposes of CEQA and to ensure full disclosure on all potential allowable uses on the Project site, this environmental impact assessment assumes development of a "blend" of industrial uses. Thus, the modeling assumptions used for the air quality, health risk assessment, greenhouse gas, energy, and traffic impact analyses summarized in subsequent chapters of this Draft EIR assume a blend of "high-cube" warehouse and general light industrial uses. Under this modeling scenario, approximately 269,555 square feet would be high-cube fulfillment center use and 145,145 square feet would be general light industrial land use.

Development Agreement

A Development Agreement is contemplated as part of the Project approvals. The Development Agreement does not contemplate any additional physical improvements, other than those already identified within the Project description, analysis, and proposed mitigation for the Project. Its effect and intent are to provide sufficient time for

the development of the Project by locking in development standards and extending applicable vesting periods for the Project's entitlements.

3.4.2 Project Construction

For the purposes of analysis, it is assumed that construction of the Project would commence in or around January 2023 and conclude in October 2023, lasting approximately 11 months. The analysis contained herein is based on the following assumptions (duration of phases is approximate):

- Site preparation: 2 weeks (January 2023)
- Grading: 1.5 months (January 2023–February 2023)
- Building construction: 6 months (February 2023–August 2023)
- Paving: 1 month (August 2023–September 2023)
- Application of architectural coatings: 1 month (September 2023–October 2023)

Construction activities would include site preparation (e.g., vegetation clearing, grubbing, tree removal, disking), grading, building construction, paving, and architectural coating.

Construction activities would generally occur across six phases: site preparation (e.g., vegetation clearing, grubbing, tree removal, disking), grading, building construction/utility installation, paving, and architectural coating. With the exception of architectural coating (which would only occur on the Project site), all phases would occur both on the Project site and within the Off-Site Street and Utility Improvements.

The five phases of construction are described in detail below.

Site Preparation

Project Site

Site Preparation generally refers to the removal of debris, organic materials, deleterious materials, and loose and unusable soils from a site prior to grading. During the site preparation phase, construction crews would use tractors/mowers, loaders, backhoes, and rubber-tired dozers to uproot and remove vegetation. Removed vegetation would be chipped/mulched and would be loaded into trucks that would transport the organic waste to an approved disposal facility. These activities would occur throughout the entirety of the Project site.

Notably, 13 western Joshua trees that have been identified as transplantable trees would be excavated from their current locations and stockpiled in a storage area that would be approved by a certified arborist. Trees would be removed from their current locations with the use of a front-end loader, hydraulic tree spade, or through the use of hand tools and manual digging. Western Joshua trees on the Project site that cannot be transplanted would be removed in the same manner as other trees and shrubs on the site.

Off-Site Street and Utility Improvements

The same site preparation activities described above would occur. It is assumed these activities would occur within the full extent of the public right-of-way. Given that the majority of these areas are already dirt roads, site preparation activities would largely be limited to removing vegetation and debris on the edges of the existing roadways, up to the edge of the public right-of-way.

Where utility lines would be installed within existing paved roadways, no site preparation activities would occur.

No take of western Joshua trees would occur within the off-site street and utility improvements areas.

Grading

Project Site

Following the site preparation phase, grading would occur. Grading generally refers to the process of using heavy machinery to alter the surface of a site to obtain a specified slope. Grading would involve the use of several pieces of heavy machinery, including bulldozers, track-hoe excavators, front-end loaders, dump trucks, motor graders, water trucks, and rollers for compaction. All grading would be done in accordance with a formal stormwater pollution prevention plan for the Project, which would employ best management practices, such as using hay bales and diversion ditches, to control stormwater runoff during construction. The site would not require the import or export of earthwork materials as on-site material will be balanced during the grading phase. A conceptual grading plan for the Project site, including the proposed depths of excavation are shown on Figure 3-17, Conceptual Grading Plan.

Off-Site Street and Utility Improvements

For the areas where off-site roadways and utilities would be constructed, the same grading activities described above for the Project site would occur directly within the footprint of proposed roadway improvements. All grading activities would occur within the footprint of areas that have already been disturbed as part of the site preparation phase.

Grading would not be necessary for the off-site utility alignments that would not be covered by a roadway.

Building Construction/Utility Installation

Project Site

After the site has been graded, underground utility lines would be installed and the buildings would be constructed. Installation of lateral utility lines would involve trenching using a backhoe, the placement of pipelines using a crane or tractors/loaders/backhoes, and the backfilling of the trenches. Subsequently, the building foundations would be poured and the buildings would be constructed. The proposed buildings would be constructed with a tilt-up construction method. With tilt-up construction, slabs of concrete, which comprise load-bearing sections of a building envelope or elevation, are cast horizontally on a concrete slab-on-ground. The slabs are then lifted (tilted) with a crane after the concrete has reached sufficient strength. The crane sets the panels, most often in a vertical orientation, on prepared foundations, thus forming the desired wall line from a series of consecutive panels standing next to each other. Roof structures and other internal features would subsequently be installed.

Off-Site Street and Utility Improvements

All off-site utilities would be installed within the footprints of existing and planned roadways. These utilities would be installed in the same manner as the utilities on the Project site.

Paving

Project Site

Following building construction, roadways and pavement surfaces would be constructed using pavers, paving equipment, and rollers. Lanes and parking spaces would be striped.

Off-Site Street and Utility Improvements

During this phase, the off-site roadway surfaces would be constructed in the same manner as those roadway surfaces on the Project site. Where paving occurred, existing roadways would be restriped.

Architectural Coating

Project Site

Architectural coatings would be applied to the Project site using paint sprayers powered by compressors. Coatings would be applied manually by construction crews.

Landscaping would also be installed during this phase, including the planting of the 13 transplantable Joshua trees. The planting of these trees would be done in accordance with Attachment B, Joshua Tree Preservation, Protection, and Poplar 18 Project, included as Attachment B to the Biological Resources Technical Report (Appendix C).

Off-Site Street and Utility Improvements

Architectural coatings would not be applied for this phase/area.

3.5 Standard Requirements and Conditions of Approval

The Project has been reviewed in detail by City staff. Various City departments and divisions are responsible for reviewing land use applications for compliance with City codes and regulations. These departments and divisions were also responsible for reviewing this EIR for technical accuracy and compliance with CEQA. The following City departments and divisions were responsible for technical review:

- City of Hesperia, Development Review Committee
- City of Hesperia, Planning Division
- City of Hesperia, Building and Safety Division
- City of Hesperia, Public Works Division
- City of Hesperia, Engineering Department
- San Bernardino County Fire Department

This review of the Project by the City departments and divisions listed above resulted in a comprehensive set of draft Conditions of Approval that will be available for public review prior to consideration of the Project by the Hesperia Planning Commission and Hesperia City Council. These conditions will be considered by the Planning Commission and City Council in conjunction with its consideration of the Project. If approved, the Project will be required to comply with all imposed Conditions of Approval.

Where applicable, Conditions of Approval and other applicable regulations, codes, and requirements to which the Project is required to comply and that result in the reduction or avoidance of an environmental impact are specified in each subsection of Chapter 4, Environmental Analysis, of this EIR. In addition, the Project is required by state law to comply with the California Building Standards Code and its California Green Building Standards (CALGreen) component (Title 24), which includes mandatory building standards aimed at reducing energy use.

3.6 Requested Actions

The City has primary approval responsibility for the Project. As such, the City is serving as the lead agency for this EIR, pursuant to CEQA Guidelines Section 15050. According to Hesperia Municipal Code Section 16.12.005, the Hesperia Development Review Committee is the reviewing body with the responsibility to review design of the Project and make a recommendation to the Planning Commission. According to Hesperia Municipal Code Section 16.12.085, the Planning Commission is authorized to approve or deny applications for design review and to impose conditions upon such approval. According to Hesperia Municipal Code Section 16.12.085, the City Council is authorized to enter into Development Agreements.

The following discretionary and ministerial actions under the jurisdiction of either the City of Hesperia or a responsible or trustee agency would be required. This EIR covers all federal, state, and local government and quasi-government approvals that may be needed to implement the Project, whether or not they are explicitly listed herein or elsewhere in this EIR (14 CCR 15124[d]).

Discretionary Approvals

Development Review Committee

- **Administrative Review.** An administrative review by the Development Review Committee is held in order to review the Project. Such review will yield a recommendation and/or ruling by City administrative staff.

Planning Commission

- **Project Review.** A review by the Planning Commission is held in order to review the Project, including all requested entitlements. Such review will yield a recommendation to the City Council.
- **Recommendation Certification of EIR.** The Planning Commission will review the EIR and make a recommendation to the City Council to certify or reject this EIR, along with appropriate CEQA Findings and the mitigation monitoring and reporting program.

City Council

- **Conditional Use Permit.** Project implementation would require approval of a Conditional Use Permit (CUP21-00010) by the Planning Commission. The MSFCSP requires review and approval of a Conditional Use Permit (CUP) for warehousing and wholesale distribution centers over 200,000 square feet located in the Main Street/I-15 District of the Specific Plan. The building includes more than 200,000 square feet of total building area, and thus, a CUP would be required.
- **Parcel Merger.** Project implementation would require merging the two APNs within the Project boundary into one 17.87-acre lot.

- **Certification of EIR.** Certify or reject this EIR, along with appropriate CEQA Findings and the mitigation monitoring and reporting program.
- **Development Agreement.** The potential for the Approval of a Development Agreement between the City and the Project Applicant pursuant to Section 16.12.085 of the Hesperia Municipal Code.

Ministerial Approvals

City of Hesperia Subsequent Implementing Approvals

- Approvals for water, sewer, and storm drain infrastructure
- Remove and relocate on-site protected native desert plants
- Issue grading permits
- Issue building permits
- Issue encroachment permits

3.7 References

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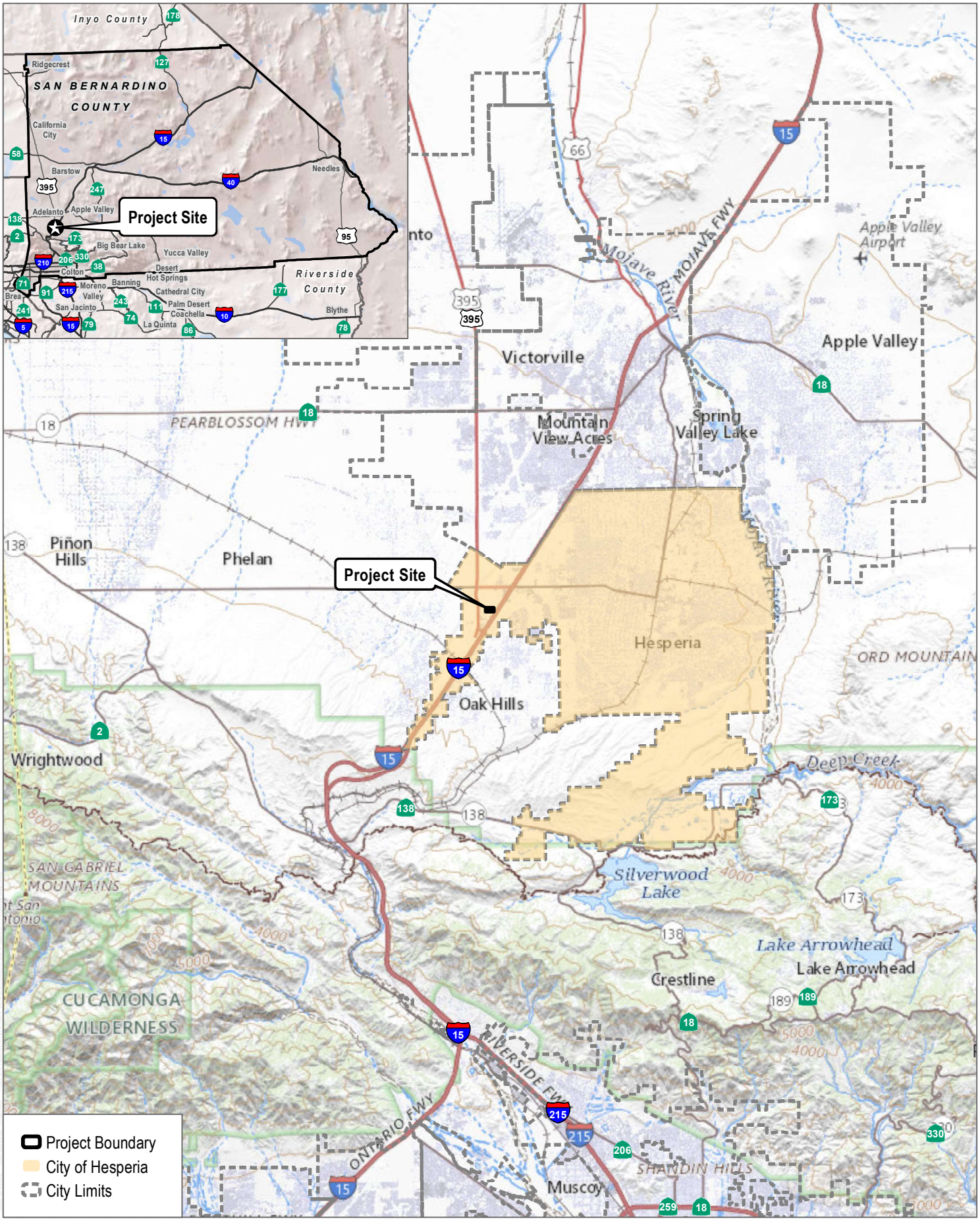

SOURCE: USGS Topo Maps 2022; County of San Bernadino 2021

DUDEK

0 10,500 21,000 Feet

FIGURE 3-1

Regional Map

Poplar 18 Project

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SOURCE: Bing Maps (accessed 2022); San Bernadino County 2021

DUDEK

0 500 1,000 Feet

FIGURE 3-2

Project Vicinity

Poplar 18 Project

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SOURCE: Esri World Imagery Basemap 2021; County of San Bernadino 2022; City of Hesperia 2020

DUDEK

0 125 250 Feet

FIGURE 3-3

Project Site Aerial

Poplar 18 Project

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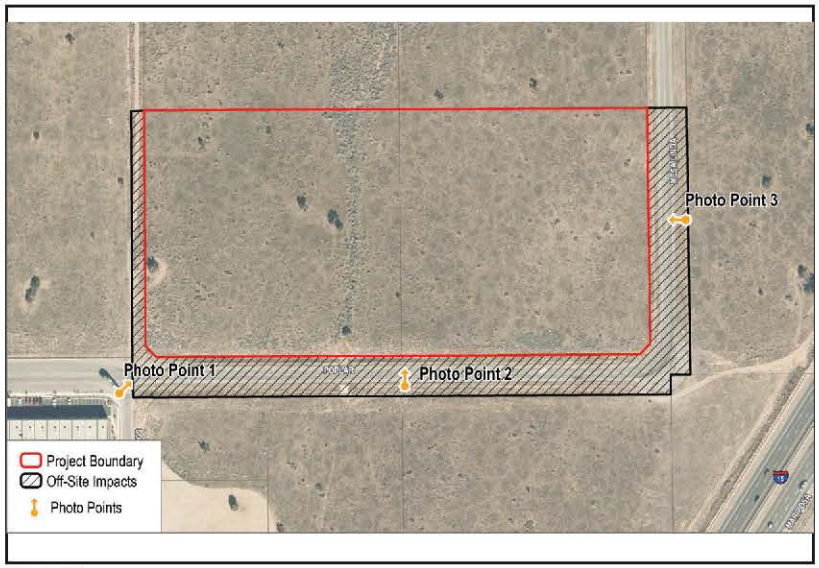

Photo Key

Photo Point 1. Northeast View from Lassen Road

Photo Point 2. Northward View from Poplar Street.

Photo Point 3. Westward View from Mesa Linda Street.

FIGURE 3-4

Existing Conditions

Poplar 18 Project

DUDEK

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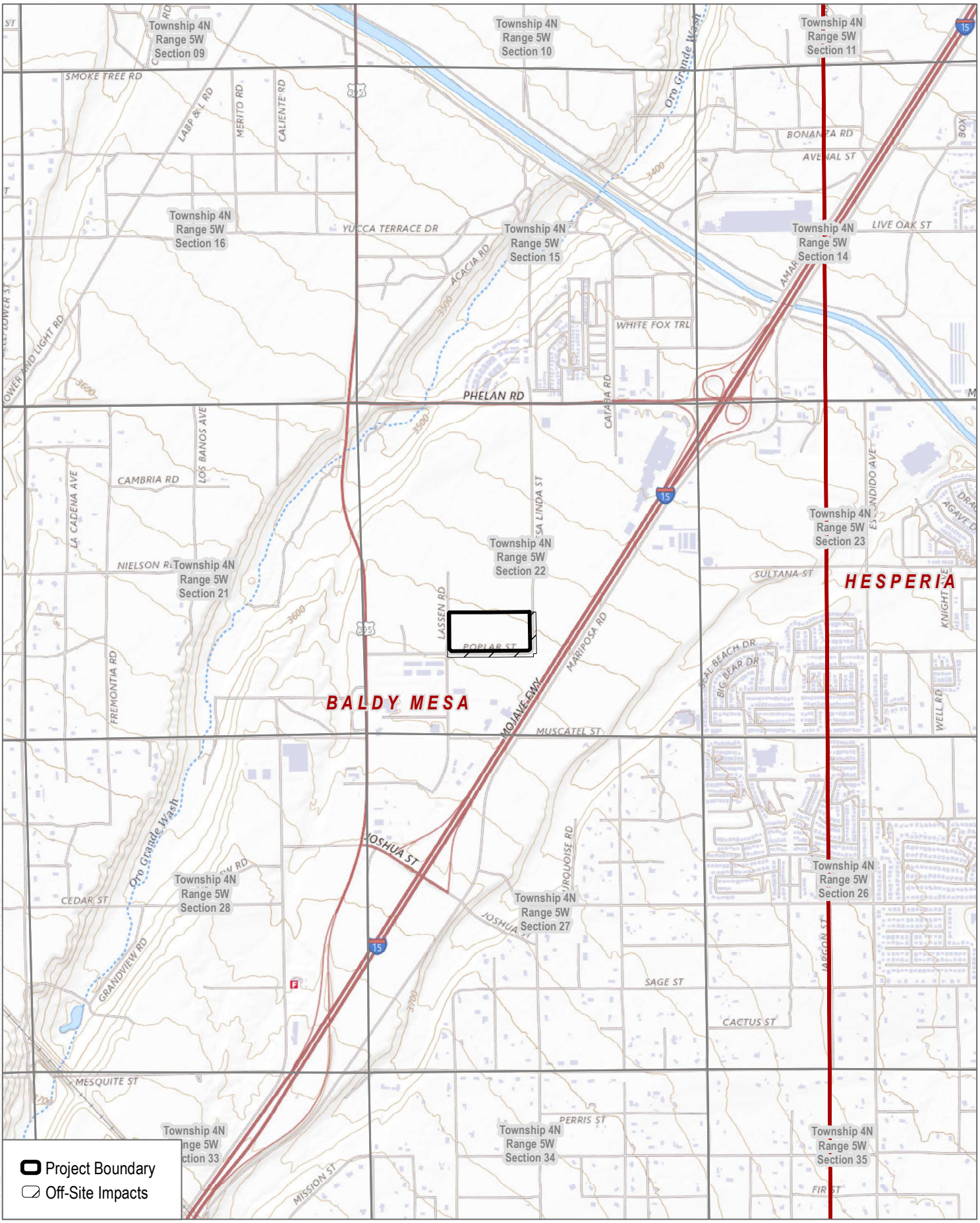

SOURCE: USGS 7.5 Minute Topo Series Baldy Mesa Quadrangle
Township 4N; Range 5W; Section 22

DUDEK

0 1,000 2,000 Feet

FIGURE 3-5

Topographic Map

Poplar 18 Project

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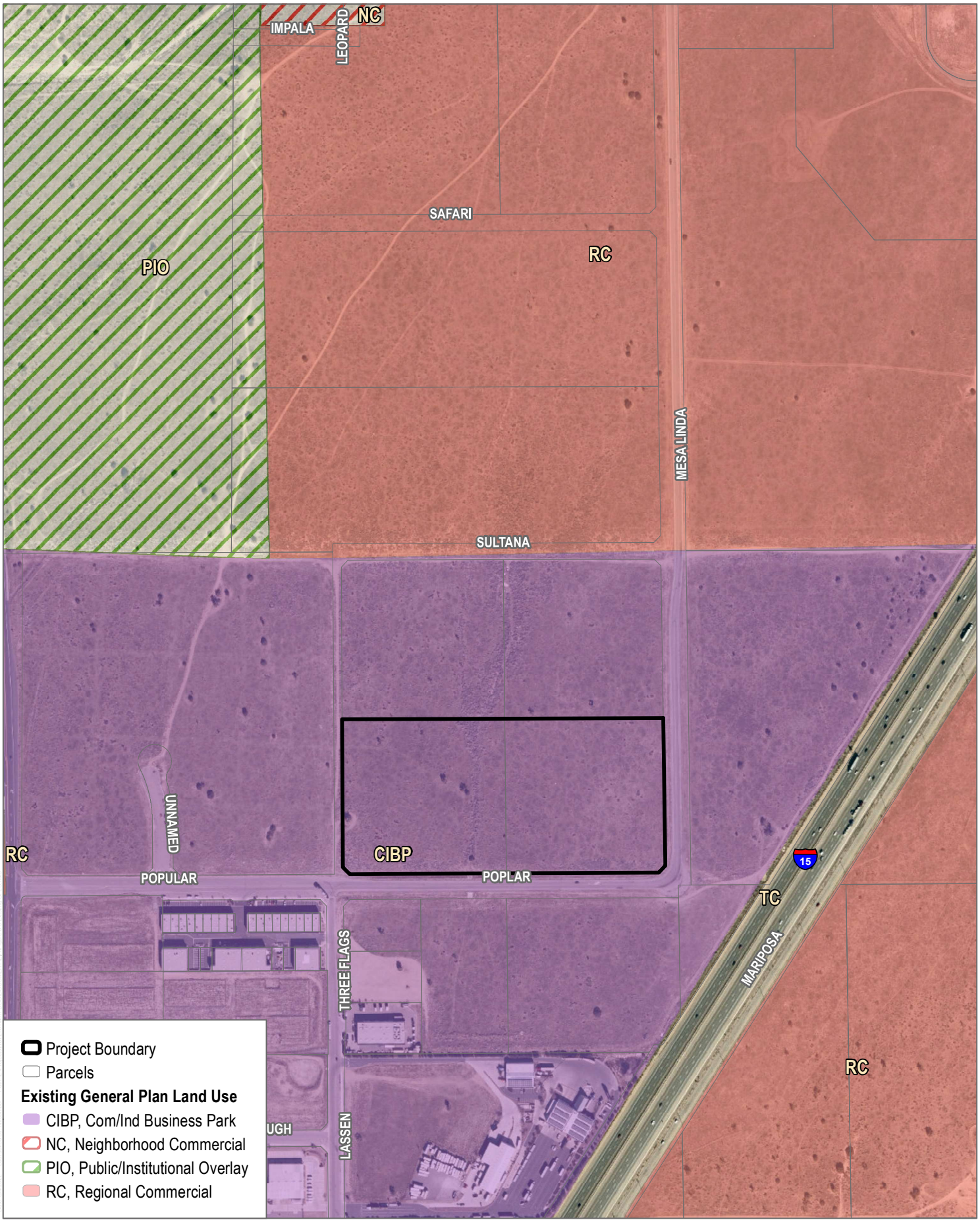

SOURCE: Esri World Imagery Basemap 2021; County of San Bernadino; City of Hesperia 2020

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0 250 500 Feet

FIGURE 3-6

Existing General Plan Land Use

Poplar 18 Project

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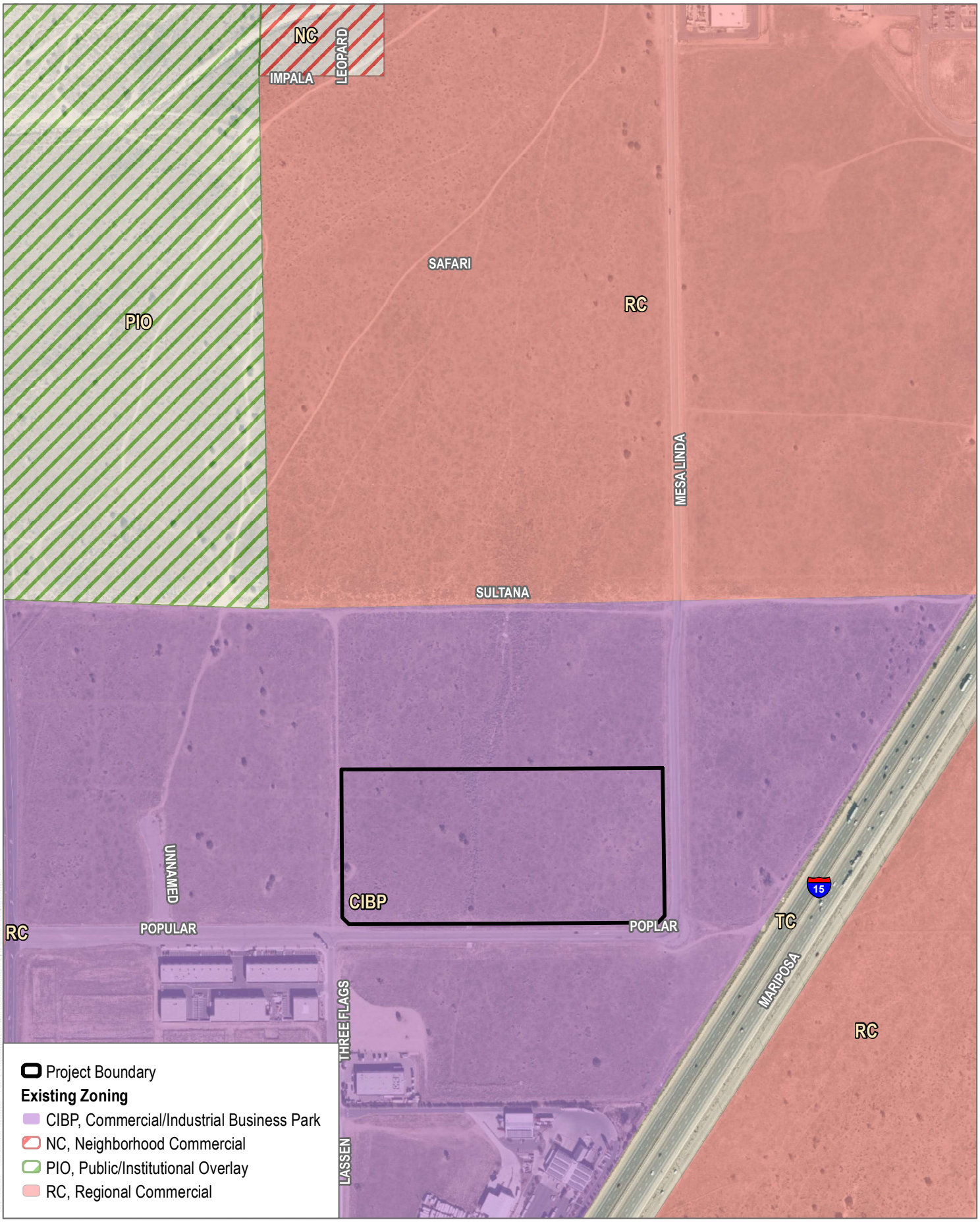

SOURCE: Esri World Imagery Basemap 2021; County of San Bernadino 2022; City of Hesperia 2020

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FIGURE 3-7

Existing Zoning

Poplar 18 Project

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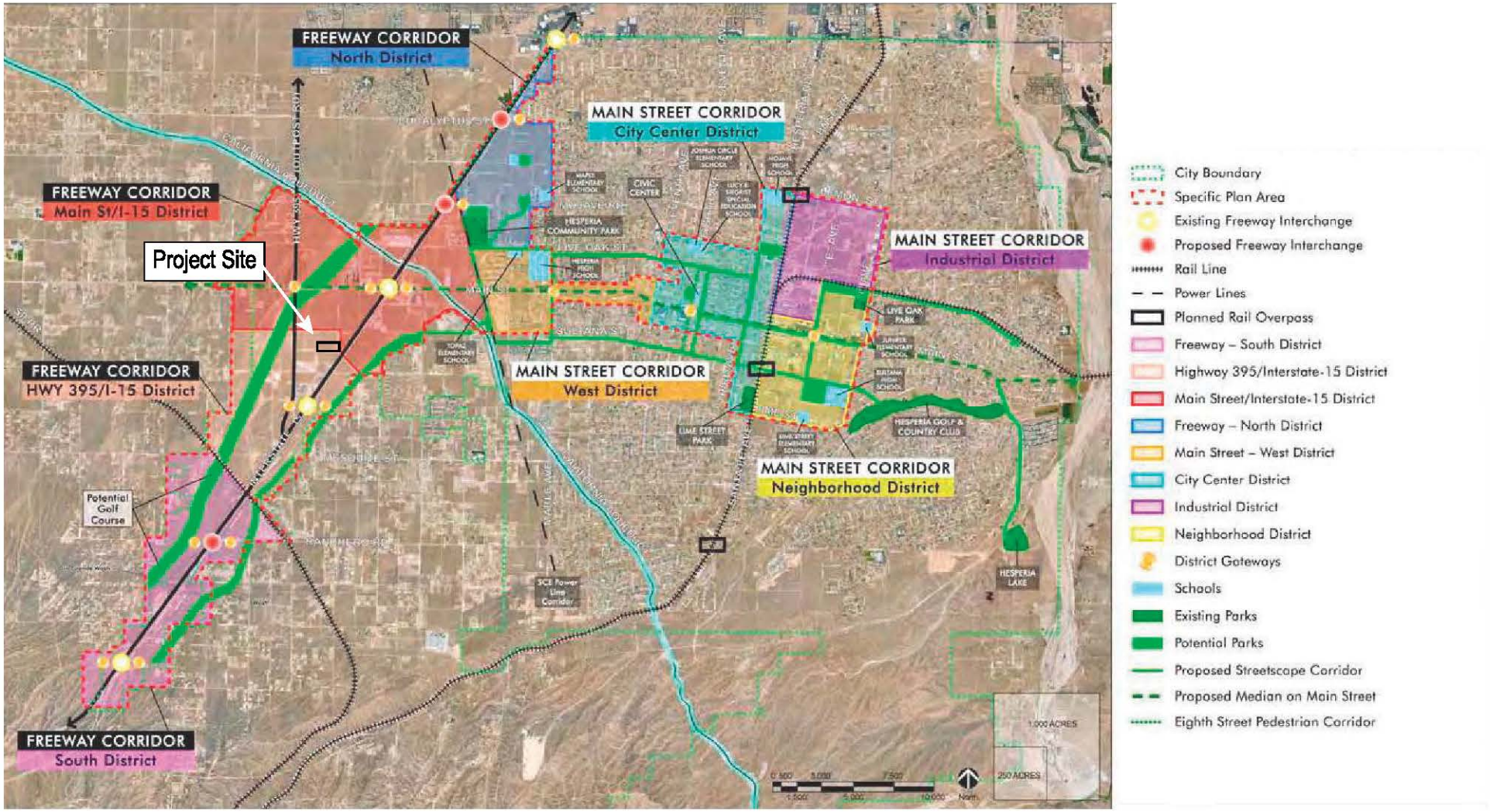

SOURCE: City of Hesperia 2020

FIGURE 3-8

Main Street and Freeway Corridor Specific Plan Land Use Districts

Poplar 18 Project

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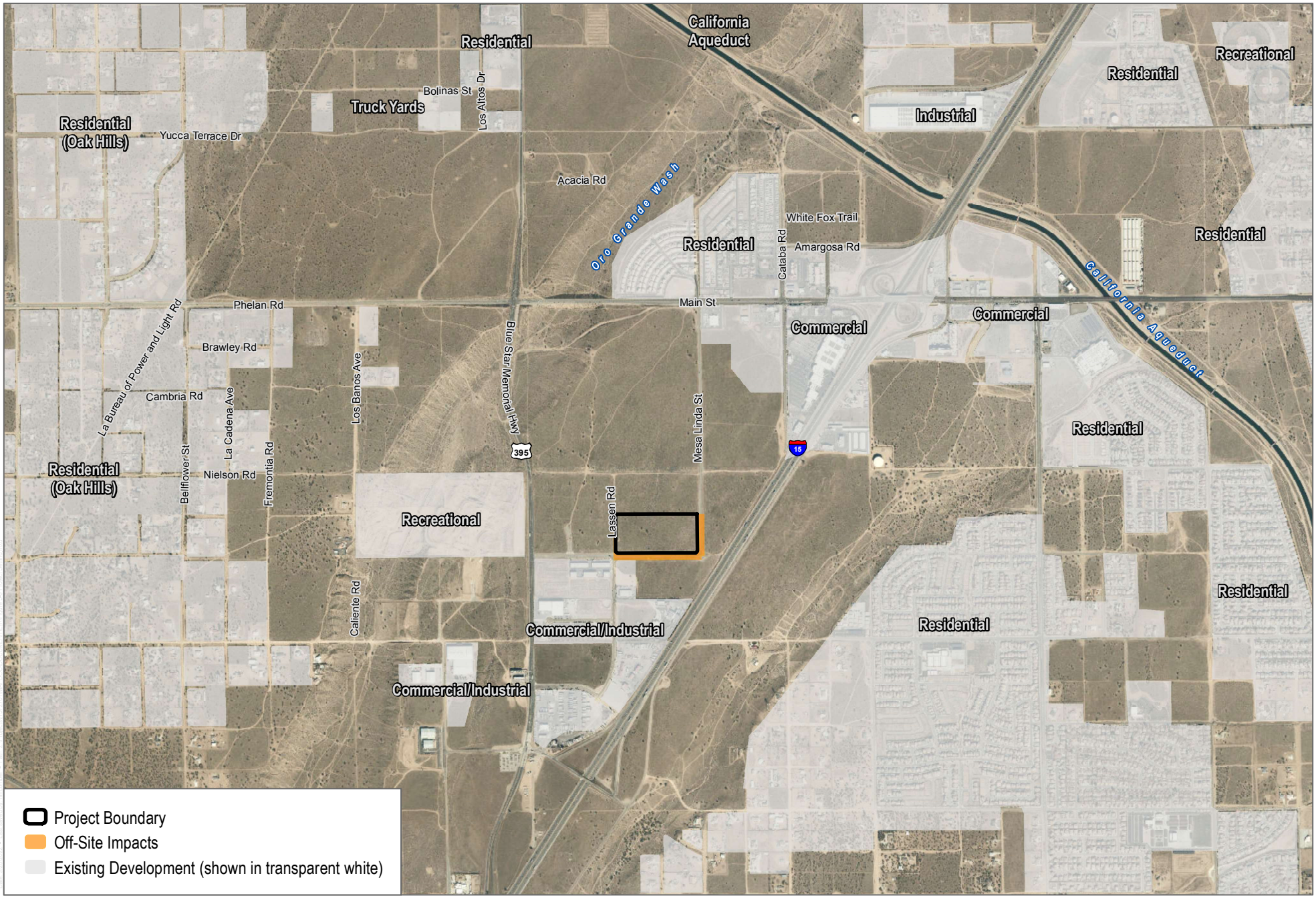

SOURCE: Esri World Imagery 2019; Open Street Map 2019

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FIGURE 3-9

Project Development Setting

Poplar 18 Project

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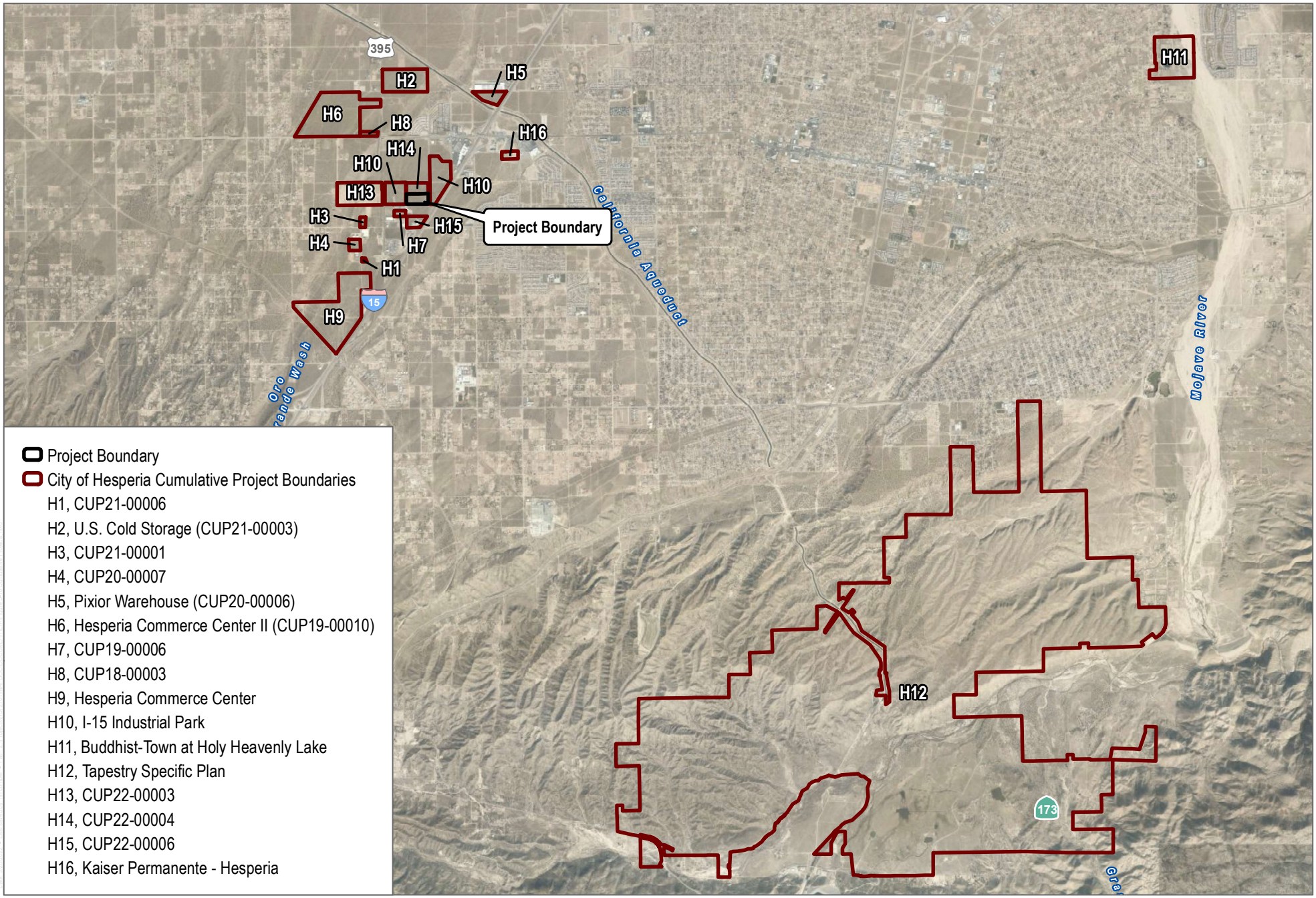

SOURCE: Bing Maps

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0 1 2 Miles

FIGURE 3-10

Cumulative Project Locations

Poplar 18 Project

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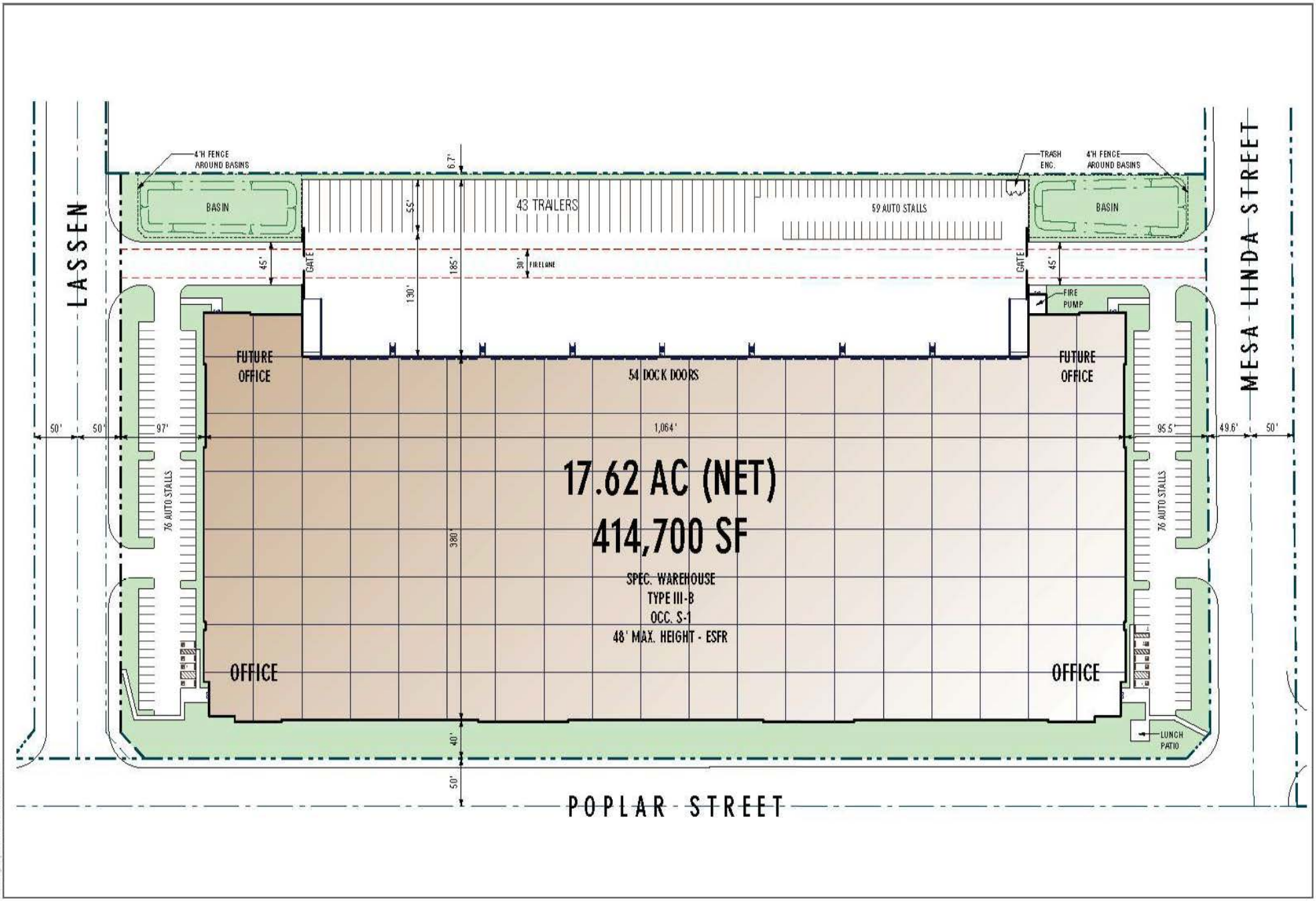

SOURCE: RGA 2022

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FIGURE 3-11
Site Plan
Poplar 18 Project

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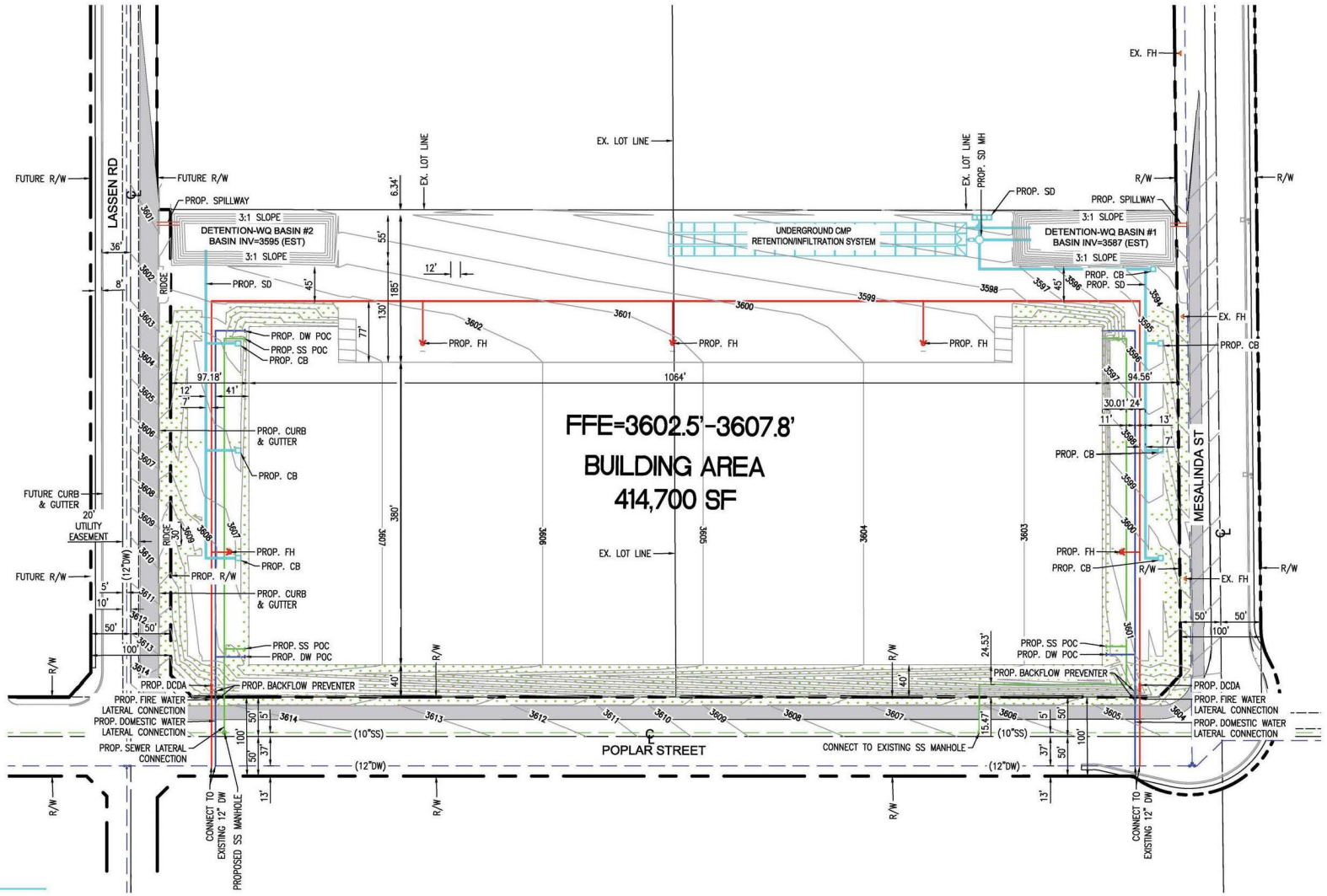

LEGEND

- STORM DRAIN
- DOMESTIC WATER
- FIRE WATER
- SANITARY SEWER
- EXISTING WATER
- EXISTING SEWER
- EXISTING STORM DRAIN

SOURCE: Westland Group 2022

FIGURE 3-12

Detailed Site Plan

Poplar 18 Project

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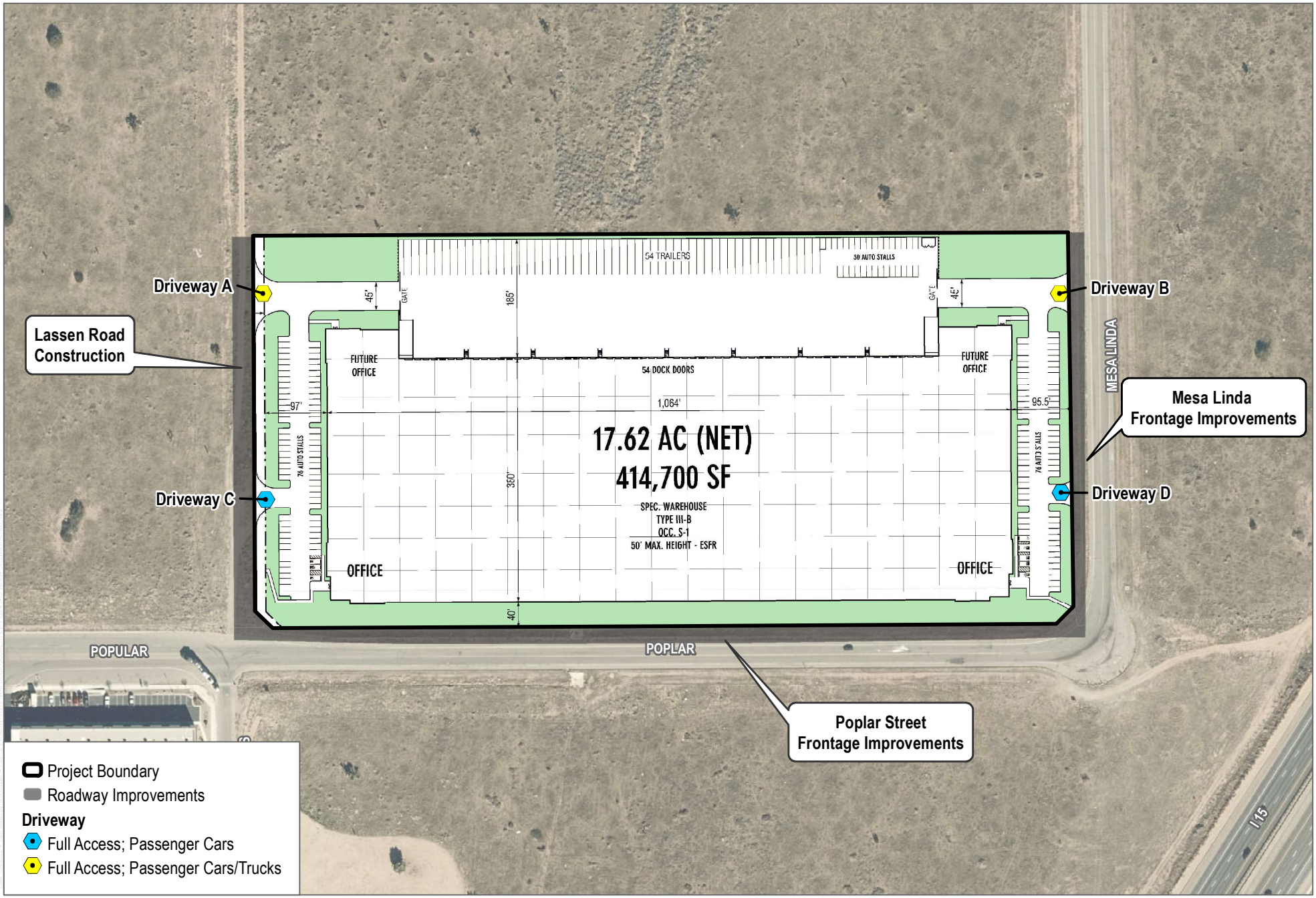

SOURCE: Esri World Imagery Basemap 2021; RGA Office Of Architectural Design 2021

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0 100 200 Feet

FIGURE 3-13

Vehicular Circulation and Access Plan

Poplar 18 Project

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SOURCE: RGA Architects 2022

DUDEK

FIGURE 3-14

Schematic Rendering

Poplar 18 Project

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SOUTH ELEVATION

EAST ELEVATION

NORTH ELEVATION

WEST ELEVATION

SOURCE: RGA 2022

DUDEK

FIGURE 3-15

Architectural Elevations

Poplar 18 Project

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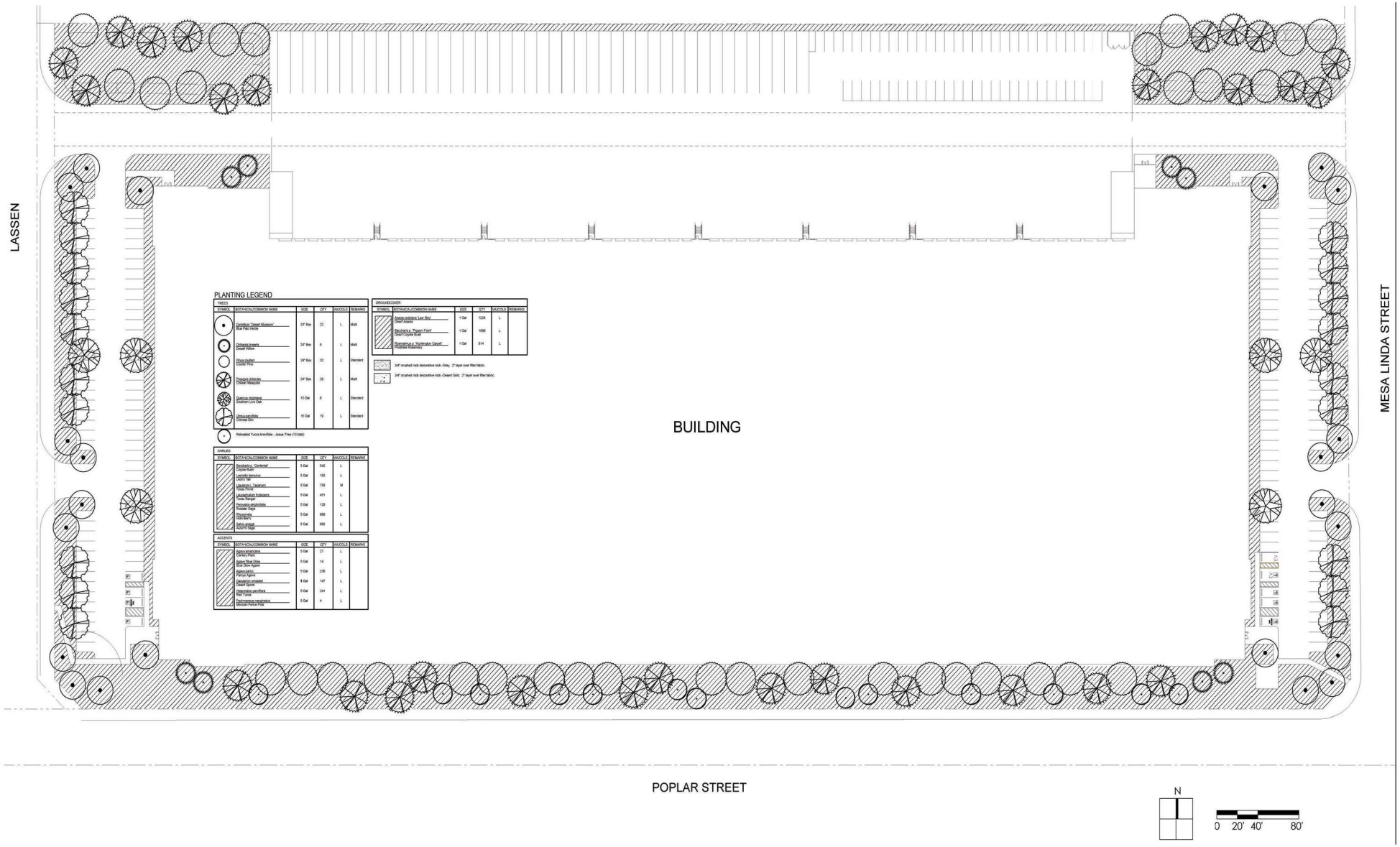

SOURCE: Hunter Landscape 2022

FIGURE 3-16

Landscaping Plan

Poplar 18 Project

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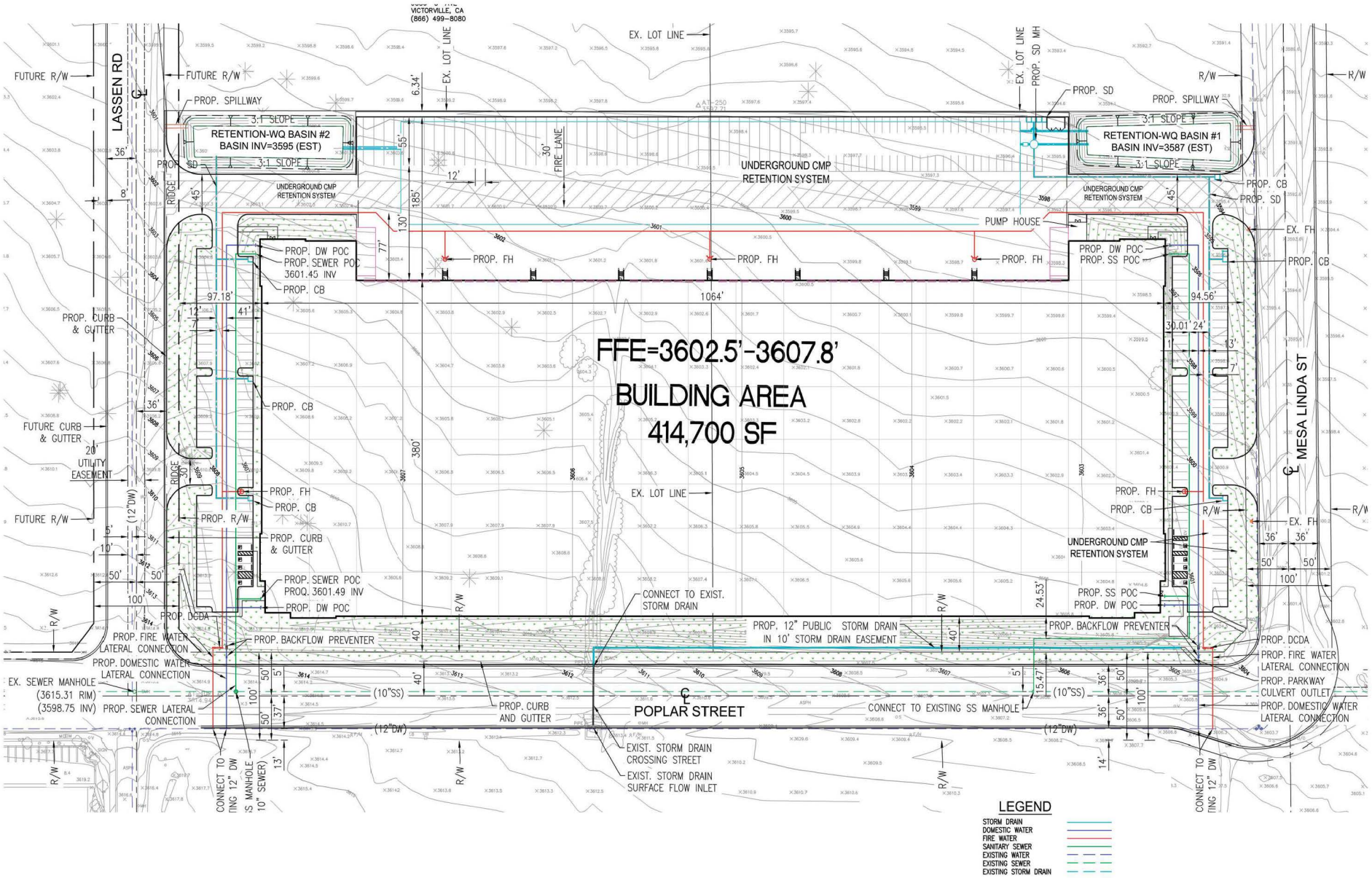

SOURCE: Westland Group 2022

FIGURE 3-17

Conceptual Grading Plan

Poplar 18 Project

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4 Environmental Analysis

The purpose of this Environmental Impact Report (EIR) is to evaluate the potential environmental effects of the Poplar 18 Project (Project). The City of Hesperia (City) circulated a Notice of Preparation (NOP) beginning on August 11, 2022, with the public review period ending on September 9, 2022. The NOP was transmitted to the State Clearinghouse, responsible agencies, other affected agencies, and other public and private potential stakeholders to solicit feedback regarding the scope of the environmental analysis to be addressed in the Project's EIR. The NOP, Initial Study, and comment letters received are contained in Appendix A of this EIR.

Sections 4.1 through 4.11 of this EIR contain the potential environmental impacts analysis associated with implementation of the Project, and focus on the following issues:

- Section 4.1 – Aesthetics
- Section 4.2 – Air Quality
- Section 4.3 – Biological Resources
- Section 4.4 – Cultural, Tribal Cultural, and Paleontological Resources
- Section 4.5 – Energy
- Section 4.6 – Greenhouse Gas Emissions
- Section 4.7 – Hazards, Hazardous Materials, and Wildfire
- Section 4.8 – Hydrology and Water Quality
- Section 4.9 – Noise
- Section 4.10 – Transportation
- Section 4.11 – Utilities and Service Systems

Technical Studies

Technical studies were prepared to analyze air quality and greenhouse gas emissions, health risks, biological resources, cultural resources, energy consumption, geology and soils, hazards and hazardous materials, hydrology and water quality, water supply impacts, noise, and transportation and were used in the preparation of this EIR. These documents are identified in the discussions for the individual environmental issues, and are included as technical appendices on a flash drive attached to the EIR and available at the City.

Analysis Format

The EIR assesses how the Project would impact each of the above-listed resource areas. Each environmental issue addressed in this EIR is presented in terms of the following subsections:

- **Existing Conditions:** Provides information describing the existing setting on and/or surrounding the Project site that may be subject to change as a result of implementation of the Project. This setting discussion describes the conditions that existed when the NOP was sent to responsible agencies and the State Clearinghouse.
- **Relevant Regulations, Plans, Policies, and Ordinances:** Provides a discussion of federal, state, regional, and local regulations, plans, policies, and ordinances applicable to the Project.

- **Thresholds of Significance:** Provides criteria for determining the significance of Project impacts for each environmental issue.
- **Impact Analysis:** Provides a discussion of the characteristics of the Project that may have an impact on the environment, analyzes the nature and extent to which the Project is expected to change the existing environment, and indicates whether the Project's impacts would meet or exceed the levels of significance thresholds.
- **Mitigation Measures and Level of Significance After Mitigation:** Identifies mitigation measures to reduce significant adverse impacts to the extent feasible and provides a discussion of significant adverse environmental impacts that cannot be feasibly mitigated or avoided, significant adverse environmental impacts that can be feasibly mitigated or avoided, adverse environmental impacts that are not significant, and beneficial impacts.
- **References Cited:** Lists the sources cited during preparation of the EIR.

4.1 Aesthetics

This section describes the existing visual conditions of the Poplar 18 Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project.

4.1.1 Existing Conditions

Regional Setting

The Project site is located in the western part of the City of Hesperia (City) in the Victor Valley region of San Bernardino County (County). The region contains open space with a variety of topographical features and vegetation communities, including the Mojave River to the east, San Bernardino Mountains and San Gabriel to the south/southwest, rolling foothills, and the surrounding desert landscape within the Victor Valley. Surrounding mountains and ridgelines are the most prominent features of the landscape. Other features that shape the visual environment and provide both physical and visual relief include the natural desert terrain that spreads across the flat valley floor, natural vegetation, natural drainage patterns and watercourses (i.e., Mojave River, Oro Grande Wash, Antelope Valley Wash, Honda Valley Wash, and an unnamed Wash east of Interstate [I] 15) and surrounding open space, habitat areas, and recreation areas.

The topography of the City includes many areas that contain bluffs with scenic value, including the area north of the Burlington, Northern, and Santa Fe railroad from Highway 138 running northeast along the edge of the Mesa to the Hesperia Airport. Ridgelines are concentrated in the Rancho Las Flores area in the southeastern portion of the City near the entrance to the Cajon Pass.

Project Setting

The Project site is located in the western portion of the City, specifically in the southwest quadrant of Interstate (I) 15 and Main Street. U.S. Highway 395 and I-15 are the two major highways that work as transportation corridors for the City. I-15 is located adjacent to the Project site's eastern boundary and U.S. Highway 395 is located adjacent to the Project site's western boundary. Although the majority of this area is undeveloped, transportation-related and trucking-related land uses (e.g., truck yards, convenience stations, and warehouses) associated with these highways are located intermittently along highway frontages and are interspersed by parcels of undeveloped land.

More specifically, the rectangular shaped Project site consists of vacant and undeveloped, relatively flat land characterized by desert landscape consisting of exposed soils, moderate vegetation cover composed of brush, shrub, and grass cover as well as scattered large Joshua and Juniper trees (see Figure 3-4, Existing Conditions). The Project site has been disturbed by illegal dumping (resulting in several debris piles throughout the site) and trespassing. Various dirt roads and trails that appear well-traveled by motorized off-road vehicles form bands of exposed, bare soils that traverse the site. The site is bounded by Sultana Road to the north, Mesa Linda Street to the east, Poplar Street to the south, and Lassen Road to the west. Surrounding land uses and elements that form the visual environment in the Project area are described as follows.

North: Sultana Road is an east-west extending dirt road that transitions into Mesa Linda Street east of the Project site. Flat desert terrain similar in vegetation cover to the Project site stretches to the north until Main Street, with the exception of commercial uses scattered along Main Street.

South: Poplar Street is an east-west, two to four lane undivided roadway that borders the Project site to the south. Light industrial and commercial uses border the opposite side of Poplar Street. Additionally, I-15 borders the southeastern corner of the Project site.

East: Mesa Linda Street is a north-south, two-lane, undivided roadway that extends along the eastern border of the Project site. Mesa Linda Street terminates to the north near Phelan/Main Street and to the south near Poplar Street. Mesa Linda Street and the surroundings consist of Commercial/Industrial uses. I-15 borders the Project site east of Mesa Linda Street. Regional Commercial uses are located east of I-15.

West: Lassen Road is a dirt road that extends along the western border of the Project Site. Lassen Road has not yet been constructed but is a planned arterial road in the City's Circulation Element. U.S. Highway 395 is a north-west two-lane to six-lane, undivided highway located to the east of the Project site. Flat desert terrain similar in vegetation cover to the Project site stretches to the west beyond U.S. Highway 395, along with scattered residential uses.

Scenic Vistas

Scenic vistas are typically broad views of scenic resources such as landforms and waterways that are visible from publicly accessible viewpoints. The City of Hesperia General Plan identifies natural scenic open space as a valuable scenic resource that contributes to the visual landscape. Such resources include the Mojave River to the east, the San Bernardino and San Gabriel Mountain ranges to the south and the surrounding Victor Valley, along with neighboring hillsides and the natural desert environment. These scenic resources provide visual relief from the man-made structures in the City and also provide residents with a connection to the natural environment (City of Hesperia 2010a). Relative to the Project site, undisturbed areas of the natural desert environment and sprawling valley are located approximately 7 miles to the south and east of the Project site; the Mojave River is located over 8 miles to the east; and the foothills and elevated terrain within the San Gabriel and San Bernardino Mountains are located between approximately 5 miles to the southwest and approximately 10 miles to the southeast, respectively. While the Project site and the surrounding area contain some natural desert landscape, existing development such as commercial uses, trucking-related uses (i.e., truck stops]) lodging accommodations, big-box retail developments, and major interstate highways preclude the area from being an area with significant scenic value that could comprise a scenic vista. Areas within the City that provide higher-quality views of undisturbed natural desert landscape are located within the southern portion of the City and east of the City limits, approximately 5 miles south and 10 miles east of the Project site, respectively.

With the exception of the San Gabriel and San Bernardino Mountains visible in the background of the site photos, scenic resources identified by the City's General Plan are not visible in the vicinity of the Project site.

Several washes and natural water courses traverse the City and are identified in the City's General Plan as providing physical and visual relief from the surrounding urban development. These include the Mojave River, the Oro Grande Wash, the Antelope Valley Wash, the Honda Valley Wash, and an unnamed wash. Exhibits OS-4 through OS-7 of the City's General Plan, and the Wash Protection Overlay in the Main Street and Freeway Corridor Specific Plan (MSFCSP) identify preservation areas within these washes. The washes encompass approximately 1,512 acres used for a variety of activities such as hiking, equestrian riding, a golf course, and natural open space, with the majority remaining in a natural and relatively undisturbed condition (City of Hesperia 2010a). The nearest wash area to the Project site is the Oro Grande Wash, which flows at an angle in a general southwest to northeast direction, approximately 0.25 miles west of the Project site beyond U.S. Highway 395. Given that these watercourses are below the grade of the general topography, as well as due to distance and intervening development and vegetation, views of these water courses are not available from the Project site.

Scenic Routes

There are no officially designated scenic roads or highways within the City (City of Hesperia 2010b). According to the California Department of Transportation (Caltrans), there is one officially designated state scenic highway in the County and 11 eligible scenic highways (Caltrans 2019). Route 38, the County's only designated scenic highway, is located approximately 27 miles southeast of the Project site in the San Bernardino National Forest. Routes 138 and 173 are both eligible scenic highways located within City limits (Caltrans 2019). Route 138 is the closest to the Project site, located approximately 7 miles to the southeast of the Project site, where the road winds through the lower elevations of the San Bernardino National Forest. None of the County's officially designated or eligible scenic highways are visible from the Project site, nor is the Project site visible from the highways.

Light and Glare

The Project site does not currently support any existing sources of light or glare. Existing sources of light and glare in the Project area include streetlights and exterior building lights in scattered commercial and light industrial areas.

Viewshed and Visibility

Due to the relatively flat nature of the Project site and surrounding area, the site is visible from surrounding roads and land uses, including commercial and light industrial uses. Views of the Project site from surrounding public vantage points consist of undeveloped land within a flat valley characterized as a desert landscape with disturbed soils where dirt roads and trails cross the Project site, scattered Joshua and Juniper trees, and moderate vegetation cover consisting of grasses and shrubs. Intervening vegetation, scattered development, and I-15 partially screen views to the Project site from some locations. Views from public vantage points were analyzed and photographed in the field to document the existing visual environment (see Figure 3-4).

Viewer groups afforded views to the Project site include motorists traveling on nearby highways and roads, and those frequenting the nearby commercial and light industrial areas. Viewer points in the Project area are further described below.

Viewpoints

Viewpoint 1—Northeast View from Lassen Road (Photo Point 1 on Figure 3-4)

Northeast view from the Lassen Road shows the flat, undeveloped Project site with disturbed soil, natural desert vegetation consisting of bushes and occasional Joshua trees and trash debris. The Project site also consists of distant views of the foothills to the northeast and surrounding commercial/industrial development.

Viewpoint 2 – Northward View from Poplar Street (Photo Point 2 on Figure 3-4)

The northward view of the Project site from Poplar Street consists of a dirt road (Lassen Road), natural desert vegetation consisting of bushes and occasional Joshua trees, trash debris and foothills to the north. As motorists move through Poplar Street, distant and unobstructed views of the surrounding commercial/industrial development continue to be seen.

Viewpoint 3 – Westward View from Mesa Linda Street (Photo Point 3 on Figure 3-4)

Westward view from Mesa Linda Street also consists of vacant land with natural desert vegetation. Distant view of utility poles can also be seen throughout Mesa Linda Street.

Surrounding Viewpoints

I-15

Motorists traveling on I-15 are provided views of the eastern and southern portion of the Project site. Views to the northern portion of the Project site are screened by commercial uses and intervening vegetation. Views toward the Project site from I-15 consists of a variety of natural vegetation, including scattered Joshua trees and Juniper, and distant ridgelines and mountains that create a backdrop to the flat desert terrain.

U.S. Highway 395

Motorists traveling on U.S. Highway 395 are afforded views to portions of the western side of the Project site. Views towards the Project site from U.S. Highway 395 consist of a variety of natural vegetation, including scattered Joshua trees and Juniper.

Local Roads and Surrounding Commercial and Light Industrial Areas

Views of the Project site from local roads (i.e., Main Street) are visible to motorists traveling through light industrial/commercial areas in the vicinity of the Project site. Similar views are also available to occupants and visitors of the surrounding commercial/light industrial uses. Views to the Project site from these areas include views of flat desert terrain with moderate vegetation cover. Views from local roads also include views of the surrounding industrial, commercial, and highway-related uses.

4.1.2 Relevant Plans, Policies, and Ordinances

State

California Scenic Highway Program

California's Scenic Highway Program was created by the state legislature in 1963. This program's purpose is to "preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways" (Caltrans 2008). The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq. The California Scenic Highway System includes a list of highways that are officially designated as scenic highways or eligible for designation as scenic highways. As discussed in Section 4.1.1, Existing Conditions, there are no state-designated or eligible state scenic highways within the viewshed of the Project site.

California Code of Regulations

Title 24 – California Building Standards Code

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

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

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

Title 24, Part 6 – California Energy Code

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

Section 140.7 establishes outdoor lighting power density allowances in terms of watts per area for lighting sources other than signage. The lighting allowances are provided by the Lighting Zone, as defined in Section 10-114 of the California Energy Code. Under Section 10-114, all urban areas within California are designated as Lighting Zone 3. Additional allowances are provided for Building Entrances or Exits, Outdoor Sales Frontage, Hardscape Ornamental Lighting, Building Facade Lighting, Canopies, Outdoor Dining, and Special Security Lighting for Retail Parking and Pedestrian Hardscape.

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

Title 24, Part 11 – California Green Building Standards Code

The California Green Building Standards Code (Title 24, Part 24) is commonly referred to as the CALGreen Code. The CALGreen Code stipulates maximum allowable light levels, efficiency requirements for lighting, miscellaneous control requirements, and light trespass requirements for electric lighting and daylighting. Paragraph 5.1106.8 Light Pollution Reduction, specifies that all non-residential outdoor lighting must comply with the following:

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

IESNA Recommended Practices

Illuminating Engineering Society of North America (IESNA) recommends illumination standards for a wide range of building and development types. These recommendations are widely recognized and accepted as best practices and are a consistent predictor of the type and direction of illumination for any given building type. For all areas not stipulated by the regulatory building code, municipal code, or specifically defined requirements, the IESNA

standards are used as the basis for establishing the amount and direction of light for the Project. The IESNA provides recommendations for pre-curfew and post-curfew light levels to limit light trespass. Pre-curfew is from dusk until 11:00 p.m. local time, when the area being illuminated is more likely to be in use. Post-curfew is from 11:00 p.m. to 7:00 a.m. local time (NLPIP 2007).

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

California Vehicle Code

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

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

Local

City of Hesperia General Plan

The City's General Plan contains the following goals and policies applicable to aesthetics, visual resources, and the visual quality and character of the Project and the surrounding area.

Land Use Element

Goal LU-1. Regulate development so that the density of residential development and the intensity of non-residential development are appropriate to the property, surrounding properties, and the general neighborhood.

Policy LU-1.1. Require that new construction, additions, renovations, and infill developments be sensitive to neighborhood context and building form and scale.

Policy LU-1.3. Require that new construction, additions, renovations, and infill developments be sensitive to the intent of the land use designations, incorporating neighborhood context as well as building form and scale.

Policy LU-1.4. Encourage architecture which breaks massive buildings into smaller parts. Focus on maintaining a human scale when creating common spaces or amenities.

Goal LU-3. Promote balanced, efficient commercial development that is functional, safe, attractive and convenient to users, and which will strengthen the local economy.

Policy LU-3.3. Ensure that the sign ordinance provides for commercial signage that is attractive, non-intrusive, safe, and consistent with overall City aesthetic goals.

Policy LU-3.4. Encourage the beautification of pedestrian areas, particularly through the use of landscaping.

Policy LU-3.5. Require the separation or buffering of residential areas from businesses which produce noise, odors, high traffic volumes, light or glare, and parking through the use of landscaping, setbacks, and other techniques.

Policy LU-3.6. Design outdoor commercial uses of property to minimize impacts to adjacent residential neighborhoods.

Policy LU-3.7. Incorporate varied planes and textures and variety in materials to provide superior architectural design on commercial buildings.

Policy LU-3.8. Incorporate landscape plantings into commercial developments to define and emphasize entrances, inclusive of those areas along the front of a building facing a parking lot.

Policy LU-3.9. Incorporate on all major commercial developments theme elements intended to distinguish them from other development, foster individuality, and promote gathering opportunities.

Policy LU-3.10. Where possible, connect rear parking lots of commercial development to the fronts of buildings with sidewalks or other features.

Policy LU-3.11. Where possible, reduce conflicts between delivery areas and pedestrian areas.

Policy LU-3.12. Require outdoor or seasonal storage areas, where permitted, to be screened from public view.

Policy LU-3.13. Include full architectural treatment on all sides of development projects.

Goal LU-4. Promote industrial development within the City which will expand its tax base and provide a range of employment activities, while not adversely impacting the community or environment.

Policy LU-4.1. Require landscaped buffers and other techniques to protect residentially designated property directly adjacent to industrial land uses.

Policy LU-4.4. Require the separation or buffering of residentially designated areas from industrial businesses which produce noise, odors, high traffic volumes, light and/or glare, and parking through the use of landscaping, setbacks, and other techniques. Existing residential areas should not limit the potential uses within industrial areas.

Policy LU-4.5. Design industrial uses adjacent to residential property to minimize impacts to the residential property

Policy LU-4.6. Incorporate varied planes and textures and variety in building materials on industrial buildings to achieve high quality architectural design.

Policy LU-4.7. Incorporate landscape plantings into industrial projects to define and emphasize entrances, inclusive of those areas along the front of a building facing a parking lot.

Policy LU-4.8. Require delivery areas to be separated from pedestrian areas.

Policy LU-4.9. Include full architectural treatment on all sides of buildings facing streets.

Goal LU-7. Facilitate a self-contained community with a well-designed and maintained community with a full range of densities and uses within the capacity of infrastructure and services.

Policy LU-7.1 Continue to encourage quality design in all new construction to further improve the built environment of the City.

Open Space Element

Goal OS-2. Identify and preserve natural open space in order to protect sensitive environments and preserve amenities such as washes, bluffs, Joshua tree forests, or juniper woodlands. Open space areas should be contiguous or connected through trails to provide accessibility for hikers and equestrians as well as wildlife.

Policy OS 2.3. Utilize natural open space to preserve natural resources such as historical, biological and scenic resources.

Goal OS-3. The areas within the Oro Grande Wash and the Unnamed Wash east of Interstate 15 identified as Area A, B and C of Exhibit OS - 7 shall be preserved in their natural state.

Policy OS-3.1. The City shall develop a policy to implement the Transfer of Development Rights (TDR) Program. The program should allow for the full transfer of development rights from portion of properties affected by slopes and/or drainage.

Goal OS-4. Permit a variety of uses within open space areas, depending upon the natural amenities available.

Policy OS-4.2. Preserve the aesthetic integrity and usefulness of open space washes by implementing restrictive development standards on projects occurring in or around the wash areas, and ensuring development proposals are compatible.

Policy OS-4.3. Establish setbacks for buildings and walls along the rim of washes to preserve natural land, form, and vegetation.

Main Street and Freeway Corridor Specific Plan

Land use and development for the Project area is further guided by the MSFCSP. According to the MSFCSP, the Project site is located within the Main Street/I-15 Land Use District and within the Industrial Business Park MSFCSP Zone; the zoning designations for the Project site is Commercial/Industrial Business Park (CIBP) (City of Hesperia 2020) (see Figure 3-6, Land Use Designations, and Figure 3-7, Zoning, in Chapter 3, Project Description).

Further, the MSFCSP establishes the preservation of Oro Grande Wash and other smaller washes through the Wash Protection Overlay, which limits the construction of permanent structures within the washes' right-of-way to keep the washes natural and undeveloped (City of Hesperia 2020). As shown in Figure 6.1 of the MSFCSP, the Oro Grande Wash area located east of the Project site (on the eastern side of U.S. Highway 395) is designated as within the Wash Protection Overlay.

The following goals and policies of the MSFCSP aim to preserve the existing visual resources within the MSFCSP area:

Urban Design and Open Space

Goal UD-1. Strengthen the identity of the City of Hesperia and the Specific Plan [MSFCSP] area by building upon the surrounding natural resources and amenities, and create a new image for Main Street and the Freeway Corridor that expresses an attractive, inviting, high quality character and commercial vitality.

Policy UD-1.1. Recognize and capitalize on Hesperia's unique location and setting — "Gateway to the High Desert" at the top of the Cajon Pass, desert landscape, and dramatic natural features such as the Oro Grande Wash - to further establish a sense of pride in the community.

Policy UD-1.2. Identify regional gateways into the City along Interstate-15 and create City identity at these locations by taking inspiration from the City's dramatic location at the top of Cajon Pass and Cajon Summit.

Policy UD-1.4. Preserve views of the mountains - San Gabriel Mountains to the southwest and San Bernardino National Forest to the southeast.

Goal UD-3. Take advantage of the City's climate and natural setting while preserving existing open space resources and planning for new resources.

Policy UD-3.1. Recognize and preserve the washes' multiple functions: a place for recreation, a natural habitat and a channel for storm runoff.

Policy JD-3.5. Preserve and protect significant areas of native wildlife and plant habitat.

Policy UD-3.6. Utilize the SCE corridor right-of-way for creating a walking and biking trail.

Policy UD-3.7. Preserve trails for equestrian uses.

Goal UD-4. Enhance the pedestrian environment and driving experience within the City.

Policy UD-4.l. Establish an open space network that connects the City's existing and planned open space resources. Recognize Main Street as a fundamental element of this network.

Commercial/Industrial Business Park Zone Development Standards

Chapter 9, Section G, Commercial/Industrial Business Park Zone, of the MSFCSP outlines permitted uses and development standards for the CIBP Zone. The purpose of the CIBP Zone is to create employment-generating uses in a business park setting. This zone is intended to provide for service commercial, light industrial, light manufacturing, and industrial support uses. The development standards for this zone aim to ensure a quality appearance, and because of the size and scale of industrial buildings, it is especially important to consider design to ensure compatibility with other parts of the community. Further, Chapter 11, Industrial Design Standards and Guidelines, of the MSFCSP outlines additional site and architectural design standards and guidelines, including landscape design standards and guidelines for industrial uses. The design standards and guidelines aim to improve the quality of design and create attractive and functional site arrangements that create visual interest and improve the appearance and character of the freeway corridor. Table 4.1-1 outlines the development standards for the CIBP Zone that are applicable to the Project.

Table 4.1-1. Main Street and Freeway Corridor Development Standards for CIBP Zone

Hesperia Main Street and Freeway Corridor Development Standards for CIBP Zone
Minimum Lot Size: 10 acres **Minimum Width:** 500 feet **Minimum Depth:** 500 feet
Maximum Gross Floor Area Ratio: 0.50
Maximum Building Height: 60 feet (45 feet within the portion of the lot that falls within 100 feet of an adjacent residential zone)
Street Yard Setbacks: 25 feet **Front Yard Setback:** 25 feet **Street Side Yard Setback:** 15 feet **Rear Yard Setback:** None (except where the rear yard abuts a residential zone or residential development as a part of a Regional Commercial zone: 50 feet) **Interior Side Yard Setback:** None (except where the interior property line abuts a residential zone, or residential development as a part of a Regional Commercial zone: 20 feet)
Parking and Loading: In addition to the off-street parking requirements and standards set forth in Chapter 16.20, Article IV (Parking and Loading Standards) of the HMC, the following shall apply: (1) To alleviate the unsightly appearance of loading facilities for industrial uses, these areas should not be located at the front of buildings where it is difficult to adequately screen them from view. Such facilities are more appropriately located at the rear of the site where special screening may not be required. (2) When it is not possible to locate loading facilities at the rear of the building, loading docks and doors should not dominate the frontage and must be screened from the street. Loading facilities should be offset from driveway openings. (3) Backing from the public street onto the site for loading into front end docks causes unsafe truck maneuvering and should not be utilized except at the ends of industrial cul-de-sacs where each circumstance will be studied individually at the time of design review.
Landscaping: (1) Drought-tolerant and water conserving landscaping and water efficient irrigation systems and techniques shall be utilized whenever possible. (2) In addition, the design standards and guidelines included in Chapter 11 (Industrial Design Standards and Guidelines) of this Plan shall apply. The provisions of Chapter 16.20, Article XII (Landscape Regulations) and Chapter 16.24 (Protected Plants) of the HMC shall apply with the following exceptions/additions: (3) Industrial development in this zone shall provide a minimum of ten percent on-site landscaping, including that required in setback areas. Refer to section 16.20 Article XII of the HMC for minimum landscape requirements.
Walls and Fences: (1) An industrial development adjacent to any residential zone shall have a minimum 6 foot high wall, not to exceed 8 feet, along property lines adjacent to such districts. (2) Both sides of all perimeter walls should be architecturally treated. Appropriate materials include decorative masonry, concrete, stone and brick.
Outdoor Displays, Storage, Equipment, and Work Areas: (1) No retail sales, merchandise displays or work areas shall occur outside building(s). (2) Outside storage and equipment shall be confined to the rear half of the property or the rear of the principal structure on site, whichever is more restrictive, and screened from public view from any adjoining properties and public rights-of-way by appropriate walls, fencing and landscaping. (3) Outdoor hoists are subject to the conditions and standards listen in Chapter 9(C)(4.18).

Source: City of Hesperia 2020.
Note: CIBP = Commercial/Industrial Business Park

City of Hesperia Municipal Code

The City provides landscaping guidelines and regulations through Chapter 16.20, Article XII of the Municipal Code. The purpose of this chapter is to provide water conservation and landscape development standards and guidelines that will promote the general welfare of the City's residents by creating a responsible outdoor environment. The

landscape regulations aim to achieve a diversity of drought-tolerant landscaping that is appropriate to the high-desert environment and creates aesthetically pleasing views and vistas along public streets

Chapter 16.24 Protected Plants of the City of Hesperia Municipal Code preserves and protects specific desert native plants and provides for the conservation of desert resources, through regulation, guidelines and enforcement that manage the removal or harvesting of such plants. These plants contribute to the visual resources of an area, and as a consequence, "the city finds that it is in the public interest to preserve and protect specified desert native plants and provide for the conservation and wise use of our desert resources, through regulation, guidelines and enforcement that manage the removal or harvesting of such plants." Detailed analysis regarding these resources is provided in Section 4.3, Biological Resources, of this EIR.

The City of Hesperia has established Sign Regulations in Chapter 16.36 of the Municipal Code. The purpose of this chapter is to encourage economic development by supporting the commercial communication needs of the business community, enhance the quality of life by providing a visually pleasing environment, and promote public health, safety and welfare. As such, the Project would be required to adhere to the regulations outlined in Chapter 16.36.

Section 16.20.135 contains general performance standards related to glare such that any activity shall not cause glare above 0.5 footcandles when measured in a residential district or lot.

4.1.3 Thresholds of Significance

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

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

4.1.4 Impacts Analysis

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

Less-than-Significant Impact. As discussed in Section 4.1.1, Existing Conditions, while the Project site and the surrounding area contain some areas with undisturbed natural desert landscape, existing development (including commercial uses, trucking-related uses [i.e., truck stops], lodging accommodations, big-box retail developments, and major interstate highways) precludes the area from being an area with significant scenic value that could comprise a scenic vista.

Physical improvements proposed as part of the Project would be limited to the Project site and the immediate vicinity. Given that existing scenic resources are outside of the Project's disturbance footprint and located between 5 and 10 miles away from the Project site, the Project would not result in any physical modifications to scenic resources that comprise a scenic vista.

With the exception of the San Gabriel and San Bernardino Mountains visible in the background of the site photos, scenic resources identified by the City's General Plan that comprise scenic vistas are not visible in the vicinity of the Project site. Due to the relatively flat topography of the Project area, views of the San Gabriel and San Bernardino Mountains are available to viewer groups in the vicinity of the Project site, including motorists traveling on nearby highways and roads, as well as employees and visitors of the nearby commercial and light industrial areas. These viewers are provided intermittent background views of mountain ridgelines under optimal atmospheric conditions and when not obstructed by existing development in the area. Development of the Project's proposed building would result in minimal obstruction of the existing mountain views. The presence of existing development, major roadways, and other man-made elements (i.e., transmission lines, signage, and traffic and streetlights) already reduces the unobstructed views of the mountains in the Project vicinity.

The Project building is designed in such a manner that building colors and project design as a whole conform with the development standards of the Hesperia Municipal Code and the MSFCSP in order to promote the visual character and quality of the surrounding area. The Project's landscaping would also have a similar effect by providing natural elements throughout the Project site. Thus, with conformance of the development standards of the Hesperia Municipal Code and the MSFCSP, the Project would not result in a significant impact to 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?

No Impact. There are no officially designated scenic roads or highways within City boundaries (City of Hesperia 2010b). The nearest designated state scenic highway, Route 38, is located approximately 27 miles southeast of the Project site. The nearest eligible scenic highway, Route 138, is located 7 miles to the southeast of the Project site (Caltrans 2019). Due to distance and intervening terrain, vegetation, and development, none of these officially designated or eligible scenic highways are visible from the Project site, nor is the Project site visible from the highways. Therefore, no impacts associated with scenic resources within a state scenic highway would occur.

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

Less-than-Significant Impact. California Public Resources Code Section 21071 defines an "urbanized area" as "an incorporated city that meets either of the following criteria: (1) Has a population of at least 100,000 persons, or (2) Has a population of less than 100,000 persons if the population of that city and not more than two contiguous incorporated cities combined equals at least 100,000 persons." The City's population as of April 1, 2020, was approximately 99,818 people (U.S. Census 2020). However, the City is bordered by the City of Victorville to the north, Town of Apple Valley to the east, unincorporated San Bernardino County land to the south, and the unincorporated community of Oak Hills to the west. The combined population of the City of Hesperia and any one of these adjacent Cities is over 100,000 persons. Thus, the Project site is considered to be within an urbanized area and the following analysis considers whether the Project would conflict with applicable zoning or other regulations governing scenic quality.

In an attempt to ensure that current and future development within the City is designed and constructed to conform to existing the visual character and quality, the City of Hesperia Development Code (Title 16 of the City's Municipal Code) includes design standards related to building size, height, floor area ratio, and setbacks, as well as landscaping, signage, and other visual considerations. These design standards help adjacent land uses to be visually consistent with one another and their surroundings and reduce the potential for conflicting visual elements. More specific to the Project site, the MSFCSP sets forth development standards for the CIBP Zone and industrial development. The design specifications for the Project will be reviewed by the City for compliance with all applicable provisions set forth by the City's Development Code and the MSFCSP. As part of the City's development review process, the Project's architectural plans are reviewed by City staff and the Planning Commission to determine whether Project design conforms to the Development Code and MSFCSP and promotes the visual character and quality of the surrounding area. Table 4.1-2 provides a consistency analysis with the development standards for the CIBP Zone (Chapter 9 of the MSFCSP).

Table 4.1-2. Project Consistency with Development Standards for CIBP Zone

Hesperia Main Street and Freeway Corridor Specific Plan Development Standards for CIBP Zone	Project Design
Minimum Lot Size: 10 acres **Minimum Width:** 500 feet **Minimum Depth:** 500 feet	***Consistent.*** The proposed project lot size is consistent with these standards, as detailed below: ▪ Lot Size: 17.87 acres ▪ Width: Approximately 1,426.1 feet ▪ Depth: Approximately 661.7 feet *See Figures 3-11, Site Plan and 3-12, Detailed Site Plan in Chapter 3, Project Description.*
Maximum Gross Floor Area Ratio: 0.50	***Inconsistent.*** The proposed building would have a gross floor area ratio of .533. The development of a 414,700 SQ FT warehouse is the most efficient use of the property. However, because the building would be greater than 200,000 SQ FT, a Conditional Use Permit would be required for the project and would include Conditions of Approval that would ensure project development would be consistent with the intent of the MSFCSP Standards. *See Figures 3-11, Site Plan and 3-12, Detailed Site Plan in Chapter 3, Project Description.*
Maximum Building Height: 60 feet	***Consistent.*** The maximum building height for the building would be 50 feet, measured from the finished floor to the top of the building parapets. *See Figures 3-14, Schematic Renderings; 3-15, Architectural Elevations in Chapter 3, Project Description.*
Street Yard Setbacks: 25 feet **Front Yard Setback:** 25 feet **Street Side Yard Setback:** 15 feet **Rear Yard Setback:** None (except where the rear yard abuts a residential zone or residential development as a part of a Regional Commercial zone: 50 feet)	***Consistent.*** Proposed setbacks of font and side yards would be a minimum of 25'. *See Figures 3-11, Site Plan and 3-16, Landscape Plan. Figures are provided in Chapter 3.*

Table 4.1-2. Project Consistency with Development Standards for CIBP Zone

Hesperia Main Street and Freeway Corridor Specific Plan Development Standards for CIBP Zone	Project Design
Interior Side Yard Setback: None (except where the interior property line abuts a residential zone, or residential development as a part of a Regional Commercial zone: 20 feet)	
Parking and Loading: In addition to the off-street parking requirements and standards set forth in Chapter 16.20, Article IV (Parking and Loading Standards) of the HMC, the following shall apply: (1) To alleviate the unsightly appearance of loading facilities for industrial uses, these areas should not be located at the front of buildings where it is difficult to adequately screen them from view. Such facilities are more appropriately located at the rear of the site where special screening may not be required. (2) When it is not possible to locate loading facilities at the rear of the building, loading docks and doors should not dominate the frontage and must be screened from the street. Loading facilities should be offset from driveway openings. (3) Backing from the public street onto the site for loading into front end docks causes unsafe truck maneuvering and should not be utilized except at the ends of industrial cul-de-sacs where each circumstance will be studied individually at the time of design review.	***Consistent.*** Parking areas would be provided on-site consistent with Chapter 16.20, Article IV (Parking and Loading Standards) of the HMC. Single loaded truck bays would be located entirely on the rear of the proposed building when viewed from southbound Poplar Street. The facades of the building sides when viewed from these locations feature walls with varying paint colors, rooflines, off-set walls, and windows. Each side of the facades are complemented with storefronts featuring a variety of building materials, windows with high quality glazing. and accent panels. In addition, the Project's landscape plan incorporates vegetative screening to soften views of the Project site and to enhance visual quality. *See Figures 3-11, Site Plan; 3-14, Schematic Renderings; 3-15, Architectural Elevations; and 3-16, Landscape Plan. Figures are provided in Chapter 3.*
Landscaping: (1) Drought-tolerant and water conserving landscaping and water efficient irrigation systems and techniques shall be utilized whenever possible. (2) In addition, the design standards and guidelines included in Chapter 11 (Industrial Design Standards and Guidelines) of this Plan shall apply. The provisions of Chapter 16.20, Article XII (Landscape Regulations) and Chapter 16.24 (Protected Plants) of the HMC shall apply with the following exceptions/additions: (3) Industrial development in this zone shall provide a minimum of ten percent on-site landscaping, including that required in setback areas. Refer to section 16.20 Article XII of the HMC for minimum landscape requirements.	***Consistent.*** Project landscaping would consist of water efficient landscaping that would incorporate natural desert vegetation and would feature a variety of trees, shrubs, accents, and groundcovers. The sites for proposed building would provide approximately 14.9% landscape coverage. *See Figures 3-11, Site Plan and 3-16, Landscape Plan. Figures are provided in Chapter 3.*
Walls and Fences: (1) An industrial development adjacent to any residential zone shall have a minimum 6 foot high wall, not to exceed 8 feet, along property lines adjacent to such districts. (2) Both sides of all perimeter walls should be architecturally treated. Appropriate materials include decorative masonry, concrete, stone and brick.	***Not Applicable.*** The Project site does not abut a residential zone, and therefore, would not have a solid perimeter wall. Nonetheless, the Project's landscape plan incorporates vegetative screening to soften views of the Project site and to enhance visual quality. *See Figures 3-11, Site Plan and 3-16, Landscape Plan. Figures are provided in Chapter 3.*

Table 4.1-2. Project Consistency with Development Standards for CIBP Zone

Hesperia Main Street and Freeway Corridor Specific Plan Development Standards for CIBP Zone	Project Design
Outdoor Displays, Storage, Equipment, and Work Areas: (1) No retail sales, merchandise displays or work areas shall occur outside building(s). (2) Outside storage and equipment shall be confined to the rear half of the property or the rear of the principal structure on site, whichever is more restrictive, and screened from public view from any adjoining properties and public rights-of-way by appropriate walls, fencing and landscaping. (3) Outdoor hoists are subject to the conditions and standards listen in Chapter 9(C)(4.18).	*Consistent.* While the Project does not involve retail sales or merchandise displays and work areas would primarily be located within the warehouse building, outdoor equipment such as yard trucks and pallets may be stored within the truck court. These areas would be confined to the rear of the buildings and enclosed with fencing and vegetative screening. *See Figures 3-11, Site Plan and 3-12, Detailed Site Plan. Figures are provided in Chapter 3.*

As provided in Table 4.1-2, the Project would be consistent with the development standards of the CIBP Zone.

Additionally, due to the size and scale of industrial buildings, it is especially important to consider design to ensure compatibility with other parts of the community. Chapter 11 of the MSFCSP provides additional details regarding design standards and guidelines for industrial development. In accordance with the MSFCSP design guidelines, all setback areas would be landscaped, and building orientation, siting and entrances would be designed to minimize conflicts with the surrounding visual environment. For instance, landscaping and vegetation is incorporated into the site plan to provide visual screening and building facades would feature a complementary neutral color palette and a variety of building materials.

The building colors shall be reviewed to assure conformance with the development standards of the Hesperia Municipal Code and the MSFCSP. Buildings would include materials such as concrete, metal, aluminum entry framing, and glass, and building elevations would include vertical and horizontal elements that would break up the overall massing of the buildings and provide visual interest (see Figures 3-14, Schematic Renderings and 3-15, Architectural Elevations, in Chapter 3).

The visual setting surrounding the Project site currently consists of a mix of developed and undeveloped areas. Development in the area includes commercial uses, trucking-related uses [i.e., truck stops], lodging accommodations, big-box retail developments, public roadways and landscaping, and major interstate highways. Undeveloped areas consist of flat desert terrain with sparse vegetation. As a result, the Project site and surrounding area can be characterized as low density industrial and commercial development within a desert landscape setting. The Project would result in the development of vacant, undeveloped land with an industrial building that would feature contemporary architecture landscaping, and streetscape improvements that would assist in completing a cohesive 'gateway' corridor envisioned in the MSFCSP. The Project would also eliminate the illegal uses currently occurring on site (trespassing and illegal dumping).

In summary, the Project would not conflict with applicable zoning or other regulations governing scenic quality and the Project would be consistent with the visual character of the surrounding area. Therefore, with compliance with the City's Development Code and the MSFCSP design standards and guidelines and implementation of site specific landscaping, the Project would not conflict applicable zoning or other regulations governing scenic quality and impacts related to visual character and quality would be less than significant.

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

Less-than-Significant Impact. The Project site is currently undeveloped and does not support any existing sources of light or glare, and development of the Project would introduce new sources of light and glare to the Project site. However, developed portions of the City contain numerous sources of light and glare typical of urban and semi-rural environments. Existing sources of light or glare include streetlights, freestanding lights, building-mounted lights, illuminated signage, reflective building materials, and vehicular headlights. The undeveloped portions of the City, such as the Project site, contain few, if any, sources of light and glare. New sources of nighttime lighting resulting from the implementation of the Project include parking lot and loading area lighting, as well as building mounted lights. The Project would include a variety of exterior building light fixtures and parking lot lighting fixtures, including building mounted and pole mounted light fixtures. As depicted in Figures 3-14, Schematic Renderings, building materials would primarily include concrete, metal, aluminum, and glass windows. These features could result in light trespass, light pollution, and glare.

The majority of construction activities associated with the Project would occur during daytime hours consistent with standard industry practices. In the event that work is required outside the standard construction hours (to reduce traffic or other impacts), lighting would be focused directly on work activity areas and would be temporary. As such, nighttime construction lighting impacts would be less than significant.

Upon Project implementation, the Project could potentially result in significant adverse light and glare impacts on nighttime views due to the addition of building and parking lot lighting. However, the Project would be required to minimize light and glare impacts to sensitive land uses through the incorporation of setbacks, site planning, and other design techniques (consistent with General Plan Policy LU-3.5). Section 16.20.135 of the City's Municipal Code contains general performance standards related to light and glare such that any industrial activity shall not cause light trespass above 0.5 footcandles when measured in a residential district or lot (City of Hesperia 2020). While the Project would not be located adjacent to any residential districts or lots, the Project's lighting would be designed such that lighting is directed on-site and away from neighboring parcels. Lighting associated with streetlights would be designed consistent with City standards for safety and proper roadway illumination, consistent with other streetlights throughout the City. In addition, as part of the final engineering and site plan check phase, a photometric plan will be prepared by City planning staff prior to finalization of site plans. During this process, City staff would ensure that Project lighting would not result in glare on adjacent properties.

Further, all light fixtures would be required to be consistent with the California Green Building Standards Code for illumination. The California Green Building Standards Code sets forth minimum requirements based on Lighting Zones, as defined in Chapter 10 of the California Administrative Code. The requirements are designed to minimize light pollution in an effort to maintain dark skies and ensure new development reduces backlight, uplight, and glare (BUG) from exterior light sources (CALGreen 2019). The Project would be required to comply with the CALGreen BUG rating for Lighting Zone 3. Further, all lights would be shielded and directed downward, and the proposed lighting plan does not include blinking, flashing, or oscillating light sources.

The warehouse building would incorporate a variety of building materials. As depicted on Figures 3-12, Architectural Elevations, building materials would primarily include concrete, metal, aluminum, and glass windows. Metal canopy overhands for shading would be include above building entrances, and aluminum entrance fronts would include glass and metal attachments. Blue reflective glazing and high gloss paint is proposed for the entrance fronts and canopies. Glass windows would consist of tempered vision insulated glass with a solarban 60 rating, which has a low exterior reflectance percentage to maximize daylighting opportunities to interior building spaces. Although metallic materials and glass have been incorporated into Project design, Project setbacks and proposed

landscaping would provide screening to screen such Project elements from view, and all paint finishes would be flat (with the exception of the high gloss proposed for entrance fronts and canopies). As such, building materials would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. Therefore, impacts associated with light and glare would be less than significant.

Threshold E: Would the Project result in cumulatively considerable impacts with regard to aesthetic and visual considerations?

Less-than-Significant Impact. The Project is located within the MSFCSP area, and thus, would be designed and constructed according to the design guidelines and standards outlined in the MSFCSP for the CIBP Zone and industrial development. These guidelines and standards aim to protect the MSFCSP area's high desert setting and panoramic mountain views. All related projects located within the MSFCSP area would be subject to these design guidelines and standards, which include recommendations for the architectural character of new buildings to maximize views of the landscape while taking inspiration from surrounding natural elements.

The development and design standards provide the framework for the desired aesthetic and visual environment. Other development projects in the area will incorporate development standards, design guidelines, and other strategies outlined in the MSFCSP. In addition, the Project's proposed building colors shall be reviewed to assure conformance with the development standards of the Hesperia Municipal Code and the MSFCSP in order to promote the visual character and quality of the surrounding area. Thus, cumulative impacts related to the visual quality and character of the Project area would not be cumulatively considerable, assuming that related Projects would implement the same mandatory design standards set forth in the MSFCSP to which the Project must adhere.

Related development in the MSFCSP area and surrounding areas would introduce new sources of light in a setting that includes large areas of undeveloped land. However, Project lighting would comply with existing requirements (i.e., lighting would be directed downward, shielded, and focused on the Project site) to ensure lighting has a minimal effect on the overall night sky and reduce the potential for glare. Other projects located throughout the MSFCSP area would similarly be required to comply with these regulations. Therefore, compliance with these regulations would ensure that lighting and glare impacts would be less than significant and no mitigation would be required.

4.1.5 Mitigation Measures and Level of Significance After Mitigation

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

The Project would result in less-than-significant impacts to scenic vistas. No mitigation is required.

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 would result in no impact to scenic highways. No mitigation is required.

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

The Project would result in less-than-significant impacts to visual character or quality. No mitigation is required.

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

The Project would result in less-than-significant impacts to light and glare. No mitigation is required.

Threshold E: Would the Project result in cumulatively considerable impacts with regard to aesthetic and visual considerations?

The Project would result in less-than-significant cumulative impacts related to aesthetic and visual considerations. No mitigation is required.

4.1.6 References Cited

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4.2 Air Quality

This section describes the existing air quality conditions of the Poplar 18 Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential air quality impacts, and identifies mitigation measures related to implementation of the Project.

In addition to the documents incorporated by reference (see Section 2.7 of Chapter 2 of this Environmental Impact Report [EIR]), the following analysis is based, in part, on the following sources:

- Air Quality and GHG Emission Estimates, prepared by Dudek in October 2022 (Appendix B-1).
- Health Risk Assessment, prepared by Dudek in October 2022 (Appendix B-2).
- South Coast Air Quality Management District and the San Joaquin Valley Air Pollution Control District Full Amicus Briefs, various dates (Appendix B-3).
- Transportation Attachments, prepared by Dudek in October 2022 (Appendix I).

4.2.1 Existing Conditions

Meteorological and Topographical Conditions

The Project site is located within the Mojave Desert Air Basin (MDAB).[1] The MDAB includes the desert portions of Los Angeles, Kern, San Bernardino, and Riverside Counties. Most of this area is commonly referred to as the high desert because elevations range from approximately 2,000 to 5,000 feet above mean sea level. The MDAB is generally above the regional inversion layer and experiences relatively good dispersion conditions.

The MDAB is separated from Southern California coastal regions and Central California valley regions by mountains extending up to 10,000 feet above mean sea level. As a result, the Mojave Desert is removed from the cooling effects of the Pacific Ocean and is characterized by extreme temperatures. The MDAB consists of an assemblage of mountain ranges interspersed with valleys that often contain dry lakes. Lower-elevation mountains scattered throughout the basin are generally 1,000 feet to 4,000 feet high. Mountain passes form channels for air masses flowing from the west and southwest, and the prevailing winds from the west and southwest are caused by the proximity of the MDAB to coastal and central regions and to the blocking effect of the Sierra Nevada to the north.

This MDAB region is characterized by hot, dry summers and cool winters, with little precipitation. During the summer, the MDAB is generally influenced by a Pacific subtropical high-pressure cell that resides off the coast of California. This high-pressure cell prevents cloud formation and engenders daytime solar heating. The MDAB is rarely influenced by the cold air masses that move south from Canada and Alaska, as these frontal systems diffuse by the time they reach the MDAB. Most moisture arrives in frequent warm, moist, unstable air masses from the south. The MDAB averages between 3 and 7 inches of precipitation per year (from 16 to 30 days with at least 0.01 inches of precipitation). The Victorville California Irrigation Management Information System station recorded an average annual precipitation of 2.9 inches of precipitation between November 2020 and October 2021 (CIMIS 2021). The MDAB is classified as a dry–hot desert climate, with portions classified as dry–very hot desert, to indicate at least 3 months have maximum average temperatures over 100.4°F (MDAQMD 2008).

[1] The description of the MDAB climate and topography is based on the Mojave Desert Air Quality Management District (MDAQMD) 2016 CEQA and Federal Conformity Guidelines (MDAQMD 2016). The description of the Western Mojave Desert ozone (O_3) nonattainment area is based the MDAQMD Federal 8-Hour Ozone Attainment Plan for the Western Mojave Desert Non-Attainment Area (MDAQMD 2008).

The Project is also located within the Mojave Desert Air Quality Management District (MDAQMD) portion of the Western Mojave Desert ozone (O_3) nonattainment area (MDAQMD 2008), which includes the following San Bernardino County communities: Phelan, Hesperia, Adelanto, Victorville, Apple Valley, Barstow, Joshua Tree, Yucca Valley, and Twentynine Palms (the southwestern portion of the MDAQMD).

Pollutants and Effects

Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established minimum ambient air quality standards (AAQS), or criteria, for outdoor pollutant concentrations in order to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}), particulate matter with an aerodynamic diameter equal to or less than 2.5 microns ($PM_{2.5}$), and lead (Pb). These pollutants, as well as toxic air contaminants (TACs), are discussed below.[2] In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants.

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

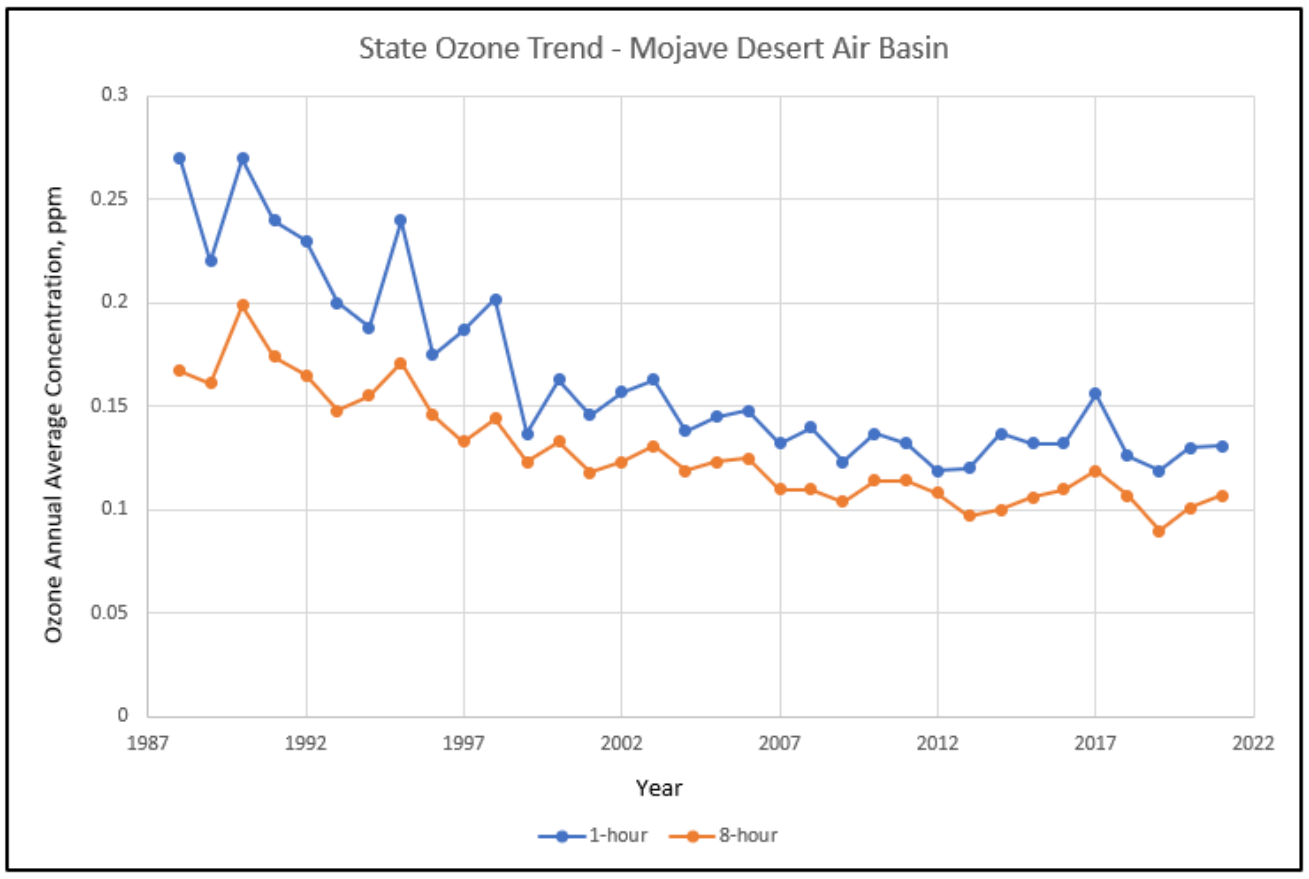
Adverse Health Effects: O_3 in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) to O_3 can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes (EPA 2020). Inhalation of O_3 causes inflammation and irritation of the tissues lining human airways, causing and worsening a variety of symptoms. Exposure to O_3 can reduce the volume of air that the lungs breathe in and can cause shortness of breath. O_3 in sufficient doses increases the permeability of lung cells, rendering them more susceptible to toxins and microorganisms. The occurrence and severity of health effects from O_3 exposure vary widely among individuals, even when the dose and the duration of exposure are the same. Research shows adults and children who spend more time outdoors participating in vigorous physical activities are at greater risk from the harmful health effects of O_3 exposure. While there are relatively few studies of O_3's effects on children, the available studies show that children are no more

[2] The descriptions of the criteria air pollutants and associated health effects are based on the U.S. Environmental Protection Agency's "Criteria Air Pollutants" (EPA 2021a), as well as the California Air Resources Board's "Glossary" (CARB 2021a)

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

or less likely to suffer harmful effects than adults. However, there are a number of reasons why children may be more susceptible to O_3 and other pollutants. Children and teens spend nearly twice as much time outdoors and engaged in vigorous activities as adults. Children breathe more rapidly than adults and inhale more pollution per pound of their body weight than adults. Also, children are less likely than adults to notice their own symptoms and avoid harmful exposures. Further research may be able to better distinguish between health effects in children and adults. Children, adolescents, and adults who exercise or work outdoors, where O_3 concentrations are the highest, are at the greatest risk of harm from this pollutant (CARB 2021b). Air quality in the MDAB has generally improved since the inception of air pollutant monitoring. This improvement is mainly a result of lower-polluting on-road motor vehicles, more stringent regulation of industrial sources, and the implementation of emission reduction strategies by the MDAQMD and nearby air districts including the South Coast Air Quality Management District (SCAQMD) and the San Joaquin Valley Air Pollution Control District, as well as CARB and EPA. This general trend toward cleaner air within the state, including the MDAB, has occurred in spite of continued population growth. Figure 4.2-1 State Ozone Trend – Mojave Desert Air Basin, demonstrates the reduction in O_3 over time.

Figure 4.2-1. State 1-Hour and 8-Hour Ozone Concentration Trend in MDAB (ppm)



Source: CARB 2022, iADAM Air Quality Statistics. Units = parts per million (ppm).

Nitrogen Dioxide. NO_2 is a brownish, highly reactive gas that is present in all urban atmospheres. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide (NO), which is a colorless, odorless gas. NO_x, which includes NO_2 and NO, plays a major role, together with VOC, in the atmospheric reactions that produce O_3. NO_x is formed from fuel combustion under high temperature or pressure. In addition, NO_2 is an important precursor to acid rain and may affect both terrestrial and aquatic ecosystems. The two major emissions sources are transportation and stationary fuel combustion sources (such as electric utility and industrial boilers).

Adverse Health Effects: A large body of health science literature indicates that exposure to NO_2 can induce adverse health effects. The strongest health evidence, and the health basis for the AAQS for NO_2, results from controlled human exposure studies that show that NO_2 exposure can intensify responses to allergens in allergic asthmatics. In addition, a number of epidemiological studies have demonstrated associations between NO_2 exposure and premature death, cardiopulmonary effects, decreased lung function growth in children, respiratory symptoms, emergency room visits for asthma, and intensified allergic responses. Infants and children are particularly at risk because they have disproportionately higher exposure to NO_2 than adults due to their greater breathing rate for their body weight and their typically greater outdoor exposure duration. Several studies have shown that long-term NO_2 exposure during childhood, the period of rapid lung growth, can lead to smaller lungs at maturity in children with higher compared to lower levels of exposure. In addition, children with asthma have a greater degree of airway responsiveness compared with adult asthmatics. In adults, the greatest risk is to people who have chronic respiratory diseases, such as asthma and chronic obstructive pulmonary disease (CARB 2021c).

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

Adverse Health Effects: CO is harmful because it binds to hemoglobin in the blood, reducing the ability of blood to carry oxygen. This interferes with oxygen delivery to the body's organs. The most common effects of CO exposure are fatigue, headaches, confusion and reduced mental alertness, light-headedness, and dizziness due to inadequate oxygen delivery to the brain. For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress. Inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance. Unborn babies whose mothers experience high levels of CO exposure during pregnancy are at risk of adverse developmental effects. Unborn babies, infants, elderly people, and people with anemia or with a history of heart or respiratory disease are most likely to experience health effects with exposure to elevated levels of CO (CARB 2021d).

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

Adverse Health Effects: Controlled human exposure and epidemiological studies show that children and adults with asthma are more likely to experience adverse responses with SO_2 exposure, compared with the non-asthmatic population. Effects at levels near the 1-hour standard are those of asthma exacerbation, including bronchoconstriction accompanied by symptoms of respiratory irritation such as wheezing, shortness of breath, and chest tightness, especially during exercise or physical activity. Also, exposure at elevated levels of SO_2 (above 1 part per million [ppm]) results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality. The elderly and people with cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most likely to experience these adverse effects (CARB 2021e).

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

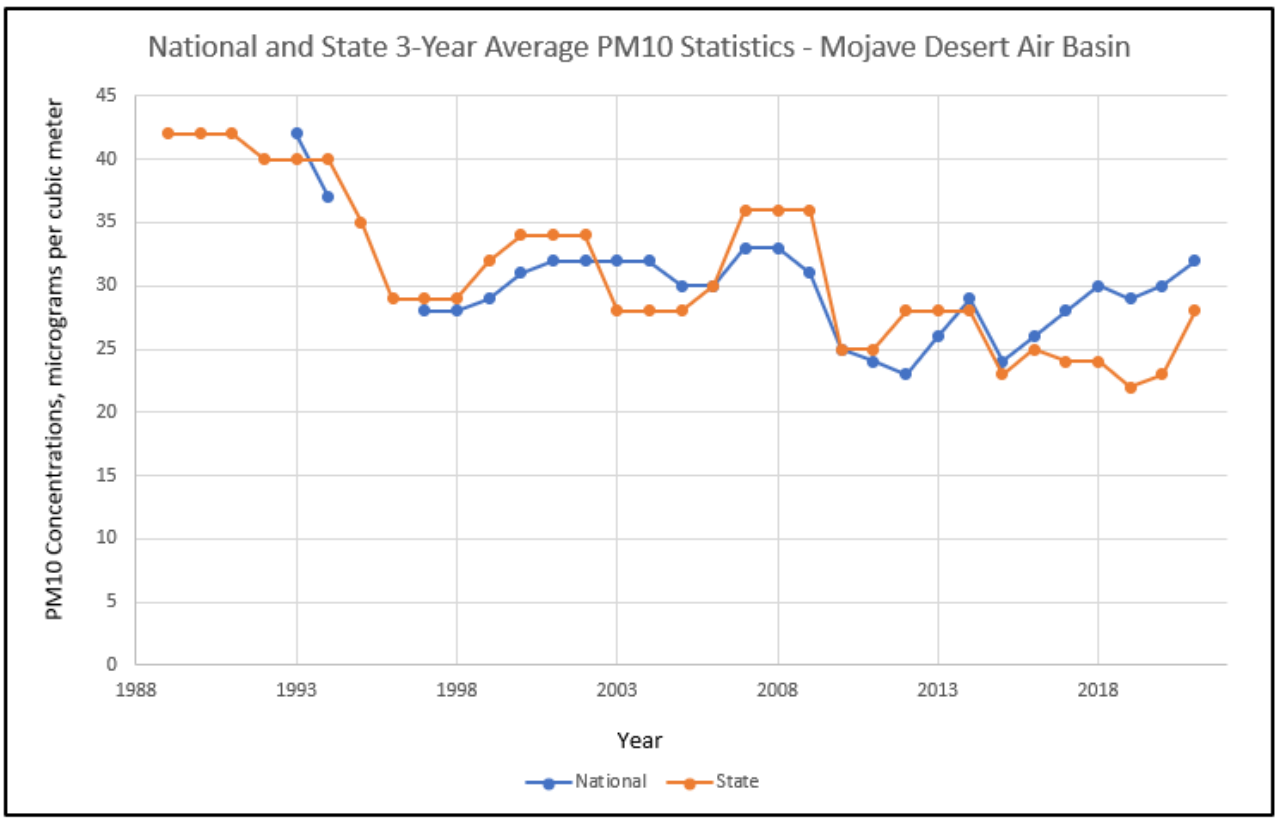
Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere.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

Adverse Health Effects: $PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances such as lead, sulfates, and nitrates can cause lung damage directly or be absorbed into the bloodstream, causing damage elsewhere in the body. Additionally, these substances can transport adsorbed gases such as chlorides or ammonium into the lungs, also causing injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissue. Suspended particulates also damage and discolor surfaces on which they settle and produce haze and reduce regional visibility.

A number of adverse health effects have been associated with exposure to both $PM_{2.5}$ and PM_{10}. For $PM_{2.5}$, short-term exposures (up to 24-hour duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases. In addition, of all of the common air pollutants, $PM_{2.5}$ is associated with the greatest proportion of adverse health effects related to air pollution, both in the United States and worldwide based on the World Health Organization's Global Burden of Disease Project. Short-term exposures to PM_{10} have been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits (CARB 2021f).

Long-term exposure (months to years) to $PM_{2.5}$ has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children. The effects of long-term exposure to PM_{10} are less clear, although several studies suggest a link between long-term PM_{10} exposure and respiratory mortality. The International Agency for Research on Cancer published a review in 2015 that concluded that particulate matter in outdoor air pollution causes lung cancer (CARB 2021f). As discussed for Ozone, air quality in the MDAB has generally improved since the inception of air pollutant monitoring including PM_{10} ambient concentrations. Figure 4.2-2 National and State 3-Year Average PM10 Statistics – Mojave Desert Air Basin, demonstrates the reduction in PM_{10} trend over time.

Figure 4.2-2. National and State 3-Year Average PM10 Statistics – Mojave Desert Air Basin



Source: CARB 2022, iADAM Air Quality Statistics. Units = micrograms per cubic meter.

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

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

Sulfates. Sulfates are the fully oxidized form of sulfur, which typically occur in combination with metals or hydrogen ions. Sulfates are produced from reactions of SO_2 in the atmosphere.

Adverse Health Effects: Sulfates can result in respiratory impairment, as well as reduced visibility.

Vinyl Chloride. Vinyl chloride is a colorless gas with a mild, sweet odor, which has been detected near landfills, sewage plants, and hazardous waste sites, due to the microbial breakdown of chlorinated solvents.

Adverse Health Effects: Short-term exposure to high levels of vinyl chloride in air can cause nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure through inhalation can cause liver damage, including liver cancer.

Hydrogen Sulfide. Hydrogen sulfide is a colorless and flammable gas that has a characteristic odor of rotten eggs. Sources of hydrogen sulfide include geothermal power plants, petroleum refineries, sewers, and sewage treatment plants.

Adverse Health Effects: Exposure to hydrogen sulfide can result in nuisance odors, as well as headaches and breathing difficulties at higher concentrations.

Visibility-Reducing Particles. Visibility-reducing particles are any particles in the air that obstruct the range of visibility. Sources of visibility-reducing particles are the same as for $PM_{2.5}$ described above.

Adverse Effects: Effects of reduced visibility can include obscuring the viewshed of natural scenery, reducing airport safety, and discouraging tourism.

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

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

Non-Criteria Air Pollutants

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

substances in the air. In addition, the California Air Toxics "Hot Spots" Information and Assessment Act, Assembly Bill (AB) 2588, was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere. The law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years.

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

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

Diesel Particulate Matter. Diesel particulate matter (DPM) is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. More than 90% of DPM is less than 1 micrometer in diameter (about 1/70 the diameter of a human hair), and thus is a subset of $PM_{2.5}$ (CARB 2021g). DPM is typically composed of carbon particles (soot, also called black carbon) and numerous organic compounds, including over 40 known carcinogenic organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene (CARB 2021g). In August 1998, CARB classified "particulate emissions from diesel-fueled engines" (i.e., DPM) (17 CCR 93000) as a TAC. DPM is emitted from a broad range of diesel engines: on-road diesel engines of trucks, buses, and cars and off-road diesel engines including locomotives, marine vessels, and heavy-duty construction equipment, among others.

Adverse Health Effects: Approximately 70% of all airborne cancer risk in California is associated with DPM (CARB 2000). To reduce the cancer risk associated with DPM, CARB adopted a diesel risk reduction plan in 2000 (CARB 2000). Because it is part of $PM_{2.5}$, DPM also contributes to the same noncancer health effects as $PM_{2.5}$ exposure. These effects include premature death; hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma; increased respiratory symptoms; and decreased lung function in children. Several studies suggest that exposure to DPM may also facilitate development of new allergies (CARB 2021g). Those most vulnerable to noncancer health effects are children, whose lungs are still developing, and the elderly, who often have chronic health problems.

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

Valley Fever. Coccidioidomycosis, more commonly known as "Valley Fever," is an infection caused by inhalation of the spores of the *Coccidioides immitis* fungus, which grows in the soils of the southwestern United States. The ecologic factors that appear to be most conducive to survival and replication of the spores are high summer temperatures, mild winters, sparse rainfall, and alkaline, sandy soils.

San Bernardino County is not considered a highly endemic region for Valley Fever as the latest report from the California Department of Public Health listed San Bernardino County as having 1.8 cases per 100,000 people (CDPH 2017).

Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where these air pollution-sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses where air pollution-sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (sensitive sites or sensitive land uses) (CARB 2005). The MDAQMD identifies sensitive receptors as residences, schools, playgrounds, childcare centers, and medical facilities (MDAQMD 2016).

Local Ambient Air Quality

Mojave Desert Air Basin Attainment Designation

Pursuant to the 1990 federal Clean Air Act amendments, the EPA classifies air basins (or portions thereof) as "attainment" or "nonattainment" for each criteria air pollutant, based on whether the National Ambient Air Quality Standards (NAAQS) have been achieved. Generally, if the recorded concentrations of a pollutant are lower than the standard, the area is classified as "attainment" for that pollutant. If an area exceeds the standard, the area is classified as "nonattainment" for that pollutant. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated as "unclassified" or "unclassifiable." The designation of "unclassifiable/attainment" means that the area meets the standard or is expected to meet the standard despite a lack of monitoring data. Areas that achieve the standards after a nonattainment designation are re-designated as maintenance areas and must have approved maintenance plans to ensure continued attainment of the standards. The California Clean Air Act, like its federal counterpart, called for the designation of areas as "attainment" or "nonattainment," but based on California Ambient Air Quality Standards (CAAQS) rather than the NAAQS. Table 4.2-1 depicts the current attainment status of the Project area with respect to the NAAQS and CAAQS. Notably, the MDAB has experienced a substantial reduction in maximum 8-hour concentrations of O_3 over time, as well as reductions in PM_{10}, from strategies including implementation of Reasonable Available Control Technology, vehicle emission standards, and other measures, as described in the respective MDAQMD O_3 attainment plan (MDAQMD 2008) and PM_{10} attainment demonstration and maintenance plan (MDAQMD 1995).

Table 4.2-1. Mojave Desert Air Basin Attainment Classification

Pollutant	Designation/Classification[a]	
	Federal Standards	State Standards
O_3 – 1 hour	No federal standard	**Nonattainment**
O_3 – 8 hours	**Severe nonattainment[b]**	**Nonattainment**
NO_2	Unclassifiable/attainment	Attainment
CO	Unclassifiable/attainment	Attainment
SO_2	Unclassifiable/attainment	Attainment
PM_{10}	**Moderate nonattainment[c]**	**Nonattainment**
$PM_{2.5}$	Unclassifiable/attainment	Attainment[d]
Lead	Unclassifiable/attainment	Attainment
Hydrogen sulfide	No federal standard	Unclassified[e]

Table 4.2-1. Mojave Desert Air Basin Attainment Classification

Pollutant	Designation/Classification[a]	
	Federal Standards	State Standards
Sulfates	No federal standard	Attainment
Visibility-reducing particles	No federal standard	Unclassified
Vinyl chloride	No federal standard	No designation

Sources: EPA 2021b (federal); CARB 2021h (state).
Notes: O_3 = ozone; NO_2 = nitrogen dioxide; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.

[a] Designations/classifications in **bold** type indicate nonattainment.
[b] West Mojave Desert portion of the MDAB, where the Project is located, is designated severe nonattainment. The Kern County portion of the MDAB is designated moderate nonattainment, and the remaining areas of the MDAB are designated unclassifiable/attainment.
[c] The Project is located in an area designated moderate nonattainment in the MDAB.
[d] The Project is located in an area designated attainment in the MDAB.
[e] The entire MDAB is designated unclassified, except for the Searles Valley portion of the basin, which is designated nonattainment.

Definitions: attainment = meets the standards; attainment/maintenance = achieve the standards after a nonattainment designation; nonattainment = does not meet the standards; unclassified or unclassifiable = insufficient data to classify; unclassifiable/attainment = meets the standard or is expected to be meet the standard despite a lack of monitoring data.

In summary, the Project is located in an area of the MDAB that is designated as a nonattainment area for federal and state O_3 standards and federal and state PM_{10} standards, and unclassifiable/attainment for all other criteria air pollutants (EPA 2021b; CARB 2021h).

Despite the current nonattainment status for O_3 and PM_{10}, air quality in the MDAB has generally improved since the inception of air pollutant monitoring as discussed previously and presenting in Figure 4.2-1 and Figure 4.2-2, for O_3 and PM_{10} respectively.

The MDAQMD is downwind of the Los Angeles basin, and to a lesser extent, is downwind of the San Joaquin Valley. Prevailing winds transport O_3 and O_3 precursors from both regions into and through the MDAB during the summer O_3 season and these transport couplings have been officially recognized by CARB. While local MDAQMD emissions contribute to exceedances of both the NAAQS and CAAQS for O_3, because the MDAQMD is overwhelmingly impacted by O_3 transported from the South Coast Air Basin, the MDAB would likely be in attainment of O_3 standards without the influence of this transported air pollution from upwind regions (MDAQMD 2008). Nonetheless, the MDAQMD has experienced a substantial reduction in maximum 8-hour ozone concentrations. Per the O_3 indicator values between 1995 and 2006 within the Western Mojave Desert, all indicators, including number of exceedance days, have decreased since 1995, indicating overall improvements in the various measures of O_3 air quality (MDAQMD 2008). The three stations closest to the South Coast Air Basin have the highest historical O_3 concentrations (Phelan, Hesperia and Victorville), while the more distant or isolated stations (Barstow and Twentynine Palms) have much lower O_3 concentrations and are experience concentrations in attainment of the NAAQS (MDAQMD 2008).

Regarding particulate matter (PM), which is a primary and secondary pollutant, the MDAQMD believes that local sources contribute to PM_{10} concentrations in the Mojave Desert Planning Area as the monitoring sites are located in and around anthropogenic sources of dust (e.g., primary PM); however, O_3 precursor transport from upwind air basins include some nitrate and sulfate aerosol or secondary particulates, which contribute to PM concentrations. Because the Mojave Desert Planning Area contains relatively limited NO_x and sulfur sources, transport contributions are estimated as half of the measured total nitrate and sulfate content, which contribute to overall PM concentrations (MDAQMD 1995).

Accordingly, it is important to note that the SCAQMD, which has jurisdiction over the South Coast Air Basin, has also experienced an improvement in air quality over the last few decades. The SCAQMD implements air quality plans, such as the 2016 Air Quality Management Plan and the draft 2022 Air Quality Management Plan, which are comprehensive documents that outline their air pollution control program for attaining all CAAQS and NAAQS. Specifically, the SCAQMD draft 2022 Air Quality Management Plan addresses attainment of the 2015 8-hour O_3 standard (70 parts per billion) for the South Coast Air Basin and the Coachella Valley. PM_{10} levels have declined almost 50% since 1990 within the South Coast Air Basin, and $PM_{2.5}$ levels have also declined 50% since measurements began in 1999 (SCAQMD 2013). Similar improvements are observed with O_3 within the South Coast Air Basin, although the rate of O_3 decline has slowed in recent years (SCAQMD 2013). Despite great strides in cleaning the air over the past several decades, the Los Angeles area still has the highest levels of O_3 in the nation and meeting the O_3 standards within the South Coast Air Basin will require federal action and zero- and low-emission technologies to reduce NO_x (SCAQMD 2022). Overall, improvements within the South Coast Air Basin will also result in improvements within the MDAB. Lastly, the MDAQMD continues to implement available control technologies and rules and regulations to further reduce sources of O_3 and PM within their jurisdictional boundaries including attainment plans and rule development, as explained in Section 4.2.2 (Local).

Local Ambient Air Quality Conditions

CARB, air districts, and other agencies monitor ambient air quality at approximately 250 air quality monitoring stations across the state. The MDAQMD monitors local ambient air quality in the Project area. Air quality monitoring stations usually measure pollutant concentrations 10 feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. The most recent background ambient air quality data from 2018 to 2020 are presented in Table 4.2-2. The Hesperia monitoring station, located at 17288 Olive Street, Hesperia, California, is the nearest air quality monitoring station to the Project site, and is located approximately 5.7 miles east of the Project. The data collected at this station are considered representative of the air quality experienced in the Project vicinity. Air quality data for O_3 and PM_{10} from the Hesperia monitoring station are provided in Table 4.2-2. Because CO, $PM_{2.5}$ NO_2, and SO_2 measurements are not monitored at the Hesperia monitoring station, the measurements were taken from the Victorville monitoring station (14306 Park Avenue, Victorville, California, approximately 7.0 miles northeast of the Project site). The number of days exceeding the AAQS is also shown in Table 4.2-2.

Table 4.2-2. Local Ambient Air Quality Data

Monitoring Station	Unit	Averaging Time	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
					2018	2019	2020	2018	2019	2020
Ozone (O_3)										
Hesperia	ppm	Maximum 1-hour concentration	State	0.09	0.113	0.108	0.118	9	9	9
	ppm	Maximum 8-hour concentration	State	0.070	0.100	0.088	0.094	71	47	46
			Federal	0.070	0.100	0.088	0.094	71	47	46
Nitrogen Dioxide (NO_2)										
Victorville	ppm	Maximum 1-hour concentration	State	0.18	0.051	0.056	0.059	0	0	0
			Federal	0.100	0.051	0.056	0.059	0	0	0

Table 4.2-2. Local Ambient Air Quality Data

Monitoring Station	Unit	Averaging Time	Agency/ Method	Ambient Air Quality Standard	Measured Concentration by Year			Exceedances by Year		
					2018	2019	2020	2018	2019	2020
	ppm	Annual concentration	State	0.030	0.011	0.011	0.012	0	0	0
			Federal	0.053	0.011	0.011	0.012	0	0	0
Carbon Monoxide (CO)										
Victorville	ppm	Maximum 1-hour concentration	State	20	1.4	1.5	1.7	0	0	0
			Federal	35	1.4	1.5	1.7	0	0	0
	ppm	Maximum 8-hour concentration	State	9.0	1.1	1.1	1.4	0	0	0
			Federal	9	1.1	1.1	1.4	0	0	0
Sulfur Dioxide (SO_2)										
Victorville	ppm	Maximum 1-hour concentration	Federal	0.075	0.010	0.004	0.004	0	0	0
	ppm	Maximum 24-hour concentration	Federal	0.14	0.003	0.003	0.003	0	0	0
	ppm	Annual concentration	Federal	0.030	0.001	0.001	0.001	0	0	0
Coarse Particulate Matter (PM_{10})[a]										
Hesperia	µg/ m^3	Maximum 24-hour concentration	State	50	—	—	—	—	—	—
			Federal	150	139.8	157.7	224.1	0.0 (1)	1.0 (1)	1.0 (1)
	µg/ m^3	Annual concentration	State	20	27.8	24.5	28.2	—	—	—
Fine Particulate Matter ($PM_{2.5}$)[a]										
Victorville	µg/ m^3	Maximum 24-hour concentration	Federal	35	32.7	17.8	48.4	0.0 (0)	0.0 (0)	4.0 (4)
	µg/ m^3	Annual concentration	State	12	8.7	7.0	10.4	0	0	0
			Federal	12.0	7.4	8.7	7.9	0	0	0

Sources: CARB 2021i; EPA 2021b.

Notes:; ppm = parts per million; µg/m^3 = micrograms per cubic meter; — = not available.

Data taken from CARB iADAM (CARB 2021i) and EPA AirData (EPA 2021b) represent the highest concentrations experienced over a given year.

Exceedances of federal and state standards are only shown for O_3 and particulate matter. Daily exceedances for particulate matter are estimated days because PM_{10} and $PM_{2.5}$ are not monitored daily. All other criteria pollutants did not exceed federal or state standards during the years shown. There is no federal standard for 1-hour ozone, annual PM_{10}, or 24-hour SO_2, nor is there a state 24-hour standard for $PM_{2.5}$.

[a] Measurements of PM_{10} and $PM_{2.5}$ are usually collected every 6 days and every 1 to 3 days, respectively. Number of days exceeding the standards is a mathematical estimate of the number of days concentrations would have been greater than the level of the standard had each day been monitored. The numbers in parentheses are the measured number of samples that exceeded the standard.

4.2.2 Relevant Plans, Policies, and Ordinances

Federal

Criteria Air Pollutants

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

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the public. The NAAQS (other than for O_3, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O_3, NO_2, SO_2, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. The Clean Air Act requires the EPA to reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a state implementation plan that demonstrates how those areas will attain the standards within mandated time frames.

Hazardous Air Pollutants

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

State

Criteria Air Pollutants

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

CARB has established the CAAQS, which are generally more restrictive than the NAAQS. As stated previously, an ambient air quality standard defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without harm to the public's health. For each pollutant, concentrations must be below the relevant CAAQS before a basin can attain the corresponding CAAQS. Air quality is considered “in attainment” if pollutant levels are continuously below the CAAQS and violate the standards no more than once each year. The CAAQS for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM_{10}, and $PM_{2.5}$ and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded.

California air districts have based their thresholds of significance for California Environmental Quality Act (CEQA) purposes on the levels that scientific and factual data demonstrate that the air basin can accommodate without affecting the attainment date for the NAAQS or CAAQS. Since an ambient air quality standard is based on maximum pollutant levels in outdoor air that would not harm the public's health, and air district thresholds pertain to attainment of the ambient air quality standard, this means that the thresholds established by air districts are also protective of human health. The NAAQS and CAAQS are presented in Table 4.2-3.

Table 4.2-3. Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[a]	National Standards[b]	
		Concentration[c]	Primary[c,d]	Secondary[c,e]
O_3	1 hour	0.09 ppm (180 µg/m³)	—	Same as primary standard[f]
	8 hours	0.070 ppm (137 µg/m³)	0.070 ppm (137 µg/m³)[f]	
NO_2[g]	1 hour	0.18 ppm (339 µg/m³)	0.100 ppm (188 µg/m³)	Same as primary standard
	Annual arithmetic mean	0.030 ppm (57 µg/m³)	0.053 ppm (100 µg/m³)	
CO	1 hour	20 ppm (23 mg/m³)	35 ppm (40 mg/m³)	None
	8 hours	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	
SO_2[h]	1 hour	0.25 ppm (655 µg/m³)	0.075 ppm (196 µg/m³)	—
	3 hours	—	—	0.5 ppm (1,300 µg/m³)
	24 hours	0.04 ppm (105 µg/m³)	0.14 ppm (for certain areas)[g]	—
	Annual	—	0.030 ppm (for certain areas)[g]	—
PM_{10}[i]	24 hours	50 µg/m³	150 µg/m³	Same as primary standard
	Annual arithmetic mean	20 µg/m³	—	
$PM_{2.5}$[i]	24 hours	—	35 µg/m³	Same as primary standard
	Annual arithmetic mean	12 µg/m³	12.0 µg/m³	15.0 µg/m³
Lead[j,k]	30-day average	1.5 µg/m³	—	—
	Calendar quarter	—	1.5 µg/m³ (for certain areas)[k]	Same as primary standard
	Rolling 3-month average	—	0.15 µg/m³	
Hydrogen sulfide	1 hour	0.03 ppm (42 µg/m³)	—	—
Vinyl chloride[j]	24 hours	0.01 ppm (26 µg/m³)	—	—
Sulfates	24 hours	25 µg/m³	—	—

Table 4.2-3. Ambient Air Quality Standards

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

Source: CARB 2016.

Notes: O_3 = ozone; ppm = parts per million by volume; µg/m³ = micrograms per cubic meter; NO_2 = nitrogen dioxide; CO = carbon monoxide; mg/m³= milligrams per cubic meter; SO_2 = sulfur dioxide; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; PST = Pacific Standard Time.

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

b National standards (other than O_3, NO_2, SO_2, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

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

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

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

f On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm.

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

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

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

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

k The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

Toxic Air Contaminants

The state Air Toxics Program was established in 1983 under AB 1807 (Tanner). The California TAC list identifies more than 200 pollutants, of which carcinogenic and noncarcinogenic toxicity criteria have been established for a subset of these pollutants pursuant to the California Health and Safety Code. In accordance with AB 2728, the state list includes the (federal) HAPs. In 1987, the Legislature enacted the Air Toxics "Hot Spots" Information and Assessment Act of

1987 (AB 2588) to address public concern over the release of TACs into the atmosphere. AB 2588 law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years. TAC emissions from individual facilities are quantified and prioritized. "High-priority" facilities are required to perform a health risk assessment (HRA), and if specific thresholds are exceeded, the facility operator is required to communicate the results to the public in the form of notices and public meetings. As a result of the state Air Toxics Program, more than 30,000 facilities have reduced their toxic emissions which has led to the reduction of cancer risk in California by about 80 percent since 1990 (CARB 2022).

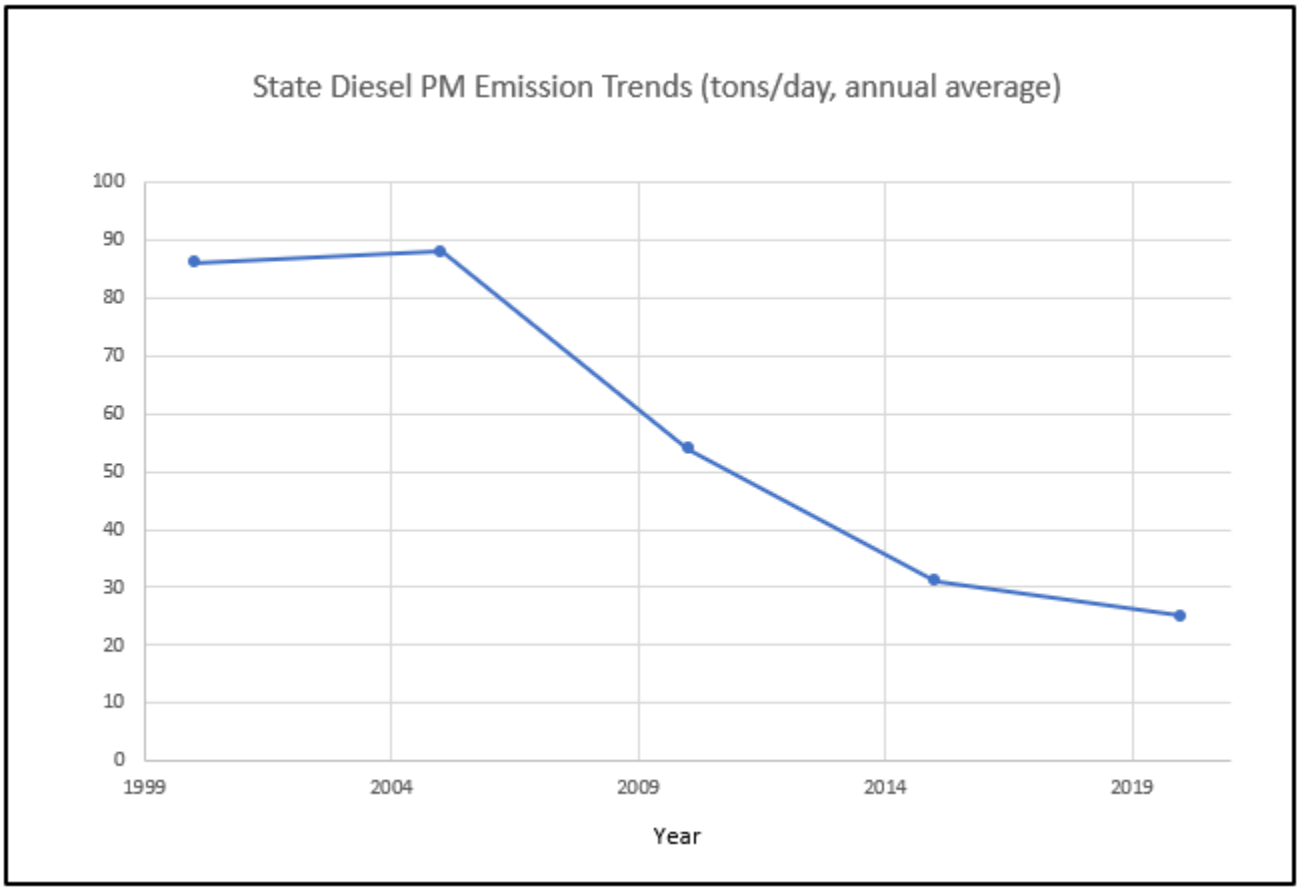
In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines (CARB 2000). The regulation is anticipated to result in an 80% decrease in statewide diesel health risk in 2020 compared with the diesel risk in 2000.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

In 2013 CARB published the California Almanac of Emissions and Air Quality. The Almanac contains 20-year trend summaries of air quality and emissions data for five criteria pollutants: ozone, PM_{10}, CO, NO_2, and SO_2. Data are summarized for the State as a whole and for the five most populated air basins (South Coast, San Francisco Bay Area, San Joaquin Valley, San Diego, and Sacramento Valley). In addition to information on criteria pollutants, the Almanac provides information on air quality and emissions for DPM. Figure 4.2-3 provides a graphical depiction of the diesel particulate matter emissions trend for the State based on the CARB California Almanac of Emissions and Air Quality 2013 report. As shown the trend of DPM is decreasing significantly since 2005 to report projected year 2020, 88 tons per day, annual average to 25 tons per day, annual average, respectively.

California Health and Safety Code Section 41700

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

Figure 4.2-3. Statewide Diesel Particulate Matter Trends



Source: CARB 2013, California Almanac of Emissions and Air Quality 2013.

Local

Mojave Desert Air Quality Management District

The MDAQMD is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in the San Bernardino County portion of the MDAB, where the Project is located. The MDAQMD operates monitoring stations in the MDAB, develops rules and regulations for stationary sources and equipment, prepares emissions inventory and air quality management planning documents, and conducts source testing and inspections. The MDAQMD's air quality management plans include control measures and strategies to be implemented to attain state and federal AAQS in the MDAB. The MDAQMD then implements these control measures as regulations to control or reduce criteria pollutant emissions from stationary sources or equipment. The MDAQMD's most recent air quality plans are the PM_{10} attainment demonstration and maintenance plan (MDAQMD 1995) and the O_3 attainment plan (MDAQMD 2008).

Applicable Rules. Emissions that would result from mobile, area, and stationary sources during construction and operation of the Project are subject to the rules and regulations of the MDAQMD. The MDAQMD rules applicable to the Project may include, but are not limited to, the following:

- **Rule 219** – Equipment Not Requiring a Permit: The rule identifies equipment exempt from permit requirements of District Rules 201 and 203.
  - District permit required for Internal combustion engines with manufacturer's maximum continuous rating greater than or equal to 50 brake horsepower
- **Rule 401 – Visible Emissions:** This rule establishes the limit for visible emissions from stationary sources.
- **Rule 402 – Nuisance:** This rule prohibits the discharge of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any such persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property.
- **Rule 403 – Fugitive Dust Control for the Mojave Desert Planning Area:** This rule ensures that the NAAQS for PM_{10} will not be exceeded due to anthropogenic sources of fugitive dust within the Mojave Desert Planning Area and implements the control measures contained in the Mojave Desert Planning Area Federal PM_{10} Attainment Plan. Rule 403 includes requirements for a Dust Control Plan, signage and fencing requirements, as well as surface watering and stabilization with chemicals, gravel and asphaltic pavement to eliminate visible fugitive dust from vehicular travel and wind erosion.
- **Rule 431 – Sulfur Content of Liquid Fuels:** The purpose of this rule is to limit the sulfur content in diesel and other liquid fuels for the purpose of reducing the formation of SO_x and particulates during combustion and of enabling the use of add-on control devices for diesel-fueled internal combustion engines. The rule applies to all refiners, importers, and other fuel suppliers such as distributors, marketers, and retailers, as well as to users of diesel, low-sulfur diesel, and other liquid fuels for stationary-source applications in the MDAQMD. The rule also affects diesel fuel supplied for mobile sources.
- **Rule 442 – Usage of Solvents:** The purpose of this rule is to reduce VOC emissions from VOC-containing materials or equipment that is not subject to limits of any rule found in District Regulation XI – Source Specific Standards.
- **Rule 1113 – Architectural Coatings.** This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. SCAG serves as the federally designated metropolitan planning organization for the Southern California region and is the largest metropolitan planning organization in the United States.

On April 7, 2016, SCAG's Regional Council adopted the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (2016–2040 RTP/SCS). The 2016 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The 2016 RTP/SCS charts a course for closely integrating land use and transportation so that the region can grow smartly and sustainably. The 2016–2040 RTP/SCS was prepared through a collaborative, continuous, and comprehensive

process with input from local governments, county transportation commissions, tribal governments, nonprofit organizations, businesses, and local stakeholders within Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. In June 2016, SCAG received its conformity determination from the Federal Highway Administration and the Federal Transit Administration indicating that all air quality conformity requirements for the 2016 RTP/SCS and associated 2015 Federal Transportation Improvement Program Consistency Amendment through Amendment 15-12 have been met (SCAG 2016).

SCAG has developed Connect SoCal, the 2020–2045 RTP/SCS, which is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. Connect SoCal charts a path toward a more mobile, sustainable, and prosperous region by making connections between transportation networks, planning strategies, and the people whose collaboration can improve the quality of life for Southern Californians. Connect SoCal embodies a collective vision for the region's future and is developed with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses, and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. SCAG's 2020–2045 RTP/SCS was adopted on September 3, 2020 (SCAG 2020).

City of Hesperia General Plan

The City of Hesperia General Plan contains the following goals and policies applicable to air quality and the Project (City of Hesperia 2010):

Conservation Element

Goal CN-8**.** Implement policies and measures to reduce air pollution and emissions of pollutants.

Policy CN-8.1**.** Implement measures to reduce fugitive dust from unpaved areas, parking lots, and construction sites.

Policy CN-8.2. Implement measures to reduce exhaust emissions from construction equipment.

Policy CN-8.5. Minimize exposure of sensitive receptor land uses and sites to health risks related to air pollution.

4.2.3 Thresholds of Significance

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

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

CEQA Guidelines Appendix G indicates that, where available, significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to determine whether the Project

would have a significant impact on air quality. As outlined in the MDAQMD's *CEQA and Federal Conformity Guidelines* (MDAQMD 2016), a project would result in a significant environmental impact if it:

1. Would generate total emissions (direct and indirect) in excess of the established significance thresholds (presented as Table 4.2-4)
2. Would generate a violation of any ambient air quality standard when added to the local background
3. Does not conform with the applicable attainment or maintenance plan
4. Would expose sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 10 in a million (10×10^{-6}) and/or a hazard index (noncarcinogenic) greater than or equal to 1

Residences, schools, daycare centers, playgrounds, and medical facilities are considered sensitive receptor land uses. The following project types proposed for sites within the specified distance to an existing or planned sensitive receptor land use must be evaluated using Threshold 4:

- any industrial project within 1,000 feet
- a distribution center (40 or more trucks per day) within 1,000 feet
- a major transportation project (50,000 or more vehicles per day) within 1,000 feet
- a dry cleaner using perchloroethylene within 500 feet
- a gasoline dispensing facility within 300 feet

The MDAQMD *CEQA Air and Federal Conformity Guidelines* (MDAQMD 2016) sets forth quantitative emission significance thresholds for criteria air pollutants below which a project would not have a significant impact on ambient air quality. Project-related air quality emissions estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented in Table 4.2-4 are exceeded. The emission-based thresholds for O_3 precursors are intended to serve as a surrogate for an "ozone significance threshold" (i.e., the potential for adverse O_3 impacts to occur) because O_3 itself is not emitted directly. MDAQMD recommends that its quantitative air pollution thresholds be used to determine the significance of project emissions.

Table 4.2-4. Mojave Desert Air Quality Management District Daily Air Quality Significance Thresholds

Pollutant	Daily Threshold (pounds per day)
VOC	137
NO_x	137
CO	548
SO_x	137
PM_{10}	82
$PM_{2.5}$	65
Hydrogen sulfide[a]	54
Lead[a]	3

Source: MDAQMD 2016.
Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.
[a] The Project includes typical equipment and on-road vehicles, which result in negligible (if any) emissions of hydrogen sulfide and lead. Therefore, these pollutants are not discussed in this analysis.

Regarding localized CO, although the MDAQMD does not have screening levels for intersection traffic that could result in potential CO hotspots, several other air districts have established these levels, which are described below to provide context of the magnitude of hourly volumes that could result in significant localized CO:

- The SCAQMD conducted CO modeling for its 2003 Air Quality Management Plan (SCAQMD 2003a) for the four worst-case intersections in the South Coast Air Basin. At the time the 2003 Air Quality Management Plan was prepared, the intersection of Wilshire Boulevard and Veteran Avenue was the most congested intersection in Los Angeles County, with an average daily traffic volume of approximately 100,000 vehicles per day. Using CO emission factors for 2002, the peak modeled CO 1-hour concentration was estimated to be 4.6 ppm at the intersection of Wilshire Boulevard and Veteran Avenue. Accordingly, CO concentrations at congested intersections would not exceed the 1-hour or 8-hour CO CAAQS unless projected daily traffic would be at least more than 100,000 vehicles per day.
- The Bay Area Air Quality Management District determined that projects would result in a less-than-significant impact to localized CO concentrations if (1) project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour, or (2) project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway) (BAAQMD 2017).

Based on the Project's proximity to the South Coast Air Basin, the SCAQMD screening criterion of 100,000 vehicles per day has been applied to this Project as a metric to evaluate CO hotspots.

Methodology

Emissions from construction and operation of the Project and existing land uses were estimated using the California Emissions Estimator Model (CalEEMod) Version 2020.4.0.[4] CalEEMod input parameters, including the Project land use type and size and construction schedule, were based on information provided by the Project Applicant, or default model assumptions if Project specifics were unavailable. Notably, the latest version of CalEEMod (CAPCOA 2021) uses vehicle emission rates obtained from the EMissions FACtor model (EMFAC) 2017 web database. EMFAC 2017 emission rates of all vehicle categories are based on aggregated model year and aggregated speed for all counties, air basins, air districts and statewide average for 31 scenario years that each includes three seasons (annual, summer, and winter).

Construction

Emissions from the construction phase of the Project were estimated using information provided by the Project Applicant and CalEEMod default values where Project specific information was not available. For the purpose of estimating Project emissions, construction was modeled beginning in January 2023 and concluding in October 2023[5] and lasting approximately 11 months. The analysis contained herein is based on the following schedule assumptions (duration of phases is approximate):

- Site preparation: 2 weeks (January 2023)
- Grading: 1.5 months (January 2023–February 2023)

[4] CalEEMod is a statewide computer model developed in cooperation with air districts throughout the state to quantify criteria air pollutant emissions associated with the construction and operational activities from a variety of land use projects, such as residential, commercial, and industrial facilities.

[5] The analysis assumes a construction start date of January 2023, which represents the earliest date construction would initiate. Assuming the earliest start date for construction represents the worst-case scenario for criteria air pollutant and greenhouse gas emissions, because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

- Building construction: 6 months (February 2023–August 2023)
- Paving: 1 month (August 2023–September 2023)
- Application of architectural coatings: 1 month (September 2023–October 2023)

Construction modeling assumptions for equipment and vehicles are provided in Table 4.2-5. Equipment mix, including equipment horsepower, load factor, quantity, and usage hours, was based on CalEEMod default values. The site would not require the import or export of earthwork materials as onsite material will be balanced during the grading phase. For the analysis, it was generally assumed that heavy-duty construction equipment would be operating at the site 5 days per week. To account for off-site construction activities which may include lateral connections for utilities and roadway and pedestrian improvements, repaving of the portion of Poplar Road adjacent to the project was included in the emission modeling analysis.

Table 4.2-5. Construction Scenario Assumptions

Construction Phase	One-Way Vehicle Trips			Equipment		
	Average Daily Worker Trips	Average Daily Vendor Truck Trips	Total Haul Truck Trips	Equipment Type	Quantity	Usage Hours
Site Preparation	10	0	0	Rubber-tired dozers	1	8
				Tractors/loaders/ backhoes	1	8
Grading	30	0	0	Excavators	2	8
				Graders	1	8
				Rubber-tired dozers	1	8
				Scrapers	2	8
				Tractors/loaders/ backhoes	2	8
Building Construction	328	128	0	Cranes	1	7
				Forklifts	3	8
				Generator sets	1	8
				Tractors/loaders/ backhoes	3	7
				Welders	1	8
Paving	16	0	0	Pavers	2	8
				Paving equipment	2	8
				Rollers	2	8
Architectural Coating	66	0	0	Air compressors	1	6

Source: Appendix B-1.

Operation

Emissions from the operational phase of the Project were estimated using CalEEMod. Operational year 2024 was assumed consistent with the assumptions in the EIR's transportation analysis (Appendix I).

Area Sources

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

Consumer products are chemically formulated products used by household and institutional consumers, including detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products. Other paint products, furniture coatings, or architectural coatings are not considered consumer products (CAPCOA 2021). Consumer product VOC emissions were estimated in CalEEMod based on the floor area of buildings and default factor of pounds of VOC per building square foot per day. The CalEEMod default values for consumer products were assumed.

VOC off-gassing emissions result from evaporation of solvents contained in surface coatings, such as in paints and primers used during building maintenance. CalEEMod calculates the VOC evaporative emissions from the application of surface coatings based on the VOC emission factor, the building square footage, the assumed fraction of surface area, and the reapplication rate. The VOC emissions factor is based on the VOC content of the surface coatings, and MDAQMD Rule 1113, Architectural Coatings, governs the VOC content for interior and exterior coatings. This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories (MDAQMD 2020). CalEEMod default values were assumed, including the surface area to be painted, the VOC content of architectural coatings, and the reapplication rate of 10% of area per year.

Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chainsaws, and hedge trimmers. The emissions associated with landscape equipment use were estimated based on CalEEMod default values for emission factors (grams per square foot of building space per day) and number of summer days (when landscape maintenance would generally be performed) and winter days.

Mobile Sources

The Project would generate criteria pollutant emissions from mobile sources (vehicular traffic) as a result of the employee passenger vehicles (workers) and truck traffic associated with the operation of the warehouse.

Emissions from the mobile sources during operation of the Project were estimated in CalEEMod. The maximum daily trip rates, taken from the EIR's transportation analysis (Appendix I), were 1,281 primary trips per day, which were assumed 7 days per week. Consistent with the EIR's transportation analyses, the primary trips per day are based on daily trip rates of 4.87 and 2.129 for land uses of general light industrial and high-cube fulfillment center warehouse, respectively. The passenger vehicle trip lengths were assumed to be CalEEMod default trip length of 16.6 miles for commercial-work trips (i.e., trips made by someone who is employed by the warehouse land use) and assumed to be 100% of primary trips.

To identify an appropriate trip length assumption for heavy-duty truck trips, two different methods of estimation were evaluated: (1) project-specific EMFAC-based estimate, and (2) SCAQMD recommendations. For method 1, to determine an average operational truck trip distance, EMFAC data and the distance to the Port of Long Beach was examined. EMFAC data was queried for San Bernardino County for operational year 2024 for light-heavy duty (LHDT1

and LHDT2), medium heavy duty (MHDT), and heavy-heavy duty trucks (HHDT) for total vehicle miles traveled (VMT) and number of vehicle trips. Based on the EMFAC data it is estimated that MHDTs average 6.85 miles per trip and HHDTs average 12.19 miles per trip in San Bernardino County. LHDT1 and LHDT2s have a shorter EMFAC trip distance compared to MHDT, therefore, as a conservative assumption, LHDT1 and LHDT2 were assumed to have the same trip distance as MHDTs. The estimated trip distance from the Port of Long Beach to the project was estimated to be 89 miles. Based on the EIR's transportation analysis, HHDT make up 57.3% of the total truck trips for the project and LHDT1, LHDT2, and MHDTs make up 42.7% of truck trips. Conservatively assuming all HHDTs originate from the Port of Long Beach, then 50% of HHDT truck trips, arrival trips, are assumed to be of a distance of 89 miles. The other 50% making up the HHDT departure from the project are assumed to have trip distance equal to the average EMFAC San Bernardino County trip distance of 12.19 miles. To determine an average total truck distance for use in CalEEMod HHDT trips are averaged with the other 42.7% of the trucks (and LHDT1, LHDT2, and MHDTs) to determine an overall weighted average truck trip distance equal to 32 miles. See Table 4.2-5 for calculation details.

Table 4.2-6. Operational Truck Trip Distance

Vehicle	Percent of Trucks Trips (%)[1]	EMFAC Data			Trip Distance
		EMFAC Truck Classification	County-wide VMT	County-wide Vehicle Trips	VMT per Trip
2-4 Axle Trucks (Arriving and Departing)	42.7	LHDT1, LHDT2, and MHDT	1,270,676[2]	185,376[2]	6.85
5+ Axle Trucks (Arriving from Port)	28.7 (50% of total HHDT Trips[4])	HHDT	N/A	N/A	89[3]
5+ Axle Trucks (Departing)	28.7(50% of total HHDT Trips[4])	HHDT	4,347,745	356,564	12.19
				Weighted Average (All Truck Trips)	**31.92**

Notes:

1 Based on project traffic impact analysis, Appendix I.

2 LHDT1, LHDT2, and MHDT conservatively based on EMFAC VMT and Trip data for MHDT.

3 Based on the distance from the project site to the Port of Long Beach.

4 Percent of truck trips represents arrival and departure trips, therefore 50% of trips (arrival) conservatively assumed to originate at the Port of Long Beach. 50% of trips assumed to depart the project facility and estimated truck trip distance is based on EMFAC county-wide average HHDT truck VMT per trip.

For method 2, the light-duty, medium-heavy-duty, and heavy-duty truck trip lengths were based on the SCAQMD recommendation of 40 miles and assumed to be 100% of primary trips.[6] While method 1 provides a tailored trip length estimate based on the project's location and the reasonably anticipated origin and destination of operational truck trips and goods movement, because method 2 yields a higher trip length, it is conservatively applied in this analysis to estimate mobile source emissions.

6 The average trip length for heavy-duty trucks were based on implementation of the Facility-Based Mobile Source Measures adopted in the SCAQMD's 2016 AQMP. SCAQMD's "Preliminary Warehouse Emission Calculations" assumed a heavy-heavy-duty truck trip length of 39.9 miles (SCAQMD 2021), and the default commercial-nonwork trip length for trucks in CalEEMod is 6.9 miles. Therefore, the conservatively assumed trip length of 40 miles is used for this analysis.

Vehicle emissions occur during startup, operation (running), and idling, as well as from evaporative losses when the engines are resting. The emissions factors for trucks and passenger vehicles were determined using CalEEMod.

Project truck idling would be limited to 5 minutes in accordance with CARB's adopted Airborne Toxic Control Measure; however, for modeling purposes, it was conservatively assumed that the trucks would idle for a total of 15 minutes: 5 minutes at the entrance, 5 minutes at the loading dock, and 5 minutes at the exit of the Project site.

Energy Source Emissions

As represented in CalEEMod, energy sources include emissions associated with building electricity and natural gas usage. Electricity use would contribute indirectly to criteria air pollutant emissions; however, the emissions from electricity use are only quantified for greenhouse gas emissions in CalEEMod, since criteria pollutant emissions would occur at the site of power plants, which are not on the Project site. However, natural gas combustion would occur at the Project site itself, in association with equipment that uses natural gas. The emissions associated with natural gas use were calculated using CalEEMod default parameters, which assume compliance with the 2019 Title 24 Building Energy Efficiency Standards.

Off-Road Equipment

It is common for industrial buildings to require cargo handling equipment to move empty containers and empty chassis to and from the various pieces of cargo handling equipment that receive and distribute containers. The most common type of cargo handling equipment are forklifts, pallet jacks, and yard trucks, which are designed for moving cargo containers. Yard trucks are also known as yard goats, utility tractors, hustlers, yard hostlers, and yard tractors. The cargo handling equipment is assumed to have a horsepower (hp) range of approximately 175 hp to 215 hp. For this particular Project, based on the maximum square footage of building space permitted by the Project, on-site modeled operational equipment includes a total of 50 electric-powered forklifts (forklifts and pallet jacks) and 2 electric-powered yard tractors operating at 8 hours a day for 365 days of the year. See Appendix B-2 for detail calculations.

Project Design Features

The Project incorporates and expresses the following Project design features (PDFs). Because these features/attributes are integral to the Project and assumed at the inception of the project design, they are not considered to be mitigation measures.

PDF-AQ-1, Zero-Emissions Off-Road Equipment. All outdoor cargo handling equipment (including yard trucks, hostlers, yard goats, pallet jacks, forklifts, and landscaping equipment) shall be zero-emission vehicles. The project shall include the necessary charging stations or other necessary infrastructure for cargo handling equipment. The building manager or their designee shall be responsible for enforcing these requirements.

Health Risk Assessments

Construction Health Risk Assessment

An HRA was performed to evaluate potential health risk associated with construction of the Project. The following discussion summarizes the dispersion modeling and HRA methodology; supporting construction HRA documentation, including detailed assumptions, is presented in Appendix B-2.

For risk assessment purposes, PM_{10} in diesel exhaust is considered DPM, originating mainly from off-road equipment operating at a defined location for a given length of time at a given distance from sensitive receptors. Less-intensive, more-dispersed emissions result from on road vehicle exhaust (e.g., heavy-duty diesel trucks). For the construction HRA, the CalEEMod scenario for the Project was adjusted to reduce diesel truck one-way trip distances to 1,000 feet (0.19 miles) to estimate emissions from truck pass-by at proximate receptors.

The air dispersion modeling methodology was based on MDAQMD's generally accepted modeling practices (MDAQMD 2020). Air dispersion modeling was performed using the EPA's American Meteorological Society/ Environmental Protection Agency Regulatory Model (AERMOD) Version 21112 modeling system (computer software) with the Lakes Environmental Software implementation/user interface, AERMOD View Version 10.0.1. The HRA followed the Office of Environmental Health Hazard Assessment 2015 guidelines (OEHHA 2015) and MDAQMD guidance to calculate the health risk impacts at all proximate receptors as further discussed below. The dispersion modeling included the use of standard regulatory default options. AERMOD parameters were selected consistent with the MDAQMD and EPA guidance and identified as representative of the Project site and Project activities. Principal parameters of this modeling are presented in Table 4.2-7.

Table 4.2-7. AERMOD Principal Parameters

Parameter	Details
Meteorological Data	AERMOD-specific meteorological data for the Southern California Logistics Airport air monitoring station (station 23131) was used for the dispersion modeling (CARB 2021j). A meteorological data set from 2009 through 2010 was obtained from the CARB in a preprocessed format suitable for use in AERMOD.
Urban versus Rural Option	Urban dispersion option was selected due to the developed nature of the Project area and per MDAQMD guidelines. San Bernardino County's population of 2,180,000 was used in the analysis.
Terrain Characteristics	The elevation of the site is 3,600 feet above sea level.
Elevation Data	Digital elevation data were imported into AERMOD and elevations were assigned to receptors and emission sources, as necessary. Digital elevation data were obtained through the AERMOD View in the U.S. Geological Survey's National Elevation Dataset format with a resolution of 1 degree (approximately 30 meters), consistent with the MDAQMD guidance (MDAQMD 2020).
Source Release Characterizations	Air dispersion modeling of DPM emissions was conducted assuming the off-road equipment would operate in accordance with the modeling scenario estimated in CalEEMod (Appendix B-1). The construction equipment and on-site truck travel DPM emissions were modeled as a line of adjacent volume sources across the Project site to represent Project construction with a release height of 3.4 meters, plume height of 6.8 meters, and plume width of 8.6 meters (EPA 2015).

Notes: AERMOD = American Meteorological Society/Environmental Protection Agency Regulatory Model; MDAQMD = Mojave Desert Air Quality Management District; DPM = diesel particular matter; CalEEMod = California Emissions Estimator Model.
See Appendix B-2.

Regarding receptors, the construction scenario used an 8-kilometer by 8-kilometer Cartesian receptor grid with 400-meter spacing to establish the impact area and evaluate locations of maximum health risk impact. Fine Cartesian receptor grids with 20-meter spacing were placed over residential receptors in close proximity to the Project site.

The health risk calculations were performed using the Hotspots Analysis and Reporting Program Version 2 (HARP2) Air Dispersion Modeling and Risk Tool (ADMRT), Version 21112. AERMOD was run with all sources emitting unit emissions (1 gram per second) to obtain the necessary input values for HARP2. The line of volume sources was partitioned evenly based on the 1 gram per second emission rate. The ground-level concentration plot files were then used to estimate the long-term cancer health risk to an individual, and the non-cancer chronic health indices. There is no reference exposure level for acute health impacts from DPM, and, thus, acute risk was not evaluated.

Operational Heath Risk Assessment

For the operational health risk, the operation year 2024 was assumed consistent with completion of Project construction. Emissions from the operation of the Project include truck trips, and truck idling emissions. For risk assessment purposes, PM_{10} in diesel exhaust is considered DPM, originating mainly from trucks traveling on site and off site and truck idling located at the loading docks. Truck travel and idling emission rates were obtained from CARB's EMFAC2021. Emission factors representing the vehicle mix and emissions for 2024 were used to estimate emissions associated with operation of the Project. Truck idling would be limited to 5 minutes in accordance with CARB's adopted Airborne Toxic Control Measure; however, truck idling was conservatively assumed to idle for 15 minutes.[7] Therefore, the analysis conservatively overestimates DPM emissions from idling. All deliveries would occur Monday through Sunday. All forklifts and yard trucks will be electric powered and, therefore, no emissions were estimated for the HRA analysis.

Conservatively, a 2024 EMFAC2021 run was conducted and a constant 2024 emission factor data set was used for the entire duration of the analysis (i.e., 30 years). Use of the 2024 emission factors would overstate potential impacts since this approach does not include reductions in emissions due to fleet turnover or cleaner technology with lower emissions. The truck travel DPM emissions were calculated by applying the exhaust PM_{10} emission factor from EMFAC2021 and the total truck trip number over the length of the distance traveled. In addition, the on-site truck idling exhaust emissions were calculated by applying the idle exhaust PM_{10} emission factor from EMFAC2021 and total truck trip over the total idling time (i.e., 15 minutes).

The dispersion modeling was performed using AERMOD (Version 21112). The truck traffic was modeled as a line of adjacent volume sources from I-15 to the Project site and truck travel on site to estimate emissions at proximate receptors. Truck idling was modeled as line volume sources.

As previously described, health effects from carcinogenic air toxics are usually described in terms of cancer risk. The MDAQMD recommends a carcinogenic (cancer) risk threshold of 10 in one million. Some TACs increase noncancer health risk due to long-term (chronic) exposures. A hazard index less than one (1.0) means that adverse health effects are not expected. Within this analysis, noncarcinogenic exposures of less than 1.0 are considered less than significant. The exhaust from diesel engines is a complex mixture of gases, vapors, and particles, many of which are known human carcinogens. DPM has established cancer risk factors and relative exposure values for long-term chronic health hazard impacts.

Dudek evaluated the Project's potential cancer and noncancer health impacts using exposure periods appropriate to evaluate long-term emission increases (third trimester of pregnancy to 30 years). Emissions dispersion of DPM was modeled using AERMOD, then cancer risk and noncancer health impacts subsequently using the CARB HARP2 (ADMRT, Version 21112). The health risk results were then compared to MDAQMD thresholds to assess Project significance. Principal parameters of this modeling are presented in Table 4.2-8.

[7] Although the Project is required to comply with CARB's idling limit of 5 minutes, on-site idling emissions was estimated for 15 minutes of truck idling, which would take into account on-site idling while the trucks are waiting to pull up to the loading dock, idling at the loading dock, and idling during check-in and check-out.

Table 4.2-8. Operational Health Risk Assessment AERMOD Operational Principal Parameters

Parameter	Details
Meteorological Data	AERMOD-specific meteorological data for the Southern California Logistics Airport air monitoring station (station 23131) was used for the dispersion modeling (CARB 2021j). A meteorological data set from 2009 through 2010 was obtained from CARB in a preprocessed format suitable for use in AERMOD.
Urban versus Rural Option	Urban dispersion option was selected due to the developed nature of the Project area and per MDAQMD guidelines. San Bernardino County's population of 2,180,000 was used in the analysis.
Terrain Characteristics	Digital elevation data were imported into AERMOD and elevations were assigned to receptors and emission sources, as necessary. Digital elevation data were obtained through the AERMOD View in the U.S. Geological Survey's National Elevation Dataset format with a resolution of 1 degree (approximately 30 meters), consistent with the MDAQMD guidance (MDAQMD 2020).
Emission Sources and Release Parameters	Air dispersion modeling of off-site and on-site truck travel and truck idling were conducted using emissions generated using EMFAC2021. Off-road equipment emissions were estimated using CalEEMod.
Source Release Characterizations	Off-site and on-site truck travel were modeled as a line of adjacent volume sources, and based on EPA methodology, the modeled sources would result in a release height of 3.4 meters, a plume height of 6.8 meters, and a plume width of 9.3 meters (EPA 2015). The truck idling emissions were modeled as a line of adjacent volume sources with a plume height of 3.16 meters, plume width of 3.12 meters, and release height of 4 meters (EPA 2015; SCAQMD 2003b; SJVAPCD 2006).

Source: See Appendix B-2.
Note: AERMOD = American Meteorological Society/Environmental Protection Agency Regulatory Model; MDAQMD = Mojave Desert Air Quality Management District; SCAQMD = South Coast Air Quality Management District; EPA = U.S. Environmental Protection Agency.

Regarding receptors, the construction scenario used an 8-kilometer by 8-kilometer Cartesian receptor grid with 400-meter spacing to establish the impact area and evaluate locations of maximum health risk impact. Fine Cartesian receptor grids with 20-meter spacing were placed over residential receptors in close proximity to the Project site.

4.2.4 Impacts Analysis

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

Less-than-Significant Impact. The Federal Particulate Matter Attainment Plan and Ozone Attainment Plan for the Mojave Desert set forth a comprehensive set of programs that will lead the MDAB into compliance with federal and state air quality standards. The control measures and related emission reduction estimates within the Federal Particulate Matter Attainment Plan and Ozone Attainment Plan are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. A project is non-conforming with an air quality plan if it conflicts with or delays implementation of any applicable attainment or maintenance plan. A project is conforming if it complies with all applicable MDAQMD rules and regulations, complies with all proposed control measures that are not yet adopted from the applicable plan(s), and is consistent with the growth forecasts in the applicable plan(s) (or is directly included in the applicable plan). Zoning changes, specific plans, general plan amendments and similar land use plan changes that do not increase dwelling unit density, do not increase vehicle trips, and do not increase VMT are also deemed to comply with the applicable air quality plan (MDAQMD 2016).

The Project would be required to comply with all applicable MDAQMD Rules and Regulations, including, but not limited to Rules 401 (Visibile Emissions), 402 (Nuisance), and 403 (Fugitive Dust). The Project site is located within the Main Street and Freeway Corridor Specific Plan, and the site is designated for Commercial/Industrial Business Park uses. The Commercial/Industrial Business Park designation is intended to provide for service commercial, light industrial, light manufacturing, and industrial support uses. Therefore, the Project would be consistent with the current land use designation and General Plan.

As discussed below, the Project's construction and operational emissions would not exceed applicable MDAQMD regional thresholds. As such, emissions are considered less than significant, and the Project would not have the potential to increase the frequency or severity of a violation in the federal or state ambient air quality for on-going Project operations. The health effects of criteria air pollutants are discussed further under the next impact criterion and in depth in Appendix B-2.

Based on the preceding considerations, the Project would comply with all applicable all MDAQMD Rules and Regulations and would be consistent with the current land use designation and General Plan. Therefore, impacts associated with the conflicting with the MDAQMD would be less than significant.

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

Less-than-Significant Impact. Construction and operation of the Project would result in emissions of criteria air pollutants from mobile, and area sources, which may cause exceedances of federal and state AAQS or contribute to existing nonattainment of AAQS. The following discussion identifies potential short-term construction and long-term operational impacts that would result from implementation of the Project.

Air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the MDAQMD develops and implements plans for future attainment of AAQS. Although the area of the MDAB where the Project is located is currently designated a nonattainment area for federal and state O_3 standards and federal and state PM_{10} standards, the MDAB has experienced a substantial reduction in maximum 8-hour concentrations of O_3 over the past 30 years, as well as reductions in PM_{10} over time, as described in the respective MDAQMD O_3 and PM_{10} attainment plans. CEQA thresholds are established at levels that the air basin can accommodate without affecting the attainment date for the AAQS. Based on these considerations, Project-level thresholds of significance for criteria pollutants are relevant in the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality.

Short-Term Construction Impacts

Construction of the Project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment and soil disturbance) and off-site sources (i.e., on-road haul trucks, vendor trucks, and worker vehicle trips). Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and for dust, the prevailing weather conditions. Therefore, such emission levels can only be approximately estimated with a corresponding uncertainty in precise ambient air quality impacts.

As discussed in the Methodology – Construction subsection of Section 4.2.3, Thresholds of Significance, criteria air pollutant emissions associated with temporary construction activity were quantified using CalEEMod. CalEEMod calculates maximum daily emissions for summer and winter periods. The estimated maximum daily construction emissions without mitigation are summarized in Table 4.2-9. Detailed construction model outputs are presented in Appendix B-1.

Table 4.2-9. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds Per Day					
2023	98.48	34.6	32.02	0.09	5.95	3.06
Maximum Daily Emissions	**98.48**	**34.6**	**32.02**	**0.09**	**5.95**	**3.06**
MDAQMD Threshold	*137*	*137*	*548*	*137*	*82*	*65*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Appendix B-1.
Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; MDAQMD = Mojave Desert Air Quality Management District.
The values shown are the maximum summer or winter daily emissions results from CalEEMod.

As shown in Table 4.2-9, daily construction emissions would not exceed the MDAQMD significance thresholds for VOC, NO_x, CO, SO_x, PM_{10}, or $PM_{2.5}$ during Project construction, and short-term construction impacts would be less than significant.

Long-Term Operational Impacts

Operation of the Project would generate VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from mobile sources, including passenger vehicle and truck trips; area sources, including the use of consumer products, architectural coatings for repainting, and landscape maintenance equipment; energy sources, including combustion of fuels used for space and water heating. CalEEMod uses summer and winter EMFAC emission factors in order to derive vehicle emissions associated with on-road vehicle activities, which vary by season. As such, operational activities for the maximum of either summer or winter scenarios are presented in Table 4.2-10. Detailed operational model outputs are presented in Appendix B-1.

Table 4.2-10. Estimated Maximum Daily Operation Criteria Air Pollutant Emissions

Emissions Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Area	9.58	<0.01	0.09	<0.01	<0.01	<0.01
Energy	0.15	1.41	1.18	0.01	0.11	0.11
Mobile	3.01	40.04	44.07	0.30	20.90	6.02
Total	**12.74**	**41.81**	**45.34**	**0.31**	**21.01**	**6.13**
MDAQMD Threshold	*137*	*137*	*548*	*137*	*82*	*65*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: See Appendix B-1 for complete results.
Notes: VOC = volatile organic compound; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; MDAQMD = Mojave Desert Air Quality Management District; <0.01 = reported value less than 0.01.

As shown in Table 4.2-10, Project operations would not exceed the numerical thresholds of significance for any criteria air pollutant as established by the MDAQMD. This impact would be less than significant.

Health Effects of Criteria Air Pollutants

Construction and operation of the Project would result in emissions that would not exceed the MDAQMD thresholds for criteria air pollutants.

As discussed in Section 4.2.1, Existing Conditions, under the heading Pollutants and Effects, health effects associated with O_3 include respiratory symptoms, worsening of lung disease leading to premature death, and damage to lung tissue (CARB 2019b). VOCs and NO_x are precursors to O_3, for which the MDAB is designated as nonattainment with respect to the NAAQS and CAAQS. The contribution of VOCs and NO_x to regional ambient O_3 concentrations is the result of complex photochemistry. The increases in O_3 concentrations in the MDAB due to O_3 precursor emissions tend to be found downwind of the source location because of the time required for the photochemical reactions to occur. Further, the potential for exacerbating excessive O_3 concentrations would also depend on the time of year that the VOC emissions would occur, because exceedances of the O_3 NAAQS and CAAQS tend to occur between April and October when solar radiation is highest. Due to the lack of quantitative methods to assess this complex photochemistry, the holistic effect of a single project's emissions of O_3 precursors is speculative. That being said, because the Project would not exceed the MDAQMD NO_x thresholds during Project operations, the Project would not contribute to significant health effects associated with O_3.

Health effects associated with NO_x and NO_2 (which is a constituent of NO_x) include lung irritation and enhanced allergic responses (see Section 4.2.1) (CARB 2019c). Because the Project would not exceed the MDAQMD NO_x thresholds, the Project would not contribute to significant health effects associated with NO_x and NO_2.

Health effects associated with CO include chest pain in patients with heart disease, headache, light-headedness, and reduced mental alertness (see Section 4.2.1) (CARB 2019d). CO tends to be a localized impact associated with congested intersections. The potential for CO hotspots is discussed under the subsequent impact criterion below and determined to be less than significant. Thus, the Project's CO emissions would not contribute to significant health effects associated with CO.

Health effects associated with PM_{10} include premature death and hospitalization, primarily for worsening of respiratory disease (see Section 4.2.1) (CARB 2017). Construction and operation of the Project would not exceed the MDAQMD threshold for PM_{10}. As such, the Project would not contribute to exceedances of the NAAQS and CAAQS for particulate matter and obstruct the MDAB from coming into attainment for these pollutants, or result in associated health effects.

The California Supreme Court's *Sierra Club v. County of Fresno* (2018) 6 Cal. 5th 502 decision (referred to herein as the Friant Ranch decision; issued on December 24, 2018), addresses the need to correlate mass emission values for criteria air pollutants to specific health consequences, and contains the following direction from the California Supreme Court: "The Environmental Impact Report (EIR) must provide an adequate analysis to inform the public how its bare numbers translate to create potential adverse impacts or it must explain what the agency *does* know and why, given existing scientific constraints, it cannot translate potential health impacts further" (italics original). Currently, MDAQMD, CARB, and EPA have not approved a quantitative method to reliably, meaningfully, and consistently translate the mass emission estimates for the criteria air pollutants resulting from the Project to specific health effects. In addition, there are numerous scientific and technological complexities associated with correlating criteria air pollutant emissions from an individual project to specific health effects or potential additional nonattainment days.

In connection with the judicial proceedings culminating in issuance of the Friant Ranch decision, the SCAQMD and the San Joaquin Valley Air Pollution Control District (SJVAPCD) filed amicus briefs attesting to the extreme difficulty of correlating an individual project's criteria air pollutant emissions to specific health impacts. Both the SJVAPCD and the SCAQMD have among the most sophisticated air quality modeling and health impact evaluation capabilities of the air districts in the state. The key, relevant points from the SCAQMD and SJVAPCD briefs are summarized herein and the full amicus briefs are provided in Appendix B-3.

In requiring a health impact type of analysis for criteria air pollutants, it is important to understand how O_3 and PM is formed, dispersed, and regulated. The formation of O_3 and PM in the atmosphere, as secondary pollutants,[8] involves complex chemical and physical interactions of multiple pollutants from natural and anthropogenic sources. The O_3 reaction is self-perpetuating (or catalytic) in the presence of sunlight because NO_2 is photochemically reformed from NO. In this way, O_3 is controlled by both NO_x and VOC emissions (NRC 2005). The complexity of these interacting cycles of pollutants means that incremental decreases in one emission may not result in proportional decreases in O_3 (NRC 2005). Although these reactions and interactions are well understood, variability in emission source operations and meteorology creates uncertainty in the modeled O_3 concentrations to which downwind populations may be exposed (NRC 2005). Once formed, O_3 can be transported long distances by wind and due to atmospheric transport, contributions of precursors from the surrounding region can also be important (EPA 2008). Because of the complexity of O_3 formation, a specific tonnage amount of VOCs or NO_X emitted in a particular area does not equate to a particular concentration of O_3 in that area (SJVAPCD 2015). PM can be divided into two categories: directly emitted PM and secondary PM. Secondary PM, like O_3, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as SO_x and NO_x (SJVAPCD 2015). Because of the complexity of secondary PM formation, including the potential to be transported long distances by wind, the tonnage of PM-forming precursor emissions in an area does not necessarily result in an equivalent concentration of secondary PM in that area (SJVAPCD 2015). This is especially true for individual projects, like the Project, where Project-generated criteria air pollutant emissions are not derived from a single "point source," but from construction equipment and mobile sources (passenger cars and trucks) driving to, from and around the Project site.

Another important technical nuance is that health effects from air pollutants are related to the concentration of the air pollutant that an individual is exposed to, not necessarily the individual mass quantity of emissions associated with an individual project. For example, health effects from O_3 are correlated with increases in the ambient level of O_3 in the air a person breathes (SCAQMD 2015). However, it takes a large amount of additional precursor emissions to cause a modeled increase in ambient O_3 levels over an entire region (SCAQMD 2015). The lack of link between the tonnage of precursor pollutants and the concentration of O_3 and $PM_{2.5}$ formed is important because it is not necessarily the tonnage of precursor pollutants that causes human health effects; rather, it is the concentration of resulting O_3 that causes these effects (SJVAPCD 2015). Indeed, the ambient air quality standards, which are statutorily required to be set by EPA at levels that are requisite to protect the public health, are established as concentrations of O_3 and $PM_{2.5}$ and not as tonnages of their precursor pollutants (EPA 2018b). Because the ambient air quality standards are focused on achieving a particular concentration region-wide, the tools and plans for attaining the AAQS are regional in nature. For CEQA analyses, project-generated emissions are typically estimated in pounds per day or tons per year and compared to mass daily or annual emission thresholds. While CEQA thresholds are established at levels that the air basin can accommodate without affecting the attainment date for the AAQS, even if a project exceeds established CEQA significance thresholds, this does not mean that one can easily determine the concentration of O_3 or PM that will be created at or near the Project site on a particular day or month of the year, or what specific health impacts will occur (SJVAPCD 2015).

In regard to regional concentrations and air basin attainment, the SJVAPCD emphasized that attempting to identify a change in background pollutant concentrations that can be attributed to a single project, even one as large as the entire Friant Ranch Specific Plan, is a theoretical exercise. The SJVAPCD brief noted that it "would be extremely difficult to model the impact on NAAQS attainment that the emissions from the Friant Ranch project may have" (SJVAPCD 2015). The situation is further complicated by the fact that background concentrations of regional pollutants are not uniform either temporally or geographically throughout an air basin but are constantly fluctuating based upon meteorology and other environmental factors. SJVAPCD noted that the currently available modeling tools are equipped to model the impact of all emission sources in the San Joaquin Valley Air Basin on attainment (SJVAPCD 2015). The SJVAPCD brief then indicated

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

that, "Running the photochemical grid model used for predicting O_3 attainment with the emissions solely from the Friant Ranch project (which equate to less than one-tenth of one percent of the total NO_x and VOC in the Valley) is not likely to yield valid information given the relative scale involved" (SJVAPCD 2015).

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

Nonetheless, following the Supreme Court's Friant Ranch decision, some EIRs where estimated criteria air pollutant emissions exceeded applicable air district thresholds have included a quantitative analysis of potential project-generated health effects using a combination of a regional photochemical grid model[9] and the EPA Benefits Mapping and Analysis Program (BenMAP or BenMAP–Community Edition [CE]).[10] The publicly available health impact assessments (HIAs) typically present results in terms of an increase in health incidences and/or the increase in background health incidence for various health outcomes resulting from a project's estimated increase in concentrations of O_3 and $PM_{2.5}$.[11] To date, the five publicly available HIAs reviewed have concluded that the evaluated projects' health effects associated with the estimated project-generated increase in concentrations of O_3 and $PM_{2.5}$ represent a small increase in incidences and a very small percentage of the number of background incidences, indicating that these health impacts are negligible and potentially within the models' margin of error. It is also important to note that while the results of the five available HIAs conclude that project emissions do not result in a substantial increase in health incidences, the estimated emissions and assumed toxicity is also conservatively inputted into the HIA and thus, overestimate health incidences, particularly for $PM_{2.5}$.

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

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9 The first step in the publicly available HIAs includes running a regional photochemical grid model, such as the Community Multiscale Air Quality (CMAQ) model or the Comprehensive Air Quality Model with extensions (CAMx) to estimate the increase in concentrations of O_3 and $PM_{2.5}$ as a result of project-generated emissions of criteria and precursor pollutants. Air districts use photochemical air quality models for regional air quality planning. These photochemical models are large-scale air quality models that simulate the changes of pollutant concentrations in the atmosphere using a set of mathematical equations characterizing the chemical and physical processes in the atmosphere (EPA 2017).

10 After estimating the increase in concentrations of O_3 and $PM_{2.5}$, the second step in the five examples includes use of BenMAP or BenMAP-CE to estimate the resulting associated health effects. BenMAP estimates the number of health incidences resulting from changes in air pollution concentrations (EPA 2018c). The health impact function in BenMAP-CE incorporates four key sources of data: (i) modeled or monitored air quality changes, (ii) population, (iii) baseline incidence rates, and (iv) an effect estimate. All of the five example HIAs focused on O_3 and $PM_{2.5}$.

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

In summary, construction and operation of the Project would not result in exceedances of the MDAQMD significance thresholds and because the MDAQMD thresholds are based on levels that the MDAB can accommodate without affecting the attainment date for the AAQS and the AAQS are established to protect public health and welfare, the Project is not anticipated to result in health effects associated with NO_x, VOCs, CO, SO_x, PM_{10}, or $PM_{2.5}$. The potential health effects associated with criteria air pollutants are considered less than significant.

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

Less-than-Significant Impact. The potential impact of Project-generated air pollutant emissions at sensitive receptors has been considered. Sensitive receptors can include uses such as long-term health care facilities, rehabilitation centers, and retirement homes. Residences, schools, playgrounds, child-care centers, and athletic facilities can also be considered as sensitive receptors. As discussed in detail below, the Project would not expose sensitive receptors to substantial pollutant concentrations.

Local Carbon Monoxide Concentrations

Mobile source impacts occur on two scales of motion. Regionally, Project-related travel would add to regional trip generation and increase VMT within the local airshed and the MDAB. Locally, Project-generated traffic would be added to the roadway system near the Project site. If such traffic occurs during periods of poor atmospheric ventilation, is composed of a large number of vehicles "cold-started" and operating at pollution-inefficient speeds, and operates on roadways already crowded with non-Project traffic, there is a potential for the formation of microscale CO hotspots in the area immediately around points of congested traffic. However, because of continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the MDAB is steadily decreasing.

The MDAQMD thresholds of significance for local CO emissions is the 1-hour and 8-hour CAAQS of 20 ppm and 9 ppm, respectively. By definition, these represent levels that are protective of public health. As noted previously, the MDAB is currently designated attainment for both state and national CO ambient air quality standards, and the City of Hesperia typically experiences low background CO concentrations.

As described in Section 4.2.3, to verify that the Project would not cause or contribute to a violation of the CO standard, a screening evaluation was conducted comparing the highest hourly traffic volumes at any studied intersection in proximity to the Project site to the 100,000 vehicles per day criterion from the SCAQMD Air Quality Management Plan (SCAQMD 2003a). The highest average daily trips on a segment of road would be 61,500 daily trips on the I-15 Northbound Ramps and Main Street (Appendix I), which would be substantially less than the 100,000 vehicles per day screening criterion applied. Therefore, impacts associated with CO hotspots would be less than significant.

Toxic Air Contaminant Exposure

As the Project consists of 269,555 square feet of high-cube fulfillment center use and 145,145 general light industrial land use, the potential impact of Project-generated air pollutant emissions at sensitive receptors has been evaluated. As described previously, an HRA for construction and operation has been prepared and is included in full as Appendix B-2.

Construction Health Risk

As discussed in Section 4.2.3, a construction HRA was performed to estimate the Maximum Individual Cancer Risk and the Chronic Hazard Index for residential receptors as a result of Project construction including repaving of the portion of Poplar Road adjacent to the project. Results of the construction HRA are presented in Table 4.2-11.

Table 4.2-11. Construction Health Risk Assessment Results – Unmitigated

Impact Parameter	Units	Project Impact	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	Per Million	0.38	10	Less than Significant
Chronic Hazard Index – Residential	Index Value	0.0005	1.0	Less than Significant

Source: Appendix B-2.
Note: CEQA = California Environmental Quality Act.

As shown in Table 4.2-11, Project construction activities would result in a Residential Maximum Individual Cancer Risk of 0.38 in 1 million, which is less than the significance threshold of 10 in 1 million. Project construction would result in a Residential Chronic Hazard Index of 0.0005, which is below the 1.0 significance threshold. The Project construction TAC health risk impacts would be less than significant.

Operational Health Risk

As discussed in Section 4.2.3, an HRA was performed to estimate the Maximum Individual Cancer Risk and Chronic Hazard Index for residential receptors associated with Project operations. Results of the operational HRA are presented in Table 4.2-12.

Table 4.2-12. Operational Health Risk Assessment Results – Unmitigated

Impact Parameter	Units	Impact Level	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	Per Million	0.71	10	Less than Significant
Chronic Hazard Index – Residential	Index Value	0.0002	1.0	Less than Significant

Source: Appendix B-2.
Notes: CEQA = California Environmental Quality Act.

As shown in Table 4.2-12, the DPM emissions from operation of the Project would result in a Residential Maximum Individual Cancer Risk of 0.71 in 1 million and a Residential Chronic Hazard Index of 0.0002. These risk levels would be less than the MDAQMD significance thresholds and would result in a less than significant impact.

Valley Fever

As discussed in Section 4.2.1 under the subsection Valley Fever, Valley Fever is not highly endemic to San Bernardino County with an incident rate of 1.8 cases per 100,000 people (CDPH 2017). In contrast, in 2016 the statewide annual incident rate was 13.7 per 100,000 people. The California counties considered highly endemic for Valley Fever include Kern (251.7 per 100,000), Kings (157.3 per 100,000), San Luis Obispo (82.8 per 100,000), Fresno (60.8 per 100,000), Tulare (45.3 per 100,000), Madera (31.5 per 100,000), and San Joaquin (25.3 per 100,000), and accounted for 70% of the reported cases in 2016 (CDPH 2017).

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

In order to reduce fugitive dust from the Project and minimize adverse air quality impacts, the Project would employ dust mitigation measures in accordance with the MDAQMD Rules 401 and 403.2, which limit the amount of fugitive dust generated during construction. These requirements are consistent with California Department of Public Health recommendations for the implementation of dust control measures, including regular application of water during soil-disturbance activities, to reduce exposure to Valley Fever by minimizing the potential that the fungal spores become airborne (CDPH 2013). Further, regulations designed to minimize exposure to Valley Fever hazards are included in Title 8 of the California Code of Regulations and would be complied with during the Project's construction phase (California Department of Industrial Relations 2017).

In summary, the Project would not result in a significant impact attributable to Valley Fever exposure based on its geographic location and compliance with applicable regulatory standards and dust mitigation measures, which will serve to minimize the release of and exposure to fungal spores. Therefore, impacts associated with Valley Fever exposure for sensitive receptors would be less than significant.

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

Less-than-Significant Impact. Land uses most commonly associated with odor complaints generally include agricultural uses (livestock and farming), wastewater treatment plants, food-processing plants, chemical plants, composting operations, refineries, landfills, dairies, and fiberglass molding facilities. The Project does not include uses that would be substantive sources of objectionable odors. Potential temporary and intermittent odors may result from construction equipment exhaust, the application of asphalt, and architectural coatings. Temporary and intermittent construction-source emissions are controlled through existing requirements and industry Best Management Practices addressing proper storage of and application of construction materials.

Over the life of the Project, odors may result from storage of municipal solid waste pending its transport to area landfills. Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the City of Hesperia's solid waste regulations.

The Project would also be required to comply with MDAQMD Rule 402 (Nuisance). Rule 402 provides that "[a] person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property" (MDAQMD 1976). Based on the preceding, the potential for the Project to create objectionable odors affecting a substantial number of people would be less than significant.

Threshold E: Would the Project result in cumulatively considerable air quality impacts?

Less-than-Significant Impact. Air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the MDAQMD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are relevant in the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality. Individual projects that do not generate operational or construction emissions that exceed the MDAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the MDAB is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact.

The area of the MDAB in which the Project is located is a nonattainment area for O_3 and PM_{10} under the NAAQS and/or CAAQS. The poor air quality in the MDAB is the result of cumulative emissions from motor vehicles, off-road equipment, commercial and industrial facilities, and other emission sources. Projects that emit these pollutants or their precursors (i.e., VOC and NO_x for O_3) potentially contribute to poor air quality. As indicated in Tables 4.2-8, and 4.2-9 daily construction emissions and operational emissions associated with the Project would not exceed the MDAQMD significance thresholds. As such, Project construction and operational emissions would be cumulatively less than significant.

4.2.5 Mitigation Measures and Level of Significance After Mitigation

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

The Project would comply with all applicable all MDAQMD Rules and Regulations and would be consistent with the current land use designation and General Plan. Therefore, impacts associated with the conflicting with the MDAQMD would be less than significant. No mitigation is required.

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

Short-Term Construction Impacts

Construction of the Project would result in a less-than-significant cumulatively considerable net increase of criteria pollutants for which the Project region is nonattainment. No mitigation is required.

Long-Term Operational Impacts

Operation of the Project would result in a less-than-significant cumulatively considerable net increase of criteria pollutants for which the Project region is nonattainment. No mitigation is required.

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

The potential impact of Project-generated air pollutant emissions at sensitive receptors has been considered. The Project would not expose sensitive receptors to substantial pollutant concentrations. No mitigation is required.

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

The Project would result in less-than-significant impacts associated other emissions (such as those leading to odors) which could adversely affect a substantial number of people. No mitigation is required.

Threshold E: Would the Project result in cumulatively considerable air quality impacts?

As indicated in Tables 4.2-8, and 4.2-9 daily construction emissions and operational emissions associated with the Project would not exceed the MDAQMD significance thresholds. As such, Project construction and operational emissions would be cumulatively less than significant. No mitigation is required.

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4.3 Biological Resources

This section describes the existing biological resources conditions of the Poplar 18 Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project.

In addition to the documents incorporated by reference (see Section 2.7 of Chapter 2 of this Environmental Impact Report [EIR]), the following analysis is based, in part, on the following sources:

- Biological Technical Report, Poplar 18 Project, prepared by Dudek in August 2022 (Appendix C)

4.3.1 Existing Conditions

The approximately 22.9-acre Project, including the 17.84-acre Project site and 5.06-acre Off-Site Improvement Area, is located in the in the western part of the Hesperia, which is within the Victor Valley region of San Bernardino County. The Project is on the southwest quadrant of Interstate (I) 15 and Main Street. The Project site is located south of Sultana Road, west of Mesa Linda Street and I-15, north of Poplar Street and west of Lassen Road and U.S. Highway 395. The Project consists of Assessor's Parcel Numbers 3064-581-04-0000 and 3064-581-05-0000. Specifically, the Project is located in in Section 22, Township 4 North, Range 5 West, as depicted on the U.S. Geological Survey Baldy Mesa, California 7.5-minute topographic quadrangle map. Regional access to the Project is provided via I-15, located east of the Project, and U.S. Highway 395, located west of the Project. Local access to the Project is provided via Poplar Street, Lassen Road, Sultana Road and Mesa Linda Street. The Project is rectangularly shaped and located on two parcels. Building 3 site is vacant and undeveloped, with the exception of a drain located on site.

Ground surface cover consists of moderate native brush and shrub growth, with occasional juniper and Joshua trees located throughout the site. The Project site is subject to disturbance as a result of illegal dumping and trespassing. These unpermitted activities have led to areas of exposed bare soils (where trails have formed) and several debris piles.

Land uses surrounding the Project site primarily consist of vacant land, along with some scattered residential, commercial, light industrial, and utility uses. Specific land uses located in the immediate vicinity of the Project site include the following:

- **North:** Sultana Road
- **East:** Mesa Linda Street and I-5
- **South:** Poplar Street
- **West:** Lassen Road and U.S. Highway 395

In the broader Project vicinity, development includes commercial uses, trucking-related uses (i.e., truck stops), lodging accommodations, big-box retail developments, and residential subdivisions.

4.3.1.1 Topography and Soils

The Project site's surface elevation ranges between approximately 3,600 and 3,630 feet above mean sea level (amsl). The Project site and immediate surrounding area is relatively flat with a slight slope from the southwestern to northeastern corner.

According to the U.S. Department of Agriculture Natural Resources Conservation Service's Web Soil Survey (USDA 2022a), the Project site occurs within the San Bernardino County, Mojave River Area (CA671). The Project site area consists of one soil type: Hesperia loamy fine sand (2% to 5% slopes).

4.3.1.2 Vegetation Communities and Land Covers

Six vegetation communities or land cover types were mapped within the biological survey area (BSA), which includes the Project site and Off-Site Improvements Area plus a 100-foot buffer (Table 2). The spatial distribution of the vegetation communities and land covers are presented on Figure 4.3-1, Biological Resources Map. The Off-Site Improvement Area includes Mesa Linda Street, Lassen Street, and Poplar Street.

Table 4.3-1. Existing Vegetation Communities, Floristic Alliances and Associations, and Land Cover Types within the BSA

Floristic Alliance	Association	Vegetation Community[1]	Project Site (Acres)	Off-Site Areas (Acres)	100-Foot Buffer (Acres)	Total BSA (Acres)
Ericameria nauseosa	*Ericameria nauseosa* shrubland	Rubber rabbitbrush scrub	3.05	0.14	0.34	3.54
Yucca brevifolia	N/A	Joshua tree woodland	1.49	0.03	0.77	2.28
Brassica nigra	*Brassica nigra*	Upland Mustards	0.39	1.07	0.07	1.52
N/A	N/A	Disturbed habitat	0.05	0.22	0.13	0.40
Avena spp. – *Bromus* spp. *Herbaceous Semi-Natural*	Wild oats and annual brome grasslands	Non-native grassland	12.86	1.36	4.73	18.94
N/A	N/A	Urban/Developed	—	2.25	0.25	2.50
		Total[2]	**17.84**	**5.06**	**6.28**	**29.18**

Notes: BSA = biological survey area; N/A = Not Applicable.
1 The spatial distribution of the vegetation communities and land covers are presented on Figure 4.3-1.
2 Total acreages may not sum exactly due to rounding

California Department of Fish and Wildlife (CDFW) rankings of 1, 2, or 3 are considered high priority for inventory or special status, and impacts to these communities typically require mitigation. One vegetation community, Joshua tree woodland, has a CDFW ranking of 3.2 and is considered special status.

Rubber Rabbitbrush Scrub

Rubber rabbitbrush scrub or *Ericameria nauseosa shrubland* alliance is recognized by the Natural Communities List and the communities include rubber rabbitbrush (*Ericameria nauseosa*) as the dominant or codominant species in the shrub canopy with a sparse or grassy herbaceous layer (CNPS 2022b). Rubber rabbitbrush scrub has an open

to continuous shrub canopy of less than 3 meters (9 feet) in height (CNPS 2022b). This alliance consists of at least 2% absolute cover of rubber rabbitbrush or more than 25% relative cover in the shrub canopy (CNPS 2022b). The rubber rabbitbrush scrub occurs in disturbed settings on well-drain sands and gravels (CNPS 2022b).

Rubber rabbitbrush scrub occurs north of Poplar Street along the southern boundary and within the central portions of the BSA. This community is dominated by rubber rabbibrush. The rubber rabbitbrush scrub alliance is ranked as S5 and therefore is not considered a sensitive biological resource by CDFW under CEQA (CDFW 2021).

Joshua Tree Woodland

Joshua tree woodland or *Yucca brevifo*lia alliance is recognized by the Natural Communities List, and the community includes western Joshua tree (*Yucca brevifolia*) as an emergent small tree over a shrub or grass layer (CNPS 2022b). Joshua tree woodland has an open to intermittent tree canopy less than 14 meters (45 feet) in height, and an open to intermittent shrub and herbaceous layer with perennial grasses and seasonal annuals (CNPS 2022b). This alliance consists of Joshua trees evenly distributed of at least 1% cover with *Juniperus* and/or *Pinus* spp. of at least more than 1% absolute cover in tree canopy (CNPS 2022b). Joshua tree woodland alliance occurs on gentle alluvial fans, ridges, and gentle to moderate slopes. Joshua tree woodland may occupy coarse sands, very fine silts, gravel, or sandy loams (CNPS 2022b).

Joshua tree woodland occurs in one patch within the western portion of the BSA, west of Lassen Street. While only two Joshua trees were mapped within the BSA in this location, this community continues west outside of the BSA. In addition, there are Portions of the western BSA where individual Joshua trees are located do not meet the minimum requirement of 1% cover and therefore were not mapped as Joshua tree woodland alliance. The Joshua tree woodland alliance is ranked as S3.2 and is considered a sensitive biological resource by CDFW under CEQA (CDFW 2021).

Upland Mustards

The upland mustards and other ruderal forbs alliance features black mustard (*Brassica nigra*), shortpod mustard (*Hirschfeldia incana*), Maltese star-thistle (*Centaurea melitensis*), or yellow star-thistle (*Centaurea solstitialis*), among other similar ruderal forbs, as the dominant species in the herbaceous layer. Per alliance membership rules, black mustard and shortpod mustard, or other mustards must make up more than 80% of the relative cover along with other non-native plant species. Communities within this alliance can grow in an open to continuous layer under 3 meters (10 feet) in height. Emergent shrubs may be present but at low cover. Upland mustards and other ruderal forbs occur in fallow fields, grasslands, roadsides, levee slopes, disturbed coastal scrub, riparian areas, and generally within disturbed areas under 1,500 meters (4,921 feet) amsl (CNPS 2022b).

Upland mustards occur in one patch immediately north of Poplar Street, within the southern portions of the BSA. This community is dominated by shortpod mustard, ripgut brome (*Bromus diandrus*), red brome (*Bromus rubens*), and common Mediterranean grass (*Schismus barbatus*), with a low cover of redstem stork's bill (*Erodium cicutarium*). The upland mustards and other ruderal forbs semi-natural alliance is not ranked by CDFW (2021), and therefore is not considered a sensitive biological resource by CDFW under CEQA (CDFW 2021).

Disturbed Habitat

Although not recognized by the California Natural Communities List (CDFW 2021), disturbed habitat refers to areas that have had physical anthropogenic disturbance and, as a result, cannot be identified as a native or naturalized vegetation association. However, these areas do have a recognizable soil substrate. If vegetation is present, it is almost entirely composed of non-native vegetation, such as ornamentals or ruderal exotic species.

Within the BSA, disturbed habitat includes the existing dirt roads including Lassen Street within the western portion of the BSA and an unnamed dirt road located within the southeastern portion of the BSA. These roads are commonly used by hikers and vehicles. Disturbed habitat is not considered a sensitive biological resource by CDFW under CEQA (CDFW 2021).

Non-Native Grassland

Non-native grassland or *Avena* spp. - *Bromus* spp. Herbaceous Semi-Natural alliance, is recognized by the Natural Communities List and the community includes wild oats (*Avena* spp.) and annual brome (*Bromus* spp.) as the dominant or co-dominant species, along with other non-natives in the herbaceous layer (CNPS 202bb). Non-native grassland has an open to continuous herbaceous cover of less than 1.2 meters (4 feet) in height (CNPS 2022b). Non-native grassland occurs in foothills, waste places, rangelands, and opening in woodlands (CNPS 2022b).

Non-native grassland is the largest community found within the BSA, and occurs throughout the site. Itis co-dominated by a mix of non-native grasses, including ripgut brome, red brome, soft brome (*Bromus hordeaceus*), cheatgrass (*Bromus tectorum*), and common Mediterranean grass, with a low cover of redstem stork's bill. Non-native grassland is not considered a sensitive biological resource by CDFW under CEQA (CDFW 2021).

Urban/Developed Land

Although not recognized by the Natural Communities List (CDFW 2021), urban/developed land represents areas that have been constructed upon or otherwise physically altered to an extent that native vegetation communities are not supported. This land cover type generally consists of semi-permanent structures, homes, parking lots, pavement or hardscape, and landscaped areas that require maintenance and irrigation (e.g., ornamental greenbelts). Typically, this land cover type is unvegetated or supports a variety of ornamental plants and landscaping.

Within the BSA, urban/developed land consists of the paved roads: Poplar Street running east/west along the southern boundary, and Mesa Linda Street continuing north/south through the eastern portion of the BSA. Urban/Developed is not considered a sensitive biological resource by CDFW under CEQA (CDFW 2021).

4.3.1.3 Plants and Wildlife Observed

Biological field surveys, including a biological reconnaissance survey, aquatic resources delineation, western Joshua tree mapping, protocol presence/absence survey for Mojave desert tortoise (*Gopherus agassizii*) and Mohave ground squirrel (*Xerospermophilus mohavensis*), and focused special-status plant surveys were conducted within the BSA from November 2021 through July 2022. All plant and wildlife species observed during the surveys were recorded.

Plants

A total of 48 species of native or naturalized plants, 36 native (75%) and 12 non-native (25%), were recorded within the BSA. A full list of plant species observed is provided in Appendix D, Plant Compendium of Appendix C (Biological Technical Report). Dipodomys Ecological Consulting biologists observed the following additional plant species: bristly fiddleneck (*Amsinckia tessellata*), compact brome (*Bromus madritensis*), bluedicks (*Dipterostemon capitatus*), California goldfields (*Lasthenia californica*), and Mojave cottonthorn (*Tetradymia stenolepis*) (Appendix C of Appendix C).

Wildlife

A total of 17 wildlife species, consisting of 16 native species (94%) and one non-native species (6%), were recorded within the BSA or vicinity during surveys (Appendix E of Appendix C). Birds detected on or in the immediate vicinity of the BSA included house finch (*Haemorhous mexicanus*), common raven (*Corvus corax*), horned lark (*Eremophila alpestris*), house sparrow (*Passer domesticus*), phainopepla (*Phainopepla nitens*), mountain bluebird (*Sialia currucoides*), yellow-rumped warbler (*Setophaga coronata*), cactus wren (*Campylorhynchus brunneicapillus*), and white-crowned sparrow (*Zonotrichia leucophrys*), Mammals detected included coyote (*Canis latrans*), black-tailed jackrabbit (*Lepus californicus*), and desert cottontail (*Sylvilagus audubonii*). One reptile was detected and included common side-blotched lizard (*Uta stansburiana*). Dipodomys Ecological Consulting biologists observed the following additional mammal species: California ground squirrels (*Otospermophilus beecheyi*), white-tailed antelope ground squirrel (*Otospermophilus beecheyi*), and Panamint kangaroo rat (*Dipodomys panamintinus*) (Appendix C of Appendix C)

4.3.1.4 Special-Status Plants

Special-status plants include those listed, or candidates for listing, as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS) and CDFW, and species identified as rare by the California Native Plant Society (particularly California Rare Plant Rank [CRPR] 1A, presumed extinct in California; CRPR 1B, rare, threatened, or endangered throughout its range; and CRPR 2, rare or endangered in California, more common elsewhere).

Dudek biologists performed an extensive desktop review of literature, existing documentation, and geographic information system (GIS) data to evaluate the potential for special-status plant species to occur within the BSA. Each special-status plant species was assigned a rating of “not expected,” “low,” “moderate,” or “high” potential to occur based on relative location to known occurrences, vegetation community, soil, and elevation. Based on the results of the literature review and database searches, 28 special-status plant species were identified as potentially occurring within the region of the BSA, and 6 species were determined to have at least a moderate potential to occur within the BSA: western Joshua tree, white-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*), Mojave monkeyflower (*Diplacus mohavensis*), sagebrush loeflingia (*Loeflingia squarrosa* var. *artemisiarum*), short-joint beavertail (*Opuntia basilaris* var. *brachyclada*), and beaver dam breadroot (*Pediomelum castoreum*). Therefore, a focused survey for these species was conducted on May 9, 2022, as further detailed in Appendix C, Section 3.2.4.1, Special-Status Plant Survey. One special-status plant species, western Joshua tree, was observed within the BSA and is further discussed in Section 5.3.2, Western Joshua Tree. No other listed or non-listed CRPR 1 or CRPR 2 plants were observed during the focused surveys conducted on May 9, 2022. There are no special-status plant species that were determined to have a moderate or high potential to occur within the BSA based on the soils, vegetation communities (habitat) present, elevation range, and previous known locations based on the CNDDB, the USFWS Information for Planning and Conservation (IPaC) database, and the California Native Plant Society Inventory (Appendix G of Appendix C).

Western Joshua Tree

Western Joshua tree is a California State Candidate for Listing. Western Joshua tree is a monocot tree in the asparagus family (*Agavaceae*) that occurs within Joshua tree woodland, Great Basin grassland and scrub, Mojavean desert scrub, pinyon and juniper woodland, Sonoran desert scrub, and valley and foothill grassland. This species occurs in San Bernardino County and other southern and eastern counties in California from 1,310 to 6,560 feet amsl (CNPS 2022b). This species typically blooms in April and May.

A total of 32 western Joshua tree individuals were observed in the western and northern portions of the BSA within Joshua tree woodland, rubber rabbitbrush scrub, and non-native grassland (Figure 4.3-1).

Desert Native Plants

No desert native plant species, except for western Joshua tree, were observed within the BSA during the focused desert native plant survey (Figure 4.3-1).

4.3.1.5 Special-Status Wildlife

Special-status wildlife include those listed, or candidates for listing, as threatened or endangered by USFWS and CDFW, and those designated as species of special concern by CDFW and as sensitive by USFWS.

Similar to special-status plants, Dudek biologists performed an extensive desktop review of literature, existing documentation, and GIS data to evaluate the potential for special-status wildlife species to occur within the BSA. Each special-status wildlife species was assigned a rating of "not expected," "low," "moderate," or "high" potential to occur based on relative location to known occurrences and vegetation community/habitat association. Based on the results of the literature review and database searches, 42 special-status wildlife species were reported in the CNDDB and USFWS databases as occurring in the vicinity of the BSA. Of these, two wildlife species were determined to have a moderate potential to occur within the BSA based on habitat present and previous known locations in the CNDDB (CDFW 2022c) and USFWS Information for Planning and Conservation database (USFWS 2022b): burrowing owl (*Athene cunicularia*) and loggerhead shrike (*Lanius ludovicianus*). Protocol surveys for desert tortoise and Mohave ground squirrel were negative. Although desert kit fox (*Vulpes macrotis arsipus*) and American badger (*Taxidea taxus*) are not expected to occur within the BSA, in an abundance of caution, these species were also included and analyzed. These species, in addition to burrowing owl and loggerhead shrike are detailed in the following discussion.

Burrowing Owl

Burrowing owl is a USFWS Bird of Conservation Concern and a California Species of Special Concern. With a relatively wide-ranging distribution throughout the west, burrowing owls are considered to be habitat generalists (Lantz et al. 2004). In California, burrowing owls are yearlong residents of open, dry grassland and desert habitats, and in grass, forb, and open shrub stages of pinyon-juniper and ponderosa pine habitats (Zeiner et al. 1990). Preferred habitat is generally typified by short, sparse vegetation with few shrubs, level to gentle topography, and well-drained soils (Haug et al. 1993).

The presence of burrows is the most essential component of burrowing owl habitat because they are required for nesting, roosting, cover, and caching prey (Coulombe 1971; Martin 1973; Green and Anthony 1989; Haug et al. 1993). In California, western burrowing owls most commonly live in burrows created by California ground squirrels (*Spermophilus beecheyi*). Burrowing owls may occur in human-altered landscapes such as agricultural areas, ruderal grassy fields, vacant lots, and pastures if the vegetation structure is suitable (i.e., open and sparse); useable burrows are available, and foraging habitat occurs in close proximity (Gervais et al. 2008). Debris piles, riprap, culverts, and pipes can be used for nesting and roosting.

Burrowing owl has moderate potential to occur within the BSA.

Loggerhead Shrike

Loggerhead shrike is a USFWS Bird of Conservation Concern and a California Species of Special Concern. It is widespread throughout the United States, Mexico, and portions of Canada (Humple 2008). The species is a yearlong

resident in most of the United States, including from California east to Virginia and south to Florida, and in Mexico. In California, although shrikes are widespread at the lower elevations in the state, the largest breeding populations are located in portions of the Central Valley, the Coast Ranges, and the southeastern deserts (Humple 2008).

Preferred habitats for loggerhead shrikes are open areas that include scattered shrubs, trees, posts, fences, utility lines, or other structures that provide hunting perches with views of open ground, as well as nearby spiny vegetation or human-made structures (such as the top of chain-link fences or barbed wire) that provide a location to impale prey upon for storage or manipulation (Humple 2008). Loggerhead shrikes occur most frequently in riparian areas along woodland edges, grasslands with sufficient perch and butcher sites, scrublands, and open canopied woodlands, although they can be quite common in agricultural and grazing areas, and can sometimes be found in mowed roadsides, cemeteries, and golf courses. Loggerhead shrikes occur only rarely in heavily urbanized areas. For nesting, the height of shrubs and presence of canopy cover are most important (Yosef 1996).

Loggerhead shrike has moderate potential to occur within the BSA.

Desert Tortoise

Desert tortoise (*Gopherus agassizii*) is a federally and state-listed threatened species. The range of the Mojave population includes portions of the Mojave Desert and the Colorado Desert in Southern California (parts of Inyo, Kern, Los Angeles, San Bernardino, and Riverside Counties), southern Nevada (Clark, Esmeralda, Nye, and Lincoln Counties), northwestern Arizona (Mohave County), and southwestern Utah (Washington County).

The typical habitat for desert tortoise in the Mojave Desert is creosote bush scrub where precipitation ranges from 2 to 8 inches, with relatively high diversity of perennial plants, and high productivity of ephemeral plants. Throughout most of the Mojave Desert, desert tortoises occur most commonly on gently sloping terrain with sandy gravel soils and where there is sparse cover of low-growing shrubs, which allows for the establishment of herbaceous plants. Soils must be friable enough for digging of burrows, but firm enough so that burrows do not collapse (USFWS 2008). Although populations of desert tortoise are not generally known to inhabit elevations much higher than 4,000 feet amsl, they occur from below sea level to an elevation of 7,300 feet amsl. Occupied habitat varies from flats and slopes dominated by creosote bush scrub at low elevations, to rocky slopes in blackbrush and juniper woodland ecotones at higher elevations (USFWS 2008).

Desert tortoise was not observed during 2022 protocol surveys.

Mohave Ground Squirrel

Mohave ground squirrel is a State of California threatened species. This species' distribution range is restricted to the Mojave Desert in San Bernardino, Los Angeles, Kern, and Inyo Counties (Zeiner et al. 1990). Mohave ground squirrels generally inhabit areas where the soil is friable and sandy or gravelly. Mohave ground squirrels occur in desert scrub habitats dominated by creosote bush and desert saltbush scrub at elevations from 1,800 to 5,000 feet amsl.

Mohave ground squirrel was not observed during 2022 focused protocol surveys.

American Badger and Desert Kit Fox

American badger is a California Species of Special Concern. Desert kit fox is considered a "fur-bearing mammal," protected from take under the California Fish and Game Commission's Mammal Hunting Regulations (Subdivision 2, Chapter 5), which effectively protects it from hunting pressure. Desert kit fox is not listed by USFWS

or CDFW under any special-status designation. Desert kit fox lives in the open desert, on creosote bush flats, and amongst sand dunes, and American badgers prefer open scrub or grassy areas (NPS 2015; USGS 2020). The Project site is predominated by Joshua tree woodland, and lacks creosote bush flats, sand dunes, or larger areas of open scrub or grassy areas. Thus, American badger is not expected to occur within the BSA due to a lack of suitable vegetation to support this species. Desert kit fox is not expected to occur within the BSA due to the surrounding areas that are conducive to stray dogs that further limit the potential for this species to occur. the Project site is not expected to support either desert kit fox or American badger. Furthermore, no desert kit fox or American badger individuals (or sign) were observed during desert tortoise or Mohave ground squirrel surveys, or incidentally observed during other focused surveys conducted within the BSA.

Notwithstanding, in an abundance of caution and to ensure that potential impacts to these species are less than significant, these species are analyzed.

4.3.1.6 Aquatic Resources

The Jurisdictional Aquatic Resources Delineation identified one ephemeral drainage within the BSA (Appendix A of Appendix C). The results of the jurisdictional delineation concluded there is approximately 0.06 acres (396 linear feet) of jurisdictional aquatic resources within the BSA (Figure 4.3-2, Jurisdictional Aquatic Resources Map). Of that total, all 0.06 acres is non-wetland waters of the state under Regional Water Quality Control Board (RWQCB) jurisdiction and streambeds under CDFW jurisdiction. This feature is not likely subject to U.S. Army Corps of Engineers (USACE) jurisdiction because this feature is isolated and does not meet the relatively permanent or significant nexus standard as a waters of the United States.

The BSA also included a swale south of Poplar Street in the southern portion of the BSA. The swale appears to have been developed to collect seasonal precipitation, but lacked a defined bed and bank, ordinary high water mark, established hydrophytic vegetation, or indicators of hydric soil. This topographical feature would not constitute jurisdictional resources regulated by CDFW and/or RWQCB.

4.3.1.7 Wildlife Corridors and Habitat Linkages

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for the migration of animals. Wildlife corridors contribute to population viability by ensuring continual exchange of genes between populations, providing access to adjacent habitat areas for foraging and mating, and providing routes for recolonization of habitat after local extirpation or ecological catastrophes (e.g., fires).

Habitat linkages are small patches that join larger blocks of habitat and help reduce the adverse effects of habitat fragmentation. Habitat linkages provide a potential route for gene flow and long-term dispersal of plants and animals and may also serve as primary habitat for smaller animals, such as reptiles and amphibians. Habitat linkages may be continuous habitat or discrete habitat islands that function as steppingstones for dispersal.

The Project site is located in an area of encroaching development and is regionally isolated by U.S. Highway 395 to the west and I-15 to the east. All terrestrial species' movement is hindered by I-15 and U.S. Highway 395, and, to a lesser degree, surface streets and paved roads, including Poplar Street running east/west along the southern boundary and Mesa Linda Street continuing north/south along the eastern boundary of the BSA. As a result, the Project site does not provide for regional wildlife movement or serve as a regional wildlife corridor. However, on a local level, wildlife may move across the site when migrating or foraging/hunting. Because the BSA does not provide

for regional wildlife movement or serve as a regional wildlife corridor, the Project is not expected to contribute to the impediment of local or seasonal movement of wildlife through the surrounding habitat.

4.3.2 Relevant Plans, Policies, and Ordinances

Federal

Federal Endangered Species Act

The federal Endangered Species Act (FESA) of 1973 (16 USC 1531 et seq.), as amended, is administered by USFWS for most plant and animal species, and by the National Oceanic and Atmospheric Administration National Marine Fisheries Service for certain marine species. This legislation is intended to provide a means to conserve the ecosystems upon which endangered and threatened species depend, and provide programs for the conservation of those species, thus preventing the extinction of plants and wildlife. FESA defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Under FESA, it is unlawful to "take" any listed species; "take" is defined as, "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

FESA allows for the issuance of incidental take permits for listed species under Section 7, which is generally available for projects that also require other federal agency permits or other approvals, and under Section 10, which provides for the approval of habitat conservation plans on private property without any other federal agency involvement.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits the intentional and unintentional take of any migratory bird or any part, nest, or eggs of any such bird. Under the MBTA, "take" is defined as pursuing, hunting, shooting, capturing, collecting, or killing, or attempting to do so (16 USC 703 et seq.). Currently, the Migratory Birds office considers nests that support eggs, nestlings, or juveniles to be active. Additionally, Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, requires that any project with federal involvement address impacts of federal actions on migratory birds with the purpose of promoting conservation of migratory bird populations (66 FR 3853–3856). Executive Order 13186 requires federal agencies to work with USFWS to develop a memorandum of understanding. USFWS reviews actions that might affect these species.

Clean Water Act

The Clean Water Act (CWA) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Section 401 requires a project operator for a federal license or permit that allows activities resulting in a discharge to waters of the United States to obtain state certification, thereby ensuring that the discharge will comply with provisions of the CWA. The RWQCBs administer the certification program in California. Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the United States. Section 404 establishes a permit program administered by USACE that regulates the discharge of dredged or fill material into waters of the United States, including wetlands. USACE implementing regulations are found at 33 Code of Federal Regulations (CFR) Parts 320 through 332. Guidelines for implementation are referred to as the Section 404(b)(1) Guidelines, which were developed by the U.S. Environmental Protection Agency in conjunction with USACE (40 CFR 230). The guidelines allow the

discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

Wetlands and Other Waters of the United States

Based on a recent court case ordering vacation of the Navigable Waters Protection Rule, USACE and the U.S. Environmental Protection Agency halted implementation of the rule and are interpreting waters of the United States consistent with the pre-2015 regulatory regime until further notice. Per 33 CFR 328.3(a), "waters of the United States" are defined as follows:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
    a. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
    b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
    c. Which are used or could be used for industrial purposes by industries in interstate commerce;
4. All impoundments of waters otherwise defined as waters of the United States under this definition;
5. Tributaries of waters identified in paragraphs (a)(1) through (4) of this section;
6. The territorial seas;
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(1) through (6) of this section.
8. Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States.

The USACE/U.S. Environmental Protection Agency Rapanos Guidance states that USACE regulates traditional navigable waters, adjacent wetlands, relatively permanent waters tributary to traditional navigable waters, and adjacent wetlands. Non-relatively permanent waters (those exhibiting less than 3 months of continuous surface flows) and their adjacent wetlands are regulated if there is a significant nexus from the site to traditional navigable waters.

The State Water Resources Control Board has authority over wetlands through Section 401 of the CWA, as well as the Porter–Cologne Water Quality Control Act (Porter–Cologne Act), California Code of Regulations Section 3831(k), and California Wetlands Conservation Policy. The CWA requires that an applicant for a Section 404 permit (to discharge dredge or fill material into waters of the United States) first obtain certification from the appropriate state agency stating that the fill is consistent with the state's water quality standards and criteria. In California, the authority to either grant certification or waive the requirement for permits is delegated by the State Water Resources Control Board to the nine RWQCBs. A request for certification is submitted to the RWQCB at the same time that an application is filed with USACE.

State

California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game Code, Sections 2050–2068) provides protection and prohibits the take of plant, fish, and wildlife species listed by the State of California. Unlike FESA, under CESA, state-listed plants have the same degree of protection as wildlife, but insects and other invertebrates may not be listed. Take is defined similarly to FESA, and is prohibited for both listed and candidate species. Take authorization may be obtained by a project applicant from the California Department of Fish and Wildlife (CDFW) under CESA Section 2081, which allows take of a listed species for educational, scientific, or management purposes. In this case, private developers consult with CDFW to develop a set of measures and standards for managing the listed species, including full mitigation for impacts, funding of mitigation implementation, and monitoring of mitigation measures.

On October 21, 2019, the California Fish and Game Commission (Commission) received a petition from the Center for Biological Diversity to list western Joshua tree (*Yucca brevifolia*) (Center for Biological Diversity 2019).[1] On November 1, 2019, the Commission referred the petition to CDFW for evaluation. CDFW evaluated the scientific information presented in the petition and other relevant information possessed by CDFW at the time of review, and prepared a report for submittal to the Commission. The report states that CDFW recommended that the Commission accept the petition for further consideration of western Joshua tree under CESA. On September 22, 2020, the Commission approved the petition to accept the candidacy proposal for western Joshua tree, effective October 9, 2020 (CDFW 2020a). When a plant or wildlife species is granted candidacy under CESA, the species is given the same protection as a threatened or endangered species while the Commission evaluates whether formal listing as threatened or endangered under is warranted. For this Project, take or removal of western Joshua trees would require a 2081 Incidental Take Permit from CDFW.

California Fish and Game Code

Fully Protected Species

Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code outline protection for fully protected species of mammals, birds, reptiles, amphibians, and fish. Species that are fully protected by these sections may not be taken or possessed at any time. CDFW cannot issue permits or licenses that authorize the "take" of any fully protected species, except under certain circumstances, such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock. Furthermore, it is the responsibility of CDFW to maintain viable populations of all native species. Toward that end, CDFW has designated certain vertebrate species as Species of Special Concern, because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction.

Sections 1600–1616

CDFW jurisdiction includes ephemeral, intermittent, and perennial watercourses (including dry washes) and lakes characterized by the presence of (1) definable bed and banks and (2) existing fish or wildlife resources. CDFW takes jurisdiction to the top of bank of the stream, or the limit of the adjacent riparian vegetation, which may include oak

[1] On October 21, 2019, the California Fish and Game Commission received a petition to list the following as threatened under the California Endangered Species Act: (1) western Joshua tree (*Yucca brevifolia*) throughout its California range, or, in the event the Commission determines that listing of *Yucca brevifolia* throughout its California range is not warranted, then (2) the western Joshua tree population within the northern part of western Joshua tree's California range, or (3) the western Joshua tree population within the southern part of western Joshua tree's California range.

woodlands in canyon bottoms. Historical court cases have further extended CDFW jurisdiction to include watercourses that seemingly disappear but reemerge elsewhere. Under the CDFW definition, a watercourse need not exhibit evidence of an ordinary high water mark to be claimed as jurisdictional. CDFW does not have jurisdiction over ocean or shoreline resources.

Under California Fish and Game Code, Sections 1600–1616, CDFW has the authority to regulate work that will substantially divert or obstruct the natural flow of, or substantially change or use any material from, the bed, channel, or bank of any river, stream, or lake. CDFW also has the authority to regulate work that will deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. This regulation takes the form of a requirement for a Lake or Streambed Alteration Agreement and is applicable to all projects. Applications to CDFW must include a complete certified CEQA document.

California Native Plant Protection Act

The Native Plant Protection Act of 1977 (Section 1900 et seq. of the California Fish and Game Code) directed CDFW to carry out the Legislature's intent to "preserve, protect and enhance rare and endangered plants in this State." The Native Plant Protection Act gave the California Fish and Game Commission the power to designate native plants as "endangered" or "rare," and protect endangered and rare plants from take. CESA expanded on the original Native Plant Protection Act and enhanced legal protection for plants, but the Native Plant Protection Act remains part of the California Fish and Game Code. To align with federal regulations, the categories of "threatened" and "endangered" species were added to CESA. All "rare" animals in CESA were converted to "threatened," but this did not change for rare plants. Thus, there are three listing categories for plants in California: rare, threatened, and endangered. Because rare plants are not included in CESA, mitigation measures for impacts to rare plants are specified in a formal agreement between CDFW and the Project proponent.

Nesting Birds

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nests or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 protects all birds of prey (raptors) and their eggs and nests. Section 3511 states that fully protected birds or parts thereof may not be taken or possessed at any time. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA.

California Environmental Quality Act

CEQA requires identification of a project's potentially significant impacts on biological resources, and ways that such impacts can be avoided, minimized, or mitigated. CEQA also provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed impacts.

The State of California CEQA Guidelines (CEQA Guidelines) Section 15380(b)(1) defines endangered animals or plants as species or subspecies whose "survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors." A rare animal or plant is defined in CEQA Guidelines Section 15380(b)(2) as a species that, although not presently threatened with extinction, exists "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or … [t]he species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act." Additionally, an animal or plant may be presumed to be endangered, rare, or threatened if it meets the criteria for listing, as defined further in CEQA Guidelines Section 15380(c).

CDFW has developed a list of "Special Species" as "a general term that refers to all of the taxa the California Natural Diversity Database (CNDDB) is interested in tracking, regardless of their legal or protection status." This is a broader list than those species that are protected under FESA, CESA, and other California Fish and Game Code provisions, and includes lists developed by other organizations, including, for example, the Audubon Watch List Species. Guidance documents prepared by other agencies, including the Bureau of Land Management Sensitive Species and USFWS Birds of Special Concern, are also included on this CDFW Special Species list. Additionally, CDFW has concluded that plant species listed as CRPR 1 and 2 by the California Native Plant Society, and potentially some CRPR 3 plants, are covered by CEQA Guidelines Section 15380.

Section IV, Appendix G (Environmental Checklist Form), of the CEQA Guidelines requires an evaluation of impacts to "any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service."

Porter–Cologne Water Quality Control Act

Pursuant to provisions of the Porter–Cologne Act, the RWQCBs regulate discharging waste, or proposing to discharge waste, within any region that could affect a water of the state (California Water Code Section 13260[a]). The State Water Resources Control Board defines a water of the state as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code Section 13050[e]). All waters of the United States are waters of the state. Waters of the state include wetlands, and the State Water Resources Control Board definition of wetlands includes the following:

1. Natural wetlands.
2. Wetlands created by modification of a surface water of the state.
3. Artificial wetlands that meet any of the following criteria:
    a. Approved by an agency as compensatory mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration.
    b. Specifically identified in a water quality control plan as a wetland or other water of the state.
    c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape.
    d. Greater than or equal to 1 acre in size unless the artificial wetland was constructed and is currently used and maintained, primarily for one or more of the following purposes: industrial or municipal wastewater treatment or disposal; settling of sediment; detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial permitting program; treatment of surface waters; agricultural crop irrigation or stock watering; fire suppression; industrial processing or cooling water; active surface mining – even if the site is managed for interim wetlands functions and values; log storage; treatment, storage, or distribution of recycled water; maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or fields flooded for rice growing.

Wetlands that may not meet all of USACE's wetland delineation criteria are considered wetland waters of the state if, "under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation" (SWRCB 2019). Additionally, aquatic resources that USACE determines to not be waters of the

United States because they lack a significant nexus to a traditional navigable water or are above the ordinary high water mark limit of federal jurisdiction, may also be considered waters of the state. If a CWA Section 404 permit is not required for a project, the RWQCB may still require a permit (waste discharge requirements) for impacts to waters of the state under the Porter–Cologne Act.

California Desert Native Plants Act

The purpose of the California Desert Native Plants Act (CDNPA) is to protect certain species of California desert native plants from unlawful harvesting on both public and privately owned lands. The CDNPA only applies within the boundaries of Imperial, Inyo, Kern, Los Angeles, Mono, Riverside, San Bernardino, and San Diego Counties. Within these counties, the CDNPA prohibits the harvest, transport, sale, or possession of specific native desert plants unless a person has a valid permit or wood receipt, and the required tags and seals. The appropriate permits, tags and seals must be obtained from the sheriff or commissioner of the county where collecting will occur, and the county will charge a fee. More information on the CDNPA, including the species protected under the law, is available by reading the provisions of the law.

Local

San Bernardino County General Plan and Development Code

The County of San Bernardino General Plan contains the goals and policies that guide future development within San Bernardino County (County of San Bernardino 2007). San Bernardino County is divided into three distinct geographic planning regions: the Valley, the Mountains, and the Desert. The Project site occurs within the Desert Planning Region of San Bernardino County. The Desert Planning Region has two goals and policies: (1) to preserve open lands by working with the Bureau of Land Management, and (2) to ensure that off-highway vehicle use is managed to protect environmentally sensitive resources.

The Project would also need to comply with the Development Code. The County of San Bernardino Development Code (County of San Bernardino 2014) implements the goals and policies of the General Plan. Chapter 88.01.060, Desert Native Plant Protection, of the Development Code is a subset of the Plant Protection and Management Code (Chapter 88.01 of the Development Code) and focuses on the conservation of specified desert plant species.

The City of Hesperia General Plan

The City of Hesperia (City) General Plan Conservation and Open Space Elements (City of Hesperia 2010) include goals and policies that address biological resources. The following goals and policies pertain to biological resources and are relevant to the Project:

Goal CN-3. Minimize development and set aside necessary open space near and along the surface waters as well as those washes and other water passageways located in the City to preserve and protect plant and animal species and their natural habitat dependent on such surface waters and waterways.

Policy CN-3.1. Monitor the development impacts to these surface water resources within the city.

Policy CN 3.2. Preserve areas within the Oro Grande wash and un-named wash #1 that exhibit ideal native habitat in a natural state.

Goal CN 4. Establish policies and regulations to protect the natural environment and habitat of the City's biological resources.

Policy CN-4.1. Preserve pristine open space areas and known wildlife corridors areas for conservation to protect sensitive species and their habitats.

Policy CN-4.2. Encourage the protection, preservation and long-term viability of environmentally sensitive habitats and species in the City.

Policy CN-4.3. Identify lands that are suitable for preservation for sensitive species and their habitats.

Policy CN-4.4. In those areas known as possible habitat for endangered and sensitive species, require proper assessments before authorizing development.

Policy CN-4.5. Where such assessments indicate the presence of endangered or sensitive species, require appropriate actions to preserve the habitat and protect the identified species.

City of Hesperia Municipal Code, Chapter 16.24 – Protected Plant Policy

Chapter 16.24 of the Hesperia Municipal Code identifies the City's Protected Plant Policies. This chapter establishes policies governing the removal of protected plants, including the following (City of Hesperia 2009):

1. The following regulated desert native plants with stems two inches or greater in diameter or six feet or greater in height:
   a. *Dalea spinosa* (smoketree);
   b. All species of the family *Agavaceae* (century plants, nolinas, yuccas);
   c. All species of the genus *Prosopis* (mesquites).
2. Creosote rings, ten feet or greater in diameter.
3. All Joshua trees (mature and immature).
4. All plants protected or regulated by the California Desert Native Plants Act.

Additionally, Section 16.24.060 of the Hesperia Municipal Code states the following (City of Hesperia 2009):

> Prior to the issuance of a native tree or plant removal permit in conjunction with a development permit and/or approval of a land use application which authorizes such removal, a plot plan or grading plan shall be approved by the appropriate City review authority for each site indicating exactly which trees of plants are authorized to be removed. The required information can be added to any other required site plan. Prior to issuance of development permits in areas with native trees or plants that are subject to the provisions of this chapter, a preconstruction inspection shall be conducted by the appropriate authority. Such preconstruction inspections may be combined with any other required inspection.

Protected Plant Plan and Relocation/Adoption

Furthermore, the City's Protected Plants policy (City of Hesperia 2009) states the following for Tentative Tract, non-single-family residential developments (i.e., commercial, industrial, and apartment development):

- A protected plant plan shall be prepared by a certified arborist or registered botanist.
- An application and fee shall be completed and paid to the City.
- Healthy, transplantable plants shall be relocated on site or may be placed in an adoption program.

To qualify as an approved adoption program, a developer shall provide a letter on company letterhead, describing the program and the community notification process. The program shall identify the following, as a minimum.

A. A public notice process which may include publication in local newspapers, radio advertisement, hand distributed fliers, and other noticing techniques. Noticing must occur over a period of not less than three weeks.
B. The location where the trees may be viewed by the public and a clearly identified period of at least two weeks (including weekends) when trees/plants are available for adoption.
C. The person that will be available on-site to assist those adopting trees to find the actual trees/plants for removal. An on-site or cell phone number for that person is required.
D. A note that a copy of the City Joshua Tree Transplanting Guidelines will be provided to each adopter.
E. A log showing the name, address, and phone number of each adopter and the number and type of trees/plants they received.

   Note: At least 50% of the transplantable trees and plants shall be adopted or the remaining number below 50% shall be purchased at $350 per transplantable tree. Purchased trees must be recycled at Advance Disposal.

Per Hesperia Municipal Code Section 16.24.040, the reviewing authority must authorize the removal of a native tree or plant subject to the provisions of the Hesperia Municipal Code only if the following findings are made:

A. The removal of the native tree or plant does not have a significant adverse impact on any proposed mitigation measures, soil retention, soil erosion and sediment control measures, scenic routes, flood and surface water runoff and wildlife habitats (flora and fauna), especially those with limited habitats (e.g., eagles).
B. The removal of the native tree or plant is justified for one of the following reasons:
   1. The location of the native tree or plant and/or its drip line interferes with the reasonable improvement of the site with an allowed structure, sewage disposal area, paved area or other approved improvement or ground disturbing activity. Also such improvements have been designed in such a manner as to save as many healthy native trees and/or plants as reasonably practicable in conjunction with the proposed improvements;
   2. The location of the native tree or plant and/or its drip line interferes with the planned improvement of a street or development of an approved access to the subject or adjoining private property;
   3. The location of the native tree or plant is hazardous to pedestrian or vehicular travel or safety as determined by the director of transportation, flood control and airports or other county reviewing authority;
   4. The native tree or plant or its presence interferes with or is causing excessive damage to utility services or facilities, roadways, sidewalks, curbs, gutters, pavement, sewer line(s), drainage or flood control improvements, foundations, existing structures, or municipal improvements;
   5. The condition or location of the native plant or tree is adjacent to and in such close proximity to existing or proposed structure that the native plant or tree has or will sustain significant damage.

6. Joshua trees that are proposed to be removed have been transplanted or stockpiled for future transplanting wherever possible. In the instance of stockpiling the permittee has posted a bond to ensure such Joshua trees are transplanted appropriately.

4.3.3 Thresholds of Significance

The significance criteria used to evaluate the Project impacts to biological resources are based on CEQA Guidelines Appendix G. Potential Project-related impacts analyzed in this section account for biological resources that occur or have the potential to occur on the Project site and the Off-Site Improvement Area. According to CEQA Guidelines Appendix G, a significant impact related to biological resources would occur if the Project would:

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

4.3.4 Impacts Analysis

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

Less-than-Significant Impact with Mitigation Incorporated. The following section evaluates the Project's potential direct and indirect effects on plant and wildlife species identified as candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.

Special-Status Plant Species

Direct Impacts

No non-listed special-status plant species were observed or have high or moderate potential to occur within the BSA; therefore, the Project would have no direct or indirect impacts to non-listed special-status plant species. One listed special-status plant species was observed within the BSA: western Joshua tree.

Western Joshua Tree

Western Joshua tree, a candidate for state listing under CESA, was observed and would be directly impacted by the Project. Based on the site plan, implementation of the Project would result in direct impacts to 16 western Joshua tree individuals. All ground-disturbing activities, even areas temporarily impacted, are considered permanent impacts to western Joshua trees. Direct impacts to western Joshua trees would be significant absent mitigation.

Based on a literature review completed by CDFW, CDFW would like the western Joshua tree locations to be buffered by 186 feet to account for the impacts to the seed bank for western Joshua trees and their associated habitat. Therefore, a 186-foot buffer (or radius) was applied to each western Joshua tree location. Direct impacts to this 186-foot buffer were analyzed, and the Project would result in 10.9 acres of impacts to western Joshua trees, their seed bank, and their associated habitat.

As required by Mitigation Measure (MM) BIO-1, mitigation for direct and indirect impacts to 32 western Joshua trees would be fulfilled through conservation of western Joshua tree through purchase of credits at a CDFW-approved mitigation bank or other conservation mechanism approved by the City of Hesperia and CDFW. Additionally, as required by MM-BIO-2 and in accordance with Chapter 16.24 of the Hesperia Municipal Code, the preparation of a western Joshua tree and desert native plants relocation plan is required to mitigate impacts to western Joshua trees as a result of the Project (also further discussed in Section 6.5, Impacts to Wildlife Corridors and Habitat Linkages). As such, a Joshua Tree Preservation, Protection, and Relocation Plan, and California Desert Native Plant Relocation Plan (Appendix E) was prepared to provide detailed specifications for the Project applicant to meet the requirements of Chapter 16.24 of the Hesperia Municipal Code to protect, preserve, and mitigate impacts to western Joshua trees. Thus, mitigation for impacts to western Joshua tree would also mitigate for impacts to Joshua tree woodland. Implementation of MM-BIO-1 (Conservation of Western Joshua Tree Lands) and MM-BIO-2 (Relocation of Desert Native Plants) would reduce potential direct impacts to western Joshua trees to less than significant.

Indirect Impacts

Western Joshua Tree

Based on a letter from CDFW, any western Joshua tree within 186 feet of the direct impact footprint would be considered indirectly impacted. Thus, although these 16 western Joshua trees would be directly avoided, CDFW would consider these trees to be indirectly impacted due to loss of seedbank and associated species.

Construction-related indirect impacts may include inadvertent spillover impacts outside of the construction footprint, dust accumulation on western Joshua tree individuals, chemical spills, stormwater erosion and sedimentation, and increased wildfire risk. Potential long-term (post-construction) indirect impacts from operation and maintenance activities may include effects of herbicides, changes in water quality, increased wildfire risk, induced demand on the surrounding area, increased traffic and vehicle emissions, and accidental chemical spills. Indirect impacts to western Joshua tree individuals would be significant absent mitigation.

Implementation of MM-BIO-6 gives the Project's Designated Biologist the authority to stop work if construction is not compliant with CEQA. MM-BIO-7 requires that an experienced biologist oversee compliance with the protective measures, including limiting impacts to the Project impact footprint. MM-BIO-8 would provide construction personnel with training related to western Joshua trees that are present on and adjacent to the impact footprint. MM-BIO-9 provides for documentation that an education program is administered to applicable personnel. MM-BIO-10 requires that impacts occur within the fenced, staked, or flagged area that is clearly delineated within the Project

impact footprint. The construction crew would be responsible for unauthorized impacts from construction activities to western Joshua trees that are outside the permitted Project footprint. Thus, implementation of MM-BIO-6 through MM-BIO-10 would enable the Project to avoid and minimize inadvertent spillover impacts outside of the approved impact footprint.

To reduce fugitive dust resulting from Project construction and to minimize adverse air quality impacts, the Project would employ dust mitigation measures in accordance with the Mojave Desert Air Quality Management District (MDAQMD) Rules 401 and 403.2, which limit the amount of fugitive dust generated during construction.

MM-BIO-11 would ensure that a prompt and effective response to any accidental chemical spills will be implemented and that repair and clean-up of any hazardous waste occurs. Thus, implementation of MM-BIO-11 would help to avoid and minimize impacts to western Joshua tree from any construction-related chemical spills.

A stormwater pollution prevention plan (SWPPP) would be prepared and implemented to prevent all construction pollutants from contacting stormwater during construction activities, with the intent of keeping sediment and any other pollutants from moving off site and into receiving waters. Best management practices (BMPs) employed on site would include erosion control, sediment control, and non-stormwater good housekeeping. Preparation and implementation of a SWPPP would help to avoid and minimize the potential effects of stormwater erosion during construction.

Construction of the Project would introduce potential ignition sources to the Project site, including the use of heavy machinery and the potential for sparks during welding activities or other hot work. However, the Project would be required to comply with City of Hesperia and state requirements for fire safety practices to reduce the possibility of fires during construction activities. Further, vegetation would be removed from the site prior to the start of construction. Adherence to City and state regulatory standards during Project construction would reduce the risk of wildfire ignition and spread during construction activities. Therefore, short-term construction impacts involving wildland fires would not be substantial.

Potential long-term (post-construction) indirect impacts from operations and maintenance activities may include effects of herbicides, changes in water quality, increased wildfire risk, and accidental chemical spills.

MM-BIO-12 would limit herbicide use to instances where hand or mechanical efforts are infeasible and would only be applied when wind speeds are less than 7 miles per hour to prevent drift into off-site western Joshua trees.

Implementation of low-impact-development features and BMPs would, to the maximum extent practicable, reduce the discharge of pollutants into receiving waters, including inadvertent release of pollutants (e.g., hydraulic fluids and petroleum); the improper management of hazardous materials; trash and debris; and the improper management of portable restroom facilities (e.g., regular service) in accordance with all relevant local and state development standards. In addition, in accordance with California Green Building Code (CALGreen) requirements (24 CCR, Part 11), Project source controls to improve water quality would be provided for outdoor material storage areas, outdoor trash storage/waste handling areas, and outdoor loading/unloading areas. Therefore, impacts to western Joshua trees due to changes in water quality would be avoided and minimized through implementation of low-impact-development features and BMPs.

Upon completion of Project construction, with adherence to the City of Hesperia's Municipal Code and because of the low ignitability of the proposed structures and implementation of fire-resistant and irrigated landscaping, the Project would not facilitate wildfire spread or exacerbate wildfire risk. Further, given that surrounding off-site fuels consist of moderately spaced vegetation, wildfires in the immediate surrounding area are not common, and it is

unlikely that the Project site would be exposed to the uncontrolled spread of a wildfire. It is not anticipated that the Project, due to slope, prevailing winds, and other factors, would exacerbate wildfire risks or the uncontrolled spread of a wildfire; thus, with adherence to the City of Hesperia's Municipal Code, long-term indirect impacts to western Joshua tree associated with increased wildlife risk is not expected to occur.

Implementation of MM-BIO-6 (Designated Biologist Authority), MM-BIO-7 (Compliance Monitoring), MM-BIO-8 (Education Program), MM-BIO-9 (Construction Monitoring Notebook), MM-BIO-10 (Delineation of Property Boundaries), MM-BIO-11 (Hazardous Waste), and MM-BIO-12 (Herbicides) would reduce potential indirect impacts to western Joshua tree to less than significant.

Special-Status Wildlife

Direct Impacts

The Project could result in significant impacts to two special-status wildlife species: burrowing owl, loggerhead shrike.

Burrowing Owl

Burrowing owl was not observed on the Project site or BSA; however, suitable habitat exists on site, and the species could occupy the Project site or BSA prior to construction.

The Project would result in the loss of 16 acres of suitable habitat for burrowing owl, including impacts to disturbed habitat, Joshua tree woodland, and non-native grassland. These potential direct impacts to burrowing owls would be significant absent mitigation under CEQA.

Pursuant to the California Fish and Game Code and MBTA, a pre-construction survey in compliance with the Staff Report on Burrowing Owl Mitigation (CDFG 2012) would be necessary to reevaluate the locations of potential burrowing owl burrows within the Project limits so take of owls and active owl nests can be avoided. Consistent with MM-BIO-3, a pre-construction survey for burrowing owl would be conducted in areas supporting potentially suitable habitat and within 14 days prior to the start of construction activities. A Burrowing Owl Relocation Plan has been prepared to facilitate implementation of this mitigation measure, and is attached as part of Appendix I of Appendix C.

As required by MM-BIO-1, mitigation for direct impacts to western Joshua trees would be fulfilled through purchase of credits at a CDFW-approved mitigation bank or other conservation mechanism approved by the City of Hesperia and CDFW. Conservation efforts for western Joshua tree associated with the Western Joshua Tree Mitigation Fund will focus on the conservation of large, interconnected Joshua tree woodlands on lands where edge effects are limited, versus lands in urban settings that are subject to habitat fragmentation and edge effects, such as the Project site. Thus, mitigation for impacts to western Joshua tree would also mitigate for impacts to loss of suitable habitat for burrowing owl.

Implementation of MM-BIO-1 (Conservation of Western Joshua Tree Lands) and MM-BIO-3 (Pre-Construction Surveys for Burrowing Owl and Avoidance) would reduce potential direct impacts to burrowing owl to less than significant.

Loggerhead Shrike

Loggerhead shrike is a CDFW Species of Special Concern during its nesting period. It can be found in lowlands and foothills throughout California. It prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches. Highest density occurs in open-canopied valley foothill hardwood, valley foothill hardwood-conifer, valley foothill riparian, pinyon-juniper, juniper, desert riparian, and western Joshua tree habitats. Loggerhead shrike was not observed during the biological surveys but has a moderate potential to occur in the BSA. Extensive suitable nesting habitat, particularly near western Joshua trees, is present within the BSA.

In addition, the Project would result in the loss of 1.5 acres of suitable habitat for loggerhead shrike (i.e., impacts to Joshua tree woodland). These potential direct impacts to loggerhead shrike would be significant absent mitigation under CEQA.

To avoid potential direct impacts to nesting loggerhead shrike, it is recommended that vegetation removal activities be conducted outside the general bird nesting season (February 1 through August 31). If vegetation cannot be removed outside the bird nesting season, a pre-construction nesting bird survey by a qualified biologist is required prior to vegetation removal. This requirement is outlined in MM-BIO-4.

As required by MM-BIO-1, mitigation for direct impacts to western Joshua trees would be fulfilled through purchase of credits at a CDFW-approved mitigation bank or other conservation mechanism approved by the City of Hesperia and CDFW. Conservation efforts for western Joshua tree associated with the Western Joshua Tree Mitigation Fund will focus on the conservation of large, interconnected Joshua tree woodlands on lands where edge effects are limited, versus lands in urban settings that are subject to habitat fragmentation and edge effects, such as the Project site. Thus, mitigation for impacts to western Joshua tree would also mitigate for impacts to loss of suitable habitat for loggerhead shrike.

Implementation of MM-BIO-1 (Conservation of Western Joshua Tree Lands) and MM-BIO-4 (Pre-Construction Nesting Bird Surveys and Avoidance) would reduce potential direct impacts to loggerhead shrike to less than significant.

Desert Tortoise

The results of the survey determined that desert tortoise is currently considered absent from the BSA. The on-site vegetation has been determined to provide low-quality habitat for the desert tortoise. While suitable (albeit low-quality) habitat for this species will be removed as a result of construction of the Project, this habitat is unoccupied, and the Project would not result in any direct or indirect impacts to desert tortoise. Therefore, impacts to desert tortoise associated with the BSA would be less than significant.

Mohave Ground Squirrel

The Project site is located in an area that is cut off from known Mohave ground squirrel populations by I-15 and U.S. Highway 395 to the east and by the California Aqueduct to the north. Disturbances from human presence and fragmentation from surrounding roadways, including off-highway-vehicle use and illegal waste dumping within the BSA has had a negative effect on habitat quality for Mohave ground squirrel. CNDDB records reveal two occurrences of Mohave ground squirrel near the BSA that were detected in 2005 and 2011. However, both these records are from sites located across the California Aqueduct, making dispersal to the Project site highly unlikely because the aqueduct creates a considerable barrier to dispersal.

The visual survey concluded that the BSA provides low-quality/disturbed suitable habitat for Mohave ground squirrel. Specifically, foraging plants for Mohave ground squirrel, such as spiny hopsage and winterfat, were absent. However, other foraging plans including peach thorn (*Lycium cooperi*), western Joshua tree, fiddleneck (*Amsinckia* spp.), and red-stemmed filaree (redstem stork's bill) were observed within the BSA, along with burrows and burrow complexes that showed that soils present are suitable for burrowing. However, surrounding roadways and various forms of human presence, including trash and litter, have marginalized the habitat quality.

Although low-quality/disturbed suitable Mohave ground squirrel habitat is present in the BSA, no Mohave ground squirrels were detected at the camera stations or captured during the trapping surveys. Additionally, the BSA is located within the southern portion of the mapped Mohave ground squirrel range, where Mohave ground squirrel occurrences are rare and populations densities have historically been low with the closest occurrences occurring north of the California Aqueduct, which presents a significant barrier to Mohave ground squirrel dispersal. As such, the survey results indicate that Mohave ground squirrel does not inhabit the BSA.

Therefore, the Project would not result in any direct or indirect impacts to Mohave ground squirrel. Therefore, impacts to Mohave ground squirrel associated with the Project would be less than significant under CEQA.

American Badger and Desert Kit Fox

No desert kit fox or American badger individuals (or sign) were observed during desert tortoise or Mohave ground squirrel surveys or incidentally observed during other focused surveys conducted within the BSA. In addition, no suitable habitat exists on site. Disturbances from human presence and fragmentation from surrounding roadways, including off-highway-vehicle use and illegal waste dumping within the BSA have had a negative effect on habitat quality for these species. However, albeit unlikely, these species could eventually occupy the BSA prior to construction; therefore, potential direct impacts to American badger and desert kit fox would be significant absent mitigation.

To avoid potential direct impacts to American badger and kit fox, a pre-construction survey for American badger and desert kit fox would be conducted within 10 days prior to the start of construction to determine the presence/absence of either species. As such, in an abundance of caution and to ensure that potential impacts to these species are less than significant, the Project applicant would prepare a mitigation and monitoring plan that addresses desert kit fox and American badger if either species is determined to occur on the Project site prior to the start of construction, pursuant to MM-BIO-5 (Pre-Construction Survey for American Badger and Desert Kit Fox and Avoidance). With the incorporation of mitigation, impacts associated with desert kit fox and American badger would be less than significant under CEQA.

Nesting Migratory Birds and Raptors

Similar to most other sites containing trees, shrubs, and other vegetation, the Project site contains opportunities for birds of prey (raptors) and other avian species to nest on site. Native nesting bird species with potential to occur within the Project site are protected by California Fish and Game Code Sections 3503 and 3503.5, and by the federal MBTA (16 USC 703–711). In particular, California Fish and Game Code Section 3503 provides that it is unlawful to take, possess, or needlessly destroy the active nests or eggs of any bird in California; Section 3503.5 protects all raptors and their eggs and active nests; and the MBTA prohibits the take (including killing, capturing, selling, trading, and transport) of native migratory bird species throughout the United States. Currently, California considers any nest that is under construction or modification, or is supporting eggs, nestlings, or juveniles as "active." Therefore, impacts to nesting migratory birds and raptors would be significant absent mitigation under

CEQA. To ensure compliance with the California Fish and Game Code and MBTA and to avoid potential impacts to nesting birds, it is recommended that vegetation removal activities be conducted outside the general bird nesting season (February 1 through August 31, depending on the species), and if vegetation cannot be removed outside the bird nesting season, a pre-construction nesting bird survey by a qualified biologist is required prior to vegetation removal. This requirement is outlined in MM-BIO-4. With the incorporation of mitigation, impacts associated with nesting birds, including raptors, would be less than significant.

Implementation of MM-BIO-4 (Pre-Construction Nesting Bird Surveys and Avoidance) would reduce potential direct impacts to nesting migratory birds and raptors to less than significant.

Indirect Impacts

Burrowing Owl

Construction activities have the potential to result in indirect impacts to burrowing owls and their habitat. Those impacts could include dust, noise and vibration, trash and debris, increased human presence, vehicle collisions, chemical spills, and night-time lighting. These potential short-term or temporary indirect impacts to burrowing owls would be significant absent mitigation under CEQA.

Post-construction (long-term) activities have the potential to result in indirect impacts to burrowing owls and their habitat. Long-term impacts that could result from development within or adjacent to burrowing owl habitat include night-time lighting and increased invasive plant species that may degrade habitat. These potential long-term indirect impacts to burrowing owls would be significant absent mitigation under CEQA.

MM-BIO-3 would require burrowing owl surveys and result in establishment of construction buffers around any burrowing owl burrows found, thus limiting effects from most short-term indirect impacts, including noise and vibration, increased human presence, night-time lighting, and vehicle collisions. MM-BIO-13 would require night-time lighting during construction within 50 feet of habitat for special-status species to be shielded downward. Additionally, MM-BIO-6, MM-BIO-7, MM-BIO-8, and MM-BIO-9 would require that all workers complete a Worker Environmental Awareness Program (WEAP) training and would require ongoing biological monitoring and compliance with all biological resource mitigation requirements. MM-BIO-14 would require trash and debris to be removed regularly and would require animal-resistant trash receptacles to avoid attracting urban-related, predator species. MM-BIO-11 would ensure that a prompt and effective response to any accidental chemical spills would be implemented, and that repair and clean-up of any hazardous waste occurs. To reduce fugitive dust resulting from Project construction and to minimize adverse air quality impacts, the Project would employ dust mitigation measures in accordance with MDAQMD's Rules 401 and 403.2, which would limit the amount of fugitive dust generated during construction.

Potential long-term indirect impacts that could result from development within or adjacent to burrowing owl habitat include nighttime lighting and increased invasive plant species that may degrade habitat. MM-BIO-13 would require night-time lighting during operations within 50 feet of habitat for special-status species to be shielded downward. MM-BIO-15 (Invasive Plant Management) would require that landscape plants within 200 feet of native vegetation communities not be on the most recent version of the California Invasive Plant Council's Inventory of Invasive Plants (http://www.cal-ipc.org/ip/inventory/index.php).

Implementation of MM-BIO-3 (Pre-Construction Surveys for Burrowing Owl and Avoidance), MM-BIO-6, (Designated Biologist Authority), MM-BIO-7 (Compliance Monitoring), MM-BIO-8 (Education Program), MM-BIO-9 (Construction Monitoring Notebook), MM-BIO-11 (Hazardous Waste), MM-BIO-13 (Lighting), MM-BIO-14 (Trash and Debris), and MM-BIO-15 (Invasive Plant Management) would reduce potential indirect impacts to burrowing owl to less than significant.

Loggerhead Shrike

Construction activities have the potential to result in indirect impacts to loggerhead shrike and their habitat. Those impacts could include dust, noise and vibration, increased human presence, vehicle collisions, chemical spills, and night-time lighting. These potential short-term or temporary indirect impacts to loggerhead shrike would be significant absent mitigation under CEQA.

Post-construction (long-term) activities have the potential to result in indirect impacts to loggerhead shrike and their habitat. Long-term impacts that could result from development within or adjacent to loggerhead shrike habitat include night-time lighting and increased invasive plant species that may degrade habitat. These potential long-term indirect impacts to loggerhead shrikes would be significant absent mitigation under CEQA.

MM-BIO-4 would require nesting bird surveys and would result in establishment of construction buffers around nests, thus limiting effects from most short-term indirect impacts, including noise and vibration, increased human presence, night-time lighting, and vehicle collisions. MM-BIO-13 would require night-time lighting during construction within 50 feet of habitat for special-status species to be shielded downward. MM-BIO-6, MM-BIO-7, MM-BIO-8, and MM-BIO-9 would require that all workers complete a WEAP training and would require ongoing biological monitoring and compliance with all biological resource mitigation requirements. MM-BIO-11 would ensure that a prompt and effective response to any accidental chemical spills be implemented, and that repair and clean-up of any hazardous waste occurs. To reduce fugitive dust resulting from construction and to minimize adverse air quality impacts, the Project would employ dust mitigation measures in accordance with MDAQMD's Rules 401 and 403.2, which limit the amount of fugitive dust generated during construction.

Potential long-term indirect impacts that could result from development within or adjacent to loggerhead shrike habitat include nighttime lighting and increased invasive plant species that may degrade habitat. MM-BIO-13 would require night-time lighting during operations within 50 feet of habitat for special-status species to be shielded downward. MM-BIO-15 (Invasive Plant Management) would require that landscape plants within 200 feet of native vegetation communities not be on the most recent version of the California Invasive Plant Council's Inventory of Invasive Plants (http://www.cal-ipc.org/ip/inventory/index.php).

Implementation of MM-BIO-4 (Pre-Construction Nesting Bird Surveys and Avoidance), MM-BIO-6, (Designated Biologist Authority), MM-BIO-7 (Compliance Monitoring), MM-BIO-8 (Education Program), MM-BIO-9 (Construction Monitoring Notebook), MM-BIO-11 (Hazardous Waste), MM-BIO-13 (Lighting), and MM-BIO-15 (Invasive Plant Management) would reduce potential indirect impacts to loggerhead shrike to less than significant.

American Badger and Desert Kit Fox

Construction activities have the potential to result in short-term indirect impacts to American badger and desert kit fox, and their habitats. Those impacts could include dust, noise and vibration, trash and debris, increased human presence, vehicle collisions, chemical spills, and night-time lighting. However, albeit unlikely, these species could occupy the BSA prior to construction; these potential short-term or temporary indirect impacts to these species would be significant absent mitigation under CEQA.

MM-BIO-5 would require a pre-construction survey for American badger and desert kit fox, and if determined present, would result in establishment of an American Badger/Desert Kit Fox Mitigation and Monitoring Plan which would include avoidance and minimization measures to reduce potential impacts to either species, as well as compensatory mitigation to offset indirect impacts including noise and vibration, increased human presence, night-time lighting, and vehicle collisions. MM-BIO-13 would require night-time lighting during construction within 50 feet of habitat for special-status species to be shielded downward. MM-BIO-6, MM-BIO-7, MM-BIO-8, and MM-BIO-9 would require that all

workers complete a WEAP training and would require ongoing biological monitoring and compliance with all biological resource mitigation requirements. MM-BIO-11 would ensure that a prompt and effective response to any accidental chemical spills would be implemented, and that repair and clean-up of any hazardous waste occurs. To reduce fugitive dust resulting from construction and to minimize adverse air quality impacts, the Project would employ dust mitigation measures in accordance with MDAQMD's 401 and 403.2, which would limit the amount of fugitive dust generated during construction.

Potential long-term indirect impacts that could result from development within or adjacent to the BSA include nighttime lighting and increased invasive plant species that may degrade habitat. MM-BIO-13 would require night-time lighting during operations within 50 feet of habitat for special-status species to be shielded downward. MM-BIO-15 (Invasive Plant Management) would require that landscape plants within 200 feet of native vegetation communities not be on the most recent version of the California Invasive Plant Council's Inventory of Invasive Plants (http://www.cal-ipc.org/ip/inventory/index.php).

Implementation of MM-BIO-5 (Pre-Construction Survey for American Badger and Desert Kit Fox and Avoidance), MM-BIO-6, (Designated Biologist Authority), MM-BIO-7 (Compliance Monitoring), MM-BIO-8 (Education Program), MM-BIO-9 (Construction Monitoring Notebook), MM-BIO-11 (Hazardous Waste), MM-BIO-13 (Lighting), and MM-BIO-15 (Invasive Plant Management)would reduce potential indirect impacts to American badger and desert kit fox to less than significant.

Nesting Migratory Birds and Raptors

Construction activities have the potential to result in indirect impacts to nesting migratory birds and raptors, and their habitats. Those impacts could include the loss of a nest through increased dust, noise and vibration, increased human presence, and night-time lighting. Potential short-term or temporary indirect impacts to these species would be significant absent mitigation under CEQA.

Post-construction (long-term) activities have the potential to result in indirect impacts to migratory birds and raptors, and their habitat. Long-term impacts that could result from development within or adjacent to suitable habitat include night-time lighting and increased invasive plant species that may degrade habitat. These potential long-term indirect impacts to migratory birds and raptors would be significant absent mitigation under CEQA.

To ensure compliance with the California Fish and Game Code and MBTA and to avoid potential indirect impacts to nesting birds, vegetation removal activities should be conducted outside the general bird nesting season (February 1 through August 31, depending on the species), and if vegetation cannot be removed outside the bird nesting season, a pre-construction nesting bird survey (MM-BIO-4) by a qualified biologist is required prior to vegetation removal. Indirect impacts including increased dust, noise, and vibration, increased human presence, and night-time lighting, would be offset through implementation of MM-BIO-13, which would require night-time lighting during construction within 50 feet of habitat for special-status species to be shielded downward. MM-BIO-6, MM-BIO-7, MM-BIO-8, and MM-BIO-9 would require that all workers complete a WEAP training, ongoing biological monitoring, and compliance with all biological resource mitigation requirements. To reduce fugitive dust resulting from construction and to minimize adverse air quality impacts, the Project would employ dust mitigation measures in accordance with MDAQMD's Rules 401 and 403.2, which would limit the amount of fugitive dust generated during construction.

Implementation of MM-BIO-4 (Pre-Construction Nesting Bird Surveys and Avoidance), MM-BIO-6, (Designated Biologist Authority), MM-BIO-7 (Compliance Monitoring), MM-BIO-8 (Education Program), MM-BIO-9 (Construction

Monitoring Notebook), and MM-BIO-13 (Lighting) would reduce potential indirect impacts to nesting birds and raptors to less than significant.

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

Less-than-Significant Impact with Mitigation Incorporated. Joshua tree woodland is a sensitive CDFW natural community. As described under Threshold A, western Joshua trees are also protected under CEQA as a candidate species.

Direct Impacts

A total of 22.90 acres, including 17.84 acres within the Project site and 5.06 acres within the Off-Site Improvement Areas, would be permanently impacted from the Project (see Figure 4.3-3, Impacts to Biological Resources). Table 3 summarizes permanent direct impacts to vegetation communities and land covers within the BSA. As stated in BTR Section 5.1 (see Appendix C), Vegetation Communities and Land Covers, CDFW state rankings of 1, 2, or 3 are considered high priority for inventory or special status, and impacts to these communities typically require mitigation. Joshua tree woodland is considered a sensitive biological resource by CDFW under CEQA.

All ground-disturbing activities, even areas temporarily impacted, are considered permanent impacts to Joshua tree woodland. The Project would result in permanent impacts to 1.52 acres of Joshua tree woodland, which would be considered a significant impact under CEQA absent mitigation.

The Project would also result in permanent impacts to 21.39 acres of vegetation communities and land cover types that are not considered sensitive by CDFW, including upland mustards, rubber rabbitbrush scrub, disturbed habitat, non-native grassland, and urban/developed lands. Therefore, these direct impacts would be less than significant under CEQA.

Table 4.3-2. Impacts to Vegetation Communities and Land Cover Types within the BSA

Floristic Alliance	Association	Vegetation Community	Total Existing BSA (Acres)	On-Site Permanent Impacts (Acres)	Off-Site Permanent Impacts Areas (Acres)	Total Permanent Impacts (Acres)
Ericameria nauseosa	*Ericameria nauseosa* shrubland	Rubber rabbitbrush scrub	3.54	3.05	0.14	3.20
Yucca brevifolia	N/A	Joshua tree woodland	2.28	1.49	0.03	1.52
Brassica nigra	*Brassica nigra*	Upland Mustards	1.52	0.39	1.07	1.46
N/A	N/A	Disturbed habitat	0.40	0.05	0.22	0.27
Avena spp. – *Bromus* spp. Herbaceous Semi-Natural	Wild oats and annual brome grasslands	Non-native grassland	18.94	12.86	1.36	14.22
N/A	N/A	Urban/Developed	2.50	—	2.25	2.25
		Total[1]	**29.18**	**17.84**	**5.06**	**22.90**

Notes: BSA = biological survey area; N/A = not applicable.
[1] Total acreages may not sum exactly due to rounding.

Mitigation for direct impacts to 32 western Joshua tree individuals would also mitigate for impacts to 1.52 acres of Joshua tree woodland. As required by MM-BIO-1, mitigation for direct impacts to 32 western Joshua trees would be fulfilled through conservation of western Joshua tree through purchase of credits at a CDFW-approved mitigation bank or other conservation mechanism approved by the City of Hesperia and CDFW. Conservation efforts for western Joshua tree would focus on the conservation of large, interconnected Joshua tree woodlands on lands where edge effects are limited, versus lands in urban settings that are subject to habitat fragmentation and edge effects, such as the Project site. Thus, mitigation for impacts to western Joshua tree would also mitigate for impacts to 1.52 acres of Joshua tree woodland.

Additionally, as required by MM-BIO-2 and in accordance with Chapter 16.24 of the Hesperia Municipal Code, the preparation of a western Joshua tree and desert native plants relocation plan is required to mitigate for impacts to western Joshua trees as a result of the Project. As such, a Joshua Tree Preservation, Protection, and Relocation Plan (Appendix F of Appendix C) was prepared for the Project to provide detailed specifications for the Project applicant to meet the requirements of Chapter 16.24 of the Hesperia Municipal Code to protect, preserve, and mitigate impacts to Joshua trees. Thus, mitigation for impacts to western Joshua tree would also mitigate for impacts to Joshua tree woodland.

Implementation of MM-BIO-1 (Conservation of Western Joshua Tree Lands) and MM-BIO-2 (Relocation of Desert Native Plants) would reduce potential direct impacts to sensitive vegetation communities (i.e., Joshua tree woodland) to less than significant.

Indirect Impacts

Construction-related indirect impacts may include inadvertent spillover impacts outside of the construction footprint, dust accumulation on Joshua tree woodland, chemical spills, stormwater erosion and sedimentation, and increased wildfire risk. Potential long-term (post-construction) indirect impacts from operation and maintenance activities may include effects of herbicides, changes in water quality, increased wildfire risk, induced demand on the surrounding area, increased traffic and vehicle emissions, and accidental chemical spills. Indirect impacts to Joshua woodland would be significant absent mitigation.

Implementation of MM-BIO-6 (Designated Biologist Authority) gives the Project's designated biologist the authority to stop work if construction is not compliant with CEQA. MM-BIO-7 (Compliance Monitoring) requires that an experienced biologist oversee compliance with the protective measures, including limiting impacts to the Project impact footprint. MM-BIO-8 (Education Program) would provide construction personnel with training related to western Joshua trees that are present on and adjacent to the impact footprint. MM-BIO-9 (Construction Monitoring Notebook) provides for documentation that an education program is administered to applicable personnel. MM-BIO-10 (Delineation of Property Boundaries) requires that impacts occur within the fenced, staked, or flagged area that is clearly delineated within the Project impact footprint. The construction crew would be responsible for unauthorized impacts from construction activities to western Joshua trees that are outside the permitted Project footprint. Thus, implementation of MM-BIO-6 through MM-BIO-10 would enable the Project to avoid and minimize inadvertent spillover impacts outside of the approved impact footprint.

To reduce fugitive dust resulting from Project construction and to minimize adverse air quality impacts, the Project would employ dust mitigation measures in accordance with MDAQMD's Rules 401 and 403.2, which limit the amount of fugitive dust generated during construction.

MM-BIO-11 (Hazardous Waste) would ensure that a prompt and effective response to any accidental chemical spills will be implemented, and that repair and clean-up of any hazardous waste occurs. Thus, implementation of MM-BIO-11 would help to avoid and minimize impacts to western Joshua tree from any construction-related chemical spills.

A SWPPP would be prepared and implemented to prevent all construction pollutants from contacting stormwater during construction activities, with the intent of keeping sediment and any other pollutants from moving off site and into receiving waters. BMPs employed on site would include erosion control, sediment control, and non-stormwater good housekeeping. Preparation and implementation of a SWPPP would help to avoid and minimize the potential effects of stormwater erosion during construction.

Construction of the Project would introduce potential ignition sources to the Project site, including the use of heavy machinery and the potential for sparks during welding activities or other hot work. However, the Project would be required to comply with City of Hesperia and state requirements for fire safety practices to reduce the possibility of fires during construction activities. Further, vegetation would be removed from the site prior to the start of construction. Adherence to City and state regulatory standards during Project construction would reduce the risk of wildfire ignition and spread during construction activities. Therefore, short-term construction impacts involving wildland fires would not be substantial.

Potential long-term (post-construction) indirect impacts from operations and maintenance activities may include effects of herbicides, changes in water quality, increased wildfire risk, and accidental chemical spills.

MM-BIO-12 (Herbicides) would limit herbicide use to instances where hand or mechanical efforts are infeasible, and would only be applied when wind speeds are less than 7 miles per hour to prevent drift into off-site western Joshua trees.

Implementation of low-impact-development features and BMPs would, to the maximum extent practicable, reduce the discharge of pollutants into receiving waters, including inadvertent release of pollutants (e.g., hydraulic fluids and petroleum); the improper management of hazardous materials; trash and debris; and the improper management of portable restroom facilities (e.g., regular service) in accordance with all relevant local and state development standards. In addition, in accordance with CALGreen Code requirements (24 CCR, Part 11), Project source controls to improve water quality would be provided for outdoor material storage areas, outdoor trash storage/waste handling areas, and outdoor loading/unloading areas. Therefore, impacts to western Joshua trees due to changes in water quality would be avoided and minimized through implementation of low-impact-development features and BMPs.

Upon completion of Project construction, with adherence to the City of Hesperia's Municipal Code and because of the low ignitability of the proposed structures and implementation of fire-resistant and irrigated landscaping, the Project would not facilitate wildfire spread or exacerbate wildfire risk. Further, given that surrounding off-site fuels consist of moderately spaced vegetation, wildfires in the immediate surrounding area are not common, and it is unlikely that the Project site would be exposed to the uncontrolled spread of a wildfire. It is not anticipated that the Project, due to slope, prevailing winds, and other factors, would exacerbate wildfire risks or the uncontrolled spread of a wildfire; thus, with adherence to the City of Hesperia's Municipal Code, long-term indirect impacts to western Joshua tree associated with increased wildlife risk is not expected to occur.

Implementation of MM-BIO-6 (Designated Biologist Authority), MM-BIO-7 (Compliance Monitoring), MM-BIO-8 (Education Program), MM-BIO-9 (Construction Monitoring Notebook), MM-BIO-10 (Delineation of Property

Boundaries), MM-BIO-11 (Hazardous Waste), and MM-BIO-12 (Herbicides) would reduce potential indirect impacts to western Joshua tree to less than significant.

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

Less-than-Significant Impact with Mitigation Incorporated. The BSA supports 0.06 acres (396 linear feet) of ephemeral drainages. The one ephemeral drainage feature is likely subject to CDFW and/or RWQCB jurisdiction based on evidence of bed and bank. This feature is not likely subject to USACE jurisdiction because this feature is isolated and does not meet the relatively permanent or significant nexus standard as waters of the United States One swale was also investigated but determined to be non-jurisdictional.

Direct Impacts

The Project would result in the loss of 0.06 acres of potential jurisdictional waters likely subject to CDFW and/or RWQCB jurisdiction (Figure 4.3-4). These potential direct impacts to jurisdictional waters would be significant absent mitigation under CEQA.

Direct impacts to 0.06 acres of jurisdictional aquatic resources would occur with Project implementation. For direct impacts to 0.06 acres of waters and streams that are regulated under the California Porter–Cologne Water Quality Control Act and California Fish and Game Code, permits would be required from each of the regulatory agencies, and typically entail providing mitigation to offset the impacts and loss of beneficial uses and functions and values to the jurisdictional waters and habitats. MM-BIO-16 (Aquatic Resources Mitigation) would require obtaining permits from each of the regulatory agencies. A waste discharge report would be required for impacts to waters of the state, and a Streambed Alteration Agreement would be required for impacts to jurisdictional streambed. MM-BIO-6 (Designated Biologist Authority), MM-BIO-7 (Compliance Monitoring), MM-BIO-8 (Education Program), and MM-BIO-9 (Construction Monitoring Notebook) would require that all workers complete a WEAP training, and would require ongoing biological monitoring and compliance with all biological resource mitigation requirements. MM-BIO-11 (Hazardous Waste) would ensure that a prompt and effective response to any accidental chemical spills would be implemented, and that repair and clean-up of any hazardous waste would occur. To reduce fugitive dust resulting from construction and to minimize adverse air quality impacts, the Project would employ dust mitigation measures in accordance with MDAQMD's 401 and 403.2, which would limit the amount of fugitive dust generated during construction.

Implementation of MM-BIO-6 (Designated Biologist Authority), MM-BIO-7 (Compliance Monitoring), MM-BIO-8 (Education Program), MM-BIO-9 (Construction Monitoring Notebook), MM-BIO-11 (Hazardous Waste), and MM-BIO-16 (Aquatic Resources Mitigation) would reduce potential indirect impacts to jurisdictional aquatic resources to less than significant.

Indirect Impacts

Construction-related (short-term) indirect impacts may include inadvertent spillover impacts outside of the construction footprint, chemical spills, and stormwater erosion and sedimentation. These potential short-term or temporary indirect impacts to jurisdictional aquatic resources would be significant absent mitigation under CEQA.

Post-construction (long-term) indirect impacts from operations and maintenance activities may include changes in water quality and accidental chemical spills. These potential long-term indirect impacts to jurisdictional aquatic resources would be significant absent mitigation under CEQA.

Implementation of MM-BIO-6 gives the Project's Designated Biologist the authority to stop work if construction is not compliant with this CEQA document. MM-BIO-7 requires that an experienced biologist oversee compliance with the protective measures, including limiting impacts within the Project footprint. MM-BIO-8 would provide construction personnel with training related to waters of the state that are present on and adjacent to the impact footprint. MM-BIO-9 provides for documentation that the education program was administered to applicable personnel. MM-BIO-10 requires that impacts occur within the fenced, staked, or flagged area that is clearly delineated within the Project impact footprint. The construction crew would be responsible for unauthorized impacts from construction activities to waters of the state that are outside the permitted Project footprint. Thus, implementation of MM-BIO-6 through MM-BIO-10 would enable the Project to avoid and minimize inadvertent spillover impacts outside of the approved impact footprint.

MM-BIO-11 would ensure that a prompt and effective response to any accidental chemical spills would be implemented, and that repair and clean-up of any hazardous waste would occur. Thus, implementation of MM-BIO-11 would help to avoid and minimize impacts to waters of the state from any construction-related chemical spills.

A SWPPP would be prepared and implemented to prevent all construction pollutants from contacting stormwater during construction activities, with the intent of keeping sediment and any other pollutants from moving off site and into receiving waters. BMPs employed on site would include erosion control, sediment control, and non-stormwater good housekeeping. Preparation and implementation of a SWPPP would help to avoid and minimize the potential effects of stormwater erosion during construction.

Potential long-term (post-construction) indirect impacts from operations and maintenance activities may include changes in water quality and accidental chemical spills.

Implementation of low-impact-development features and BMPs would, to the maximum extent practicable, reduce the discharge of pollutants into receiving waters, including inadvertent release of pollutants (e.g., hydraulic fluids and petroleum); the improper management of hazardous materials; trash and debris; and the improper management of portable restroom facilities (e.g., regular service) in accordance with all relevant local and state development standards. In addition, in accordance with CALGreen Code requirements (24 CCR, Part 11), Project source controls to improve water quality would be provided for outdoor material storage areas, outdoor trash storage/waste handling areas, and outdoor loading/unloading areas. Therefore, impacts to western Joshua trees due to changes in water quality would be avoided and minimized through implementation of low-impact-development features and BMPs.

MM-BIO-11 would ensure that a prompt and effective response to any accidental chemical spills would be implemented, and repair and clean-up of any hazardous waste would occur. Thus, implementation of MM-BIO-11 would help to avoid and minimize impacts to jurisdictional aquatic resources from any operations-related chemical spills.

Implementation of MM-BIO-6, (Designated Biologist Authority), MM-BIO-7 (Compliance Monitoring), MM-BIO-8 (Education Program), MM-BIO-9 (Construction Monitoring Notebook), MM-BIO-10 (Delineation of Property Boundaries), and MM-BIO-11 (Hazardous Waste) would reduce potential indirect impacts to jurisdictional aquatic resources to less than significant.

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

Less-than-Significant Impact with Mitigation Incorporated. No significant direct permanent impacts would occur on wildlife movement or use of native wildlife nursery sites associated with Project activities; however, potential long-term indirect impacts to wildlife movement would be significant absent mitigation under CEQA. The following analysis evaluates the Project's potential impacts on wildlife movement, wildlife corridors, and wildlife nursery sites.

Direct Impacts

The Project site is located in an area of encroaching development and has been regionally isolated by U.S. Highway 395 to the west and I-15 to the east. As a result, the Project site does not provide for regional wildlife movement or serve as a regional wildlife corridor. Wildlife movement may be temporarily disrupted during the construction phase of the Project, although this effect would be both localized and short-term. Nearby corridors that could support wildlife movement in the region, include the Oro Grande Wash and La Bureau of Power and Light Road immediately to the west; these would not be impacted by the Project. Further, the Project site does not contain nursery sites, such as bat colony roosting sites or colonial bird nesting areas. Therefore, impacts associated with wildlife movement, wildlife corridors, and wildlife nursery sites would result in significant direct impacts to wildlife corridors or migratory routes under CEQA.

Indirect Impacts

Some short-term indirect impacts to localized wildlife movement could occur due to construction-related noise and work in the vicinity. However, these impacts would be temporary and would not be expected to significantly disrupt wildlife movement due to ambient noise conditions and the ability for wildlife to continue to move around the construction area and upland portions of the BSA during and after construction. Work activities are not currently proposed during the night-time. Therefore, implementation of the Project would not result in significant short-term indirect impacts to wildlife corridors or migratory routes.

Post-construction (long-term) indirect impacts from operations and maintenance activities may include night-time lighting. These potential long-term indirect impacts to wildlife movement would be significant absent mitigation under CEQA.

MM-BIO-13 would ensure all lighting during operations and within 50 feet of the outside edge of the impact footprint containing habitat for special-status wildlife would be directed away from natural areas.

Implementation of MM-BIO-13 (Lighting) would reduce potential indirect impacts to wildlife movement to 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?

Less-than-Significant Impact with Mitigation Incorporated. The City of Hesperia Municipal Code Chapter 16.24 regulates and protects California Desert Native Plants, including Joshua trees. The following analysis evaluates the Project's potential conflicts with such local policies and ordinances.

California Desert Native Plants

No desert native plant species, in addition to western Joshua tree, were recorded on the BSA.

Joshua Trees

In accordance with Chapter 16.24 of the Hesperia Municipal Code, the preparation of a western Joshua tree and desert native plants relocation plan is required to mitigate impacts to Joshua trees as a result of the Project. As such, a Joshua Tree Preservation, Protection, and Relocation Plan and Desert Native Plant Relocation Plan was prepared for the Project to provide detailed specifications for the Project Applicant to meet the requirements of Chapter 16.24 of the Hesperia Municipal Code to protect, preserve, and mitigate impacts to western Joshua trees.

The Joshua Tree Preservation, Protection, and Relocation Plan addresses the requirements of the City's Protected Plant Policy and provides details for the initial survey of the Project site's Joshua trees, detailed specifications for the protection of trees to be preserved on site, and relocation/salvage requirements for those trees requiring removal and relocation (Appendix F of Appendix C).

Pursuant to MM-BIO-2, the Project applicant will submit an application and applicable fee paid to the City of Hesperia for removal or relocation of protected native desert plants under Hesperia Municipal Code Chapter 16.24. The application will include certification from a qualified Joshua tree and native desert plant expert(s) to determine that proposed removal or relocation of protected native desert plants are appropriate, supportive of a healthy environment, and in compliance with the City of Hesperia Municipal Code. The application will include the Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan (Appendix F of Appendix C). The plan will be prepared by a qualified Joshua Tree and native desert plant expert(s). With the incorporation of mitigation, and with adherence to both the CDNPA and the Hesperia Municipal Code, impacts associated with western Joshua tree and desert native plants would be less than significant.

The Project could result in potentially significant impacts to native desert plants (e.g., western Joshua trees), of which are addressed by state and local plant and tree preservation regulations, absent mitigation. Implementation of MM-BIO-1 (Conservation of Western Joshua Tree Lands) and MM-BIO-2 (Relocation of Desert Native Plants) would reduce potential impacts California desert native plants (including western Joshua tree to less than significant.

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

Less-than-Significant Impact. The Project is located within the California Desert Conservation Area Plan (BLM 1980). The Project is also located within the Draft West Mojave Plan (BLM 2005) and the Desert Renewable Energy Conservation Plan (BLM 2016) areas. The West Mojave Plan and Desert Renewable Energy Conservation Plan are amendments to the California Desert Conservation Area Plan. The Bureau of Land Management issued a Record of Decision for the West Mojave Plan in 2006, although the West Mojave Plan has not been formally adopted. The Project will not conflict with the conservation criteria associated with the California Desert Conservation Area Plan or Desert Renewable Energy Conservation Plan. Therefore, the Project would not be in conflict with any Habitat Conservation Plans under CEQA.

Threshold G: Would the Project result in cumulatively considerable impacts to biological resources?

Less-than-Significant Impact with Mitigation Incorporated. The Project would result in potentially cumulatively considerable impacts to western Joshua trees and Joshua tree woodland vegetation on the Project site. Western Joshua trees are a state candidate species for listing under CESA and are locally protected by the City of Hesperia and by the CDNPA. Joshua tree woodlands are considered a sensitive natural community by CDFW (CDFW 2020). As required by MM-BIO-1, mitigation for direct impacts to 32 western Joshua trees will be fulfilled through purchase of credits at a CDFW-approved mitigation bank or other conservation mechanism approved by the City of Hesperia and CDFW. Additionally, as required by MM-BIO-2 and in accordance with Chapter 16.24 of the Hesperia Municipal Code, the preparation of a Joshua tree and desert native plants relocation plan is required to mitigate impacts to western Joshua trees as a result of the Project. As such, a Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan was prepared.

Potential impacts to special-status wildlife species, such as burrowing owl, loggerhead shrike, American badger and desert kit fox and nesting birds and raptors would be reduced to less than significant through Project implementation of MM-BIO-3 through MM-BIO-15. Implementing these mitigation measures would reduce potential impacts to less than significant and would significantly reduce the potential for direct or indirect impacts to special-status species. Therefore, there would not be a cumulatively considerable impact on any special-status species.

Potential impacts to jurisdictional waters of the state, if necessary, would be reduced to less than significant through implementation of MM-BIO-6 (Designated Biologist Authority), MM-BIO-7 (Compliance Monitoring), MM-BIO-8 (Education Program), MM-BIO-9 (Construction Monitoring Notebook), MM-BIO-11 (Hazardous Waste), and MM-BIO-16 (Aquatic Resources Mitigation). Implementing these mitigation measures would reduce potential impacts to less than significant and would significantly reduce the potential for direct or indirect impacts to waters of the state. Therefore, there would not be a cumulatively considerable impact to waters of the state.

Additionally, the Project would not result in a significant impact to wildlife corridors and linkages, nor to local policies and regional conservation plans. The Project would therefore not contribute to a cumulative impact on these resources.

4.3.5 Mitigation Measures and Level of Significance After Mitigation

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

One candidate for state listing under CESA, western Joshua tree, was observed and would be directly impacted by the Project. Two wildlife species were determined to have a moderate potential to occur within the BSA and could occur during construction of the Project: burrowing owl and loggerhead shrike. Suitable habitat for burrowing owl and loggerhead shrike would be directly impacted by the Project.

The Project could result in potentially significant impacts to species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS, including native desert plants protected under the CDNPA and City of Hesperia Municipal Code, western Joshua trees, burrowing owl, loggerhead shrike, and nesting migratory birds and raptors. Implementation of MM-BIO-1 through MM-BIO-14 is required to reduce impacts to less than significant level.

MM-BIO-1 Conservation of Western Joshua Tree Lands. Based on a literature review completed by the California Department of Fish and Wildlife (CDFW), CDFW indicated that western Joshua tree locations shall be buffered by 186 feet to account for the take of seed bank for western Joshua trees and their associated habitat. Therefore, a 186-foot buffer (or radius) shall be applied to each western Joshua tree location. The direct impacts to this 186-foot buffer were analyzed, and the Project would result in 10.9 acres of impacts to western Joshua trees, their seed bank, and their associated habitat. Mitigation for direct impacts to 10.9 acres of western Joshua trees and their 186-foot buffer shall be fulfilled through conservation of western Joshua trees at a 2:1 habitat replacement of equal or better functions and values to those impacted by the Project, for a total of 21.8 acres. Mitigation shall be accomplished either through off-site conservation or through a CDFW-approved mitigation bank. If mitigation is not purchased through a mitigation bank and lands are conserved separately, a cost estimate shall be prepared to estimate the initial start-up costs and ongoing annual costs of management activities for the management of the conservation easement(s) area in perpetuity. The funding source shall be in the form of an endowment to help the qualified natural lands management entity that is ultimately selected to hold the conservation easement(s). The endowment amount shall be established following the completion of a Project-specific Property Analysis Record (PAR) to calculate the costs of in-perpetuity land management. The PAR shall take into account all of the management activities required in the Incidental Take Permit to fulfill the requirements of the conservation easement(s), which are currently in review and development.

Additionally, no take of western Joshua tree shall occur without authorization from CDFW in the form of an Incidental Take Permit pursuant to California Fish and Game Code 2081. The Project applicant shall adhere to measures and conditions set forth within the Incidental Take Permit.

MM-BIO-2 Relocation of Desert Native Plants. Prior to the issuance of grading permits, the Project applicant shall submit an application and applicable fee paid to the City of Hesperia for removal or relocation of protected native desert plants under Hesperia Municipal Code Chapter 16.24 as required and schedule a pre-construction site inspection with the Planning Division and the Building Division. The application shall include certification from a qualified western Joshua tree and native desert plant expert(s) to determine that proposed removal or relocation of protected native desert plants are appropriate, supportive of a healthy environment, and in compliance with the City of Hesperia Municipal Code. Protected plants subject to Hesperia Municipal Code Chapter 16.24 may be relocated on site, or within an area designated as an area for species to be adopted later.

The application shall include a detailed plan for removal of all protected plants on the Project site. The Joshua Tree Preservation, Protection, and Relocation Plan and Desert Native Plant Relocation Plan shall be prepared by a qualified western Joshua tree and native desert plant expert(s). The plan shall include the following measures:

- Salvaged plants shall be transplanted expeditiously to either their final on-site location, or to an approved off-site area. If the plants cannot be expeditiously taken to their permanent relocation area at the time of excavation, they may be transplanted in a temporary area (stockpiled) prior to being moved to their permanent relocation site(s).
- Western Joshua trees shall be marked on their north facing side prior to excavation. Transplanted western Joshua trees shall be planted in the same orientation as they currently occur on the Project site, with the marking on the north side of the trees facing north at the relocation site(s).

- Transplanted plants shall be watered prior to and at the time of transplantation. The schedule of watering shall be determined by the qualified tree expert and desert native plant expert(s) to maintain plant health. Watering of the transplanted plants shall continue under the guidance of qualified tree expert and desert native plant expert(s) until it has been determined that the transplants have become established in the permanent relocation site(s) and no longer require supplemental watering.

MM-BIO-3 Pre-Construction Surveys for Burrowing Owl and Avoidance. One pre-construction burrowing owl survey shall be completed no more than 14 days before initiation of site preparation or grading activities, and a second survey shall be completed within 24 hours of the start of site preparation or grading activities. If ground-disturbing activities are delayed or suspended for more than 30 days after the pre-construction surveys, the Project site shall be resurveyed. Surveys for burrowing owl shall be conducted in accordance with protocols established in the 2012 (or current version) Staff Report on Burrowing Owl Mitigation prepared by the California Department of Fish and Game [now California Department of Fish and Wildlife (CDFW).

If burrowing owls are detected, a Burrowing Owl Relocation Plan shall be implemented in consultation with the CDFW. As required by the Burrowing Owl Relocation Plan, disturbance to burrows shall be avoided during the nesting season (February 1 through August 31). Buffers shall be established around occupied burrows in accordance with guidance provided in the Staff Report on Burrowing Owl Mitigation or current version. No Project activities shall be allowed to encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until it is determined that occupied burrows have been vacated or the nesting season has completed.

Outside of the nesting season, passive owl relocation techniques approved by CDFW shall be implemented. Owls shall be excluded from burrows in the immediate Project area and within a buffer zone by installing one-way doors in burrow entrances. These doors shall be placed at least 48 hours prior to ground-disturbing activities. The Project area shall be monitored daily for 1 week to confirm owl departure from burrows prior to any ground-disturbing activities. Compensatory mitigation for permanent loss of owl habitat shall be provided following the guidance in the Staff Report on Burrowing Owl Mitigation (current version).

Where possible, burrows shall be excavated using hand tools and refilled to prevent reoccupation. Sections of flexible plastic pipe shall be inserted into the tunnels during excavation to maintain an escape route for any wildlife inside the burrow.

MM-BIO-4 Pre-Construction Nesting Bird Surveys and Avoidance. Construction activities shall avoid the migratory bird nesting season (typically February 1 through August 31) to reduce any potential significant impact to birds that may be nesting in the survey area. If construction activities must occur during the migratory bird nesting season, an avian nesting survey of the Project site and within 500 feet of all impact areas must be conducted to determine the presence/absence of protected migratory birds and active nests. The avian nesting survey shall be performed by a qualified wildlife biologist within 72 hours prior to the start of construction in accordance with the Migratory Bird Treaty Act (16 USC 703–712) and California Fish and Game Code Sections 3503, 3503.5, and 3513. If an active bird nest is found, the nest shall be flagged and mapped on the construction plans along with an appropriate buffer established around the nest, which

shall be determined by a biologist based on the species' sensitivity to disturbance (typically 300 feet for passerines and 500 feet for raptors and special-status species). The nest area shall be avoided until the nest is vacated and the juveniles have fledged. The nest area shall be demarcated in the field with flagging and stakes or construction fencing. On-site construction monitoring shall also be conducted when construction occurs in proximately to an active nest buffer. No Project activities shall encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until it is determined that nestlings have fledged and the nest is no longer active.

MM-BIO-5 Pre-Construction Survey for American Badger and Desert Kit Fox and Avoidance. A pre-construction survey for American badger and desert kit fox shall be conducted on the Project site and Off-Site Improvement Area within 10 days prior to the start of construction to determine the presence/absence of either species. If either species is discovered during the survey, an American badger/desert kit fox mitigation and monitoring plan shall be developed. The mitigation and monitoring plan shall include avoidance and minimization measures to reduce potential impacts to either species, as well as compensatory mitigation to offset direct or indirect impacts. The plan shall be developed in consultation with California Department of Fish and Wildlife. At a minimum, the plan shall contain the following:

- Identify pre-construction survey methods for American badger and desert kit fox
- Describe feasible pre-construction and construction-phase avoidance methods
- Describe pre-construction and construction-phase relocation methods, including the possibility for passive relocation
- For burrows that will not be impacted by the Project, identify appropriate construction exclusion zones for active and natal burrows
- Coordinate survey findings prior to and during construction to meet the information needs of wildlife health officials in monitoring the health of kit fox populations.

MM-BIO-6 Designated Biologist Authority. The Designated Biologist shall have authority to immediately stop any activity that does not comply with the biological resources mitigation measures and/or to order any reasonable measure to avoid the unauthorized take of an individual western Joshua tree.

MM-BIO-7 Compliance Monitoring. The Designated Biologist shall be on site daily when impacts occur. The Designated Biologist shall conduct compliance inspections to minimize incidental take of western Joshua trees and impacts to other sensitive biological resources; prevent unlawful take of western Joshua trees; and ensure that signs, stakes, and fencing are intact, and that impacts are only occurring outside the permitted impact footprint. Weekly written observation and inspection records that summarize oversight activities and compliance inspections and monitoring activities required by the Incidental Take Permit shall be prepared.

MM-BIO-8 Education Program. An education program (Worker Environmental Awareness Program [WEAP]) for all persons employed or otherwise working in the Project area shall be administered before impacts occur. The WEAP shall consist of a presentation from the Designated Biologist that includes a discussion of the biology and status of western Joshua tree, burrowing owl, and loggerhead shrike; and other biological resources mitigation measures described in the California Environmental Quality Act document. Interpretation for non-English-speaking workers shall be provided, and the same

instruction shall be provided to any new workers before they are authorized to perform work in the Project area. Upon completion of the WEAP, employees shall sign a form stating they attended the program and understand all protection measures. This training shall be repeated at least once annually for long-term and/or permanent employees who will be conducting work in the Project area.

MM-BIO-9 Construction Monitoring Notebook**.** The Designated Biologist shall maintain a construction-monitoring notebook on site throughout the construction period, which shall include a copy of the biological resources mitigation measures with attachments and a list of signatures of all personnel who have successfully completed the education program. The permittee shall ensure that a copy of the construction monitoring notebook is available for review at the Project site upon request by the California Department of Fish and Wildlife.

MM-BIO-10 Delineation of Property Boundaries. Before beginning activities that will cause impacts, the contractor shall, in consultation with the Designated Biologist, clearly delineate the boundaries with fencing, stakes, or flags, consistent with the grading plan, within which the impacts will take place. All impacts outside the fenced, staked, or flagged areas shall be avoided, and all fencing, stakes, and flags shall be maintained until the completion of impacts in that area.

MM-BIO-11 Hazardous Waste. The Project applicant shall immediately stop work and, pursuant to pertinent state and federal statutes and regulations, arrange for repair and clean up by qualified individuals of any fuel or hazardous waste leaks or spills at the time of occurrence, or as soon as it is safe to do so.

MM-BIO-12 Herbicides. The Project applicant shall limit herbicide use for invasive plant species and shall use herbicides only if it has been determined that hand or mechanical efforts are infeasible. To prevent drift, the permittee shall apply herbicides only when wind speeds are less than 7 miles per hour. All herbicide application shall be performed by a licensed applicator and in accordance with all applicable federal, state, and local laws and regulations.

MM-BIO-13 Lighting. Lighting for construction activities and operations within 50 feet of the outside edge of the impact footprint containing habitat for special-status wildlife shall be directed away from natural areas.

MM-BIO-14 Trash and Debris. The following avoidance and minimization measures shall be implemented during Project construction**:**

(1) Fully covered trash receptacles that are animal-proof shall be installed and used by the operator to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash. Trash contained within the receptacles shall be removed at least once a week from the Project site.

(2) Construction work areas shall be kept clean of debris, such as cable, trash, and construction materials. All construction/contractor personnel shall collect all litter, vehicle fluids, and food waste from the Project site on a daily basis.

MM-BIO-15 Invasive Plant Management. To reduce the spread of invasive plant species, landscape plants within 200 feet of native vegetation communities shall not be on the most recent version of the California Invasive Plant Council's Inventory of Invasive Plants (http://www.cal-ipc.org/ip/inventory/index.php). Post-construction, the Project applicant shall continually remove invasive plant species on site by hand or mechanical methods, as feasible.

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

The Project could result in potentially significant impacts to Joshua tree woodland, a CDFW sensitive natural community (CDFW 2020). Implementation of MM-BIO-1 and MM-BIO-2 is required to reduce direct impacts to a less than significant level. Implementation of MM-BIO-6, MM-BIO-7, MM-BIO-8, MM-BIO-9, MM-BIO-10, MM-BIO-11, and MM- BIO-12 are required to reduce indirect impacts to western Joshua tree to a less than significant level.

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

The Project could result in potentially significant impacts to state-defined non-wetland waters as a result of Project activities. Short-term and long-term indirect impacts to jurisdictional waters relating to construction activities (edge effects) and trash/pollution would not likely result in significant impacts, especially with the application of the standard BMPs that would be implemented during Project construction. Implementation of MM-BIO-6 through MM- BIO-11 and MM-BIO-16 is required to reduce direct and indirect impacts to a less-than-significant level.

MM-BIO-16 Aquatic Resources Mitigation. The Project site supports aquatic resources that are jurisdictional under the Regional Water Quality Control Board (RWQCB) and California Department of Fish and Wildlife (CDFW). Prior to construction activity, the Project applicant shall coordinate with the Lahontan RWQCB (Region 6) to ensure conformance with the requirements of Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act. Prior to activity within CDFW jurisdictional streambeds or associated riparian habitat, the applicant shall coordinate with CDFW (Inland Deserts Region 6) relative to conformance with the Lake and Streambed Alteration permit requirements.

The Project shall mitigate to ensure no-not-loss of waters at a minimum of 1:1 with re-establishment credits (0.06 acres RWQCB/CDFW) for impacts to aquatic resources as part of an overall strategy to ensure no net loss. Mitigation shall be completed through the use of a mitigation bank (e.g., West Mojave Mitigation Bank) or other applicant-sponsored mitigation. Final mitigation ratios and credits shall be determined in consultation with the RWQCB and/or CDFW based on agency evaluation of current resource functions and values and through each agency's respective permitting process.

Should applicant-sponsored mitigation be implemented, a Habitat Mitigation and Monitoring Plan (HMMP) shall be prepared in accordance with State Water Resources Control Board guidelines and approved by the agencies in accordance with the applicable permits. The HMMP shall include a conceptual planting plan, including planting zones, grading, and irrigation, as applicable; a conceptual planting plant palette; a long-term maintenance and monitoring plan; annual reporting requirements; and proposed success criteria. Any off-site applicant-sponsored mitigation shall be conserved and managed in perpetuity.

Best management practices shall be implemented to avoid any indirect impacts on jurisdictional waters, including the following:

- Vehicles and equipment shall not be operated in ponded or flowing water except as described in permits.
- Water containing mud, silt, or other pollutants from grading or other activities shall not be allowed to enter jurisdictional waters or be placed in locations that may be subjected to high storm flows.

- Spoil sites shall not be located within 30 feet from the boundaries of jurisdictional waters or in locations that may be subject to high storm flows, where spoils might be washed back into drainages.
- Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources resulting from Project-related activities shall be prevented from contaminating the soil and/or entering avoided jurisdictional waters.
- No equipment maintenance shall be performed within 100 feet of jurisdictional waters, including wetlands and riparian areas, where petroleum products or other pollutants from the equipment may enter these areas. Fueling of equipment shall not occur on the Project site.

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

No significant direct permanent impacts or construction-related short-term impacts would occur on wildlife movement or use of native wildlife nursery sites associated with Project activities. However, the Project could result in potentially significant long-term indirect impacts from operations and maintenance activities that could disrupt wildlife movement around the Project site due to increased lighting from buildings. Implementation of MM-BIO-13 is required to reduce long-term indirect impacts to a less-than-significant level

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

Implementation of MM-BIO-1 (Conservation of Western Joshua Tree Lands) and MM-BIO-2 (Relocation of Desert Native Plants) would reduce potential impacts California desert native plants, western Joshua tree, to less than significant.

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

The Project will not conflict with the conservation criteria associated with the California Desert Conservation Area Plan or Desert Renewable Energy Conservation Plan. Therefore, the Project would not be in conflict with any habitat conservation plans. The Project would result in less-than-significant impacts to an adopted conservation plan. No mitigation is required.

Threshold G: Would the Project result in cumulatively considerable impacts to biological resources?

The Project could contribute to a cumulative considerable impact related to native desert plants protected under the CNDPA, western Joshua trees, burrowing owl, loggerheaded shrike, American badger and desert kit fox, and nesting migratory birds and raptors. Potential cumulative impacts to jurisdictional resources could also occur, and mitigation would be required. Incorporation of MM-BIO-1 through MM-BIO-16 is required to reduce impacts to less than significant.

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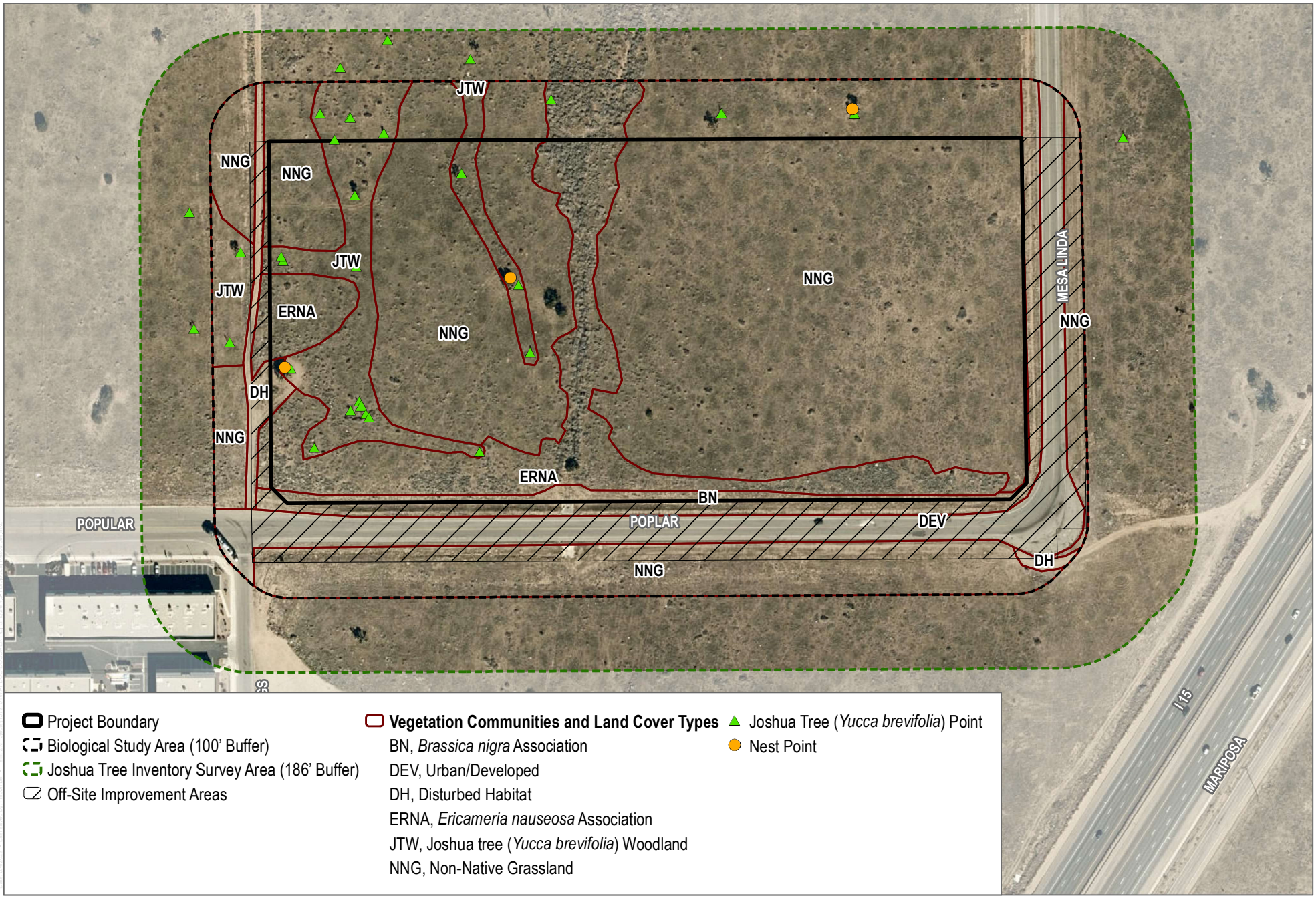

SOURCE: Esri World Imagery Basemap; County of San Bernadino 2017

DUDEK

0 110 220 Feet

FIGURE 4.3-1

Biological Resources

Poplar 18 Project

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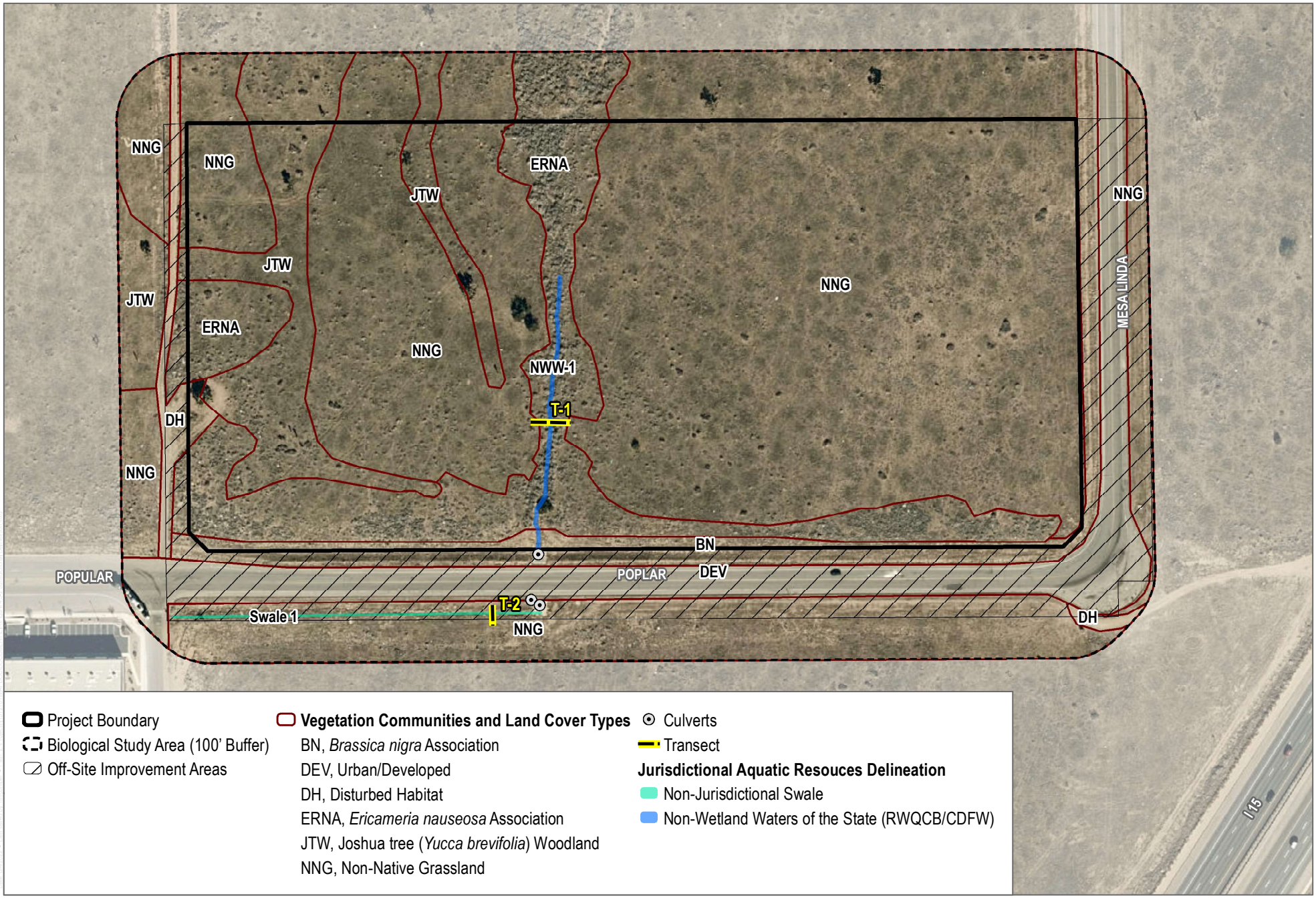

SOURCE: Esri World Imagery Basemap; County of San Bernadino 2017

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0 90 180 Feet

FIGURE 4.3-2

Jurisdictional Delineation

Poplar 18 Project

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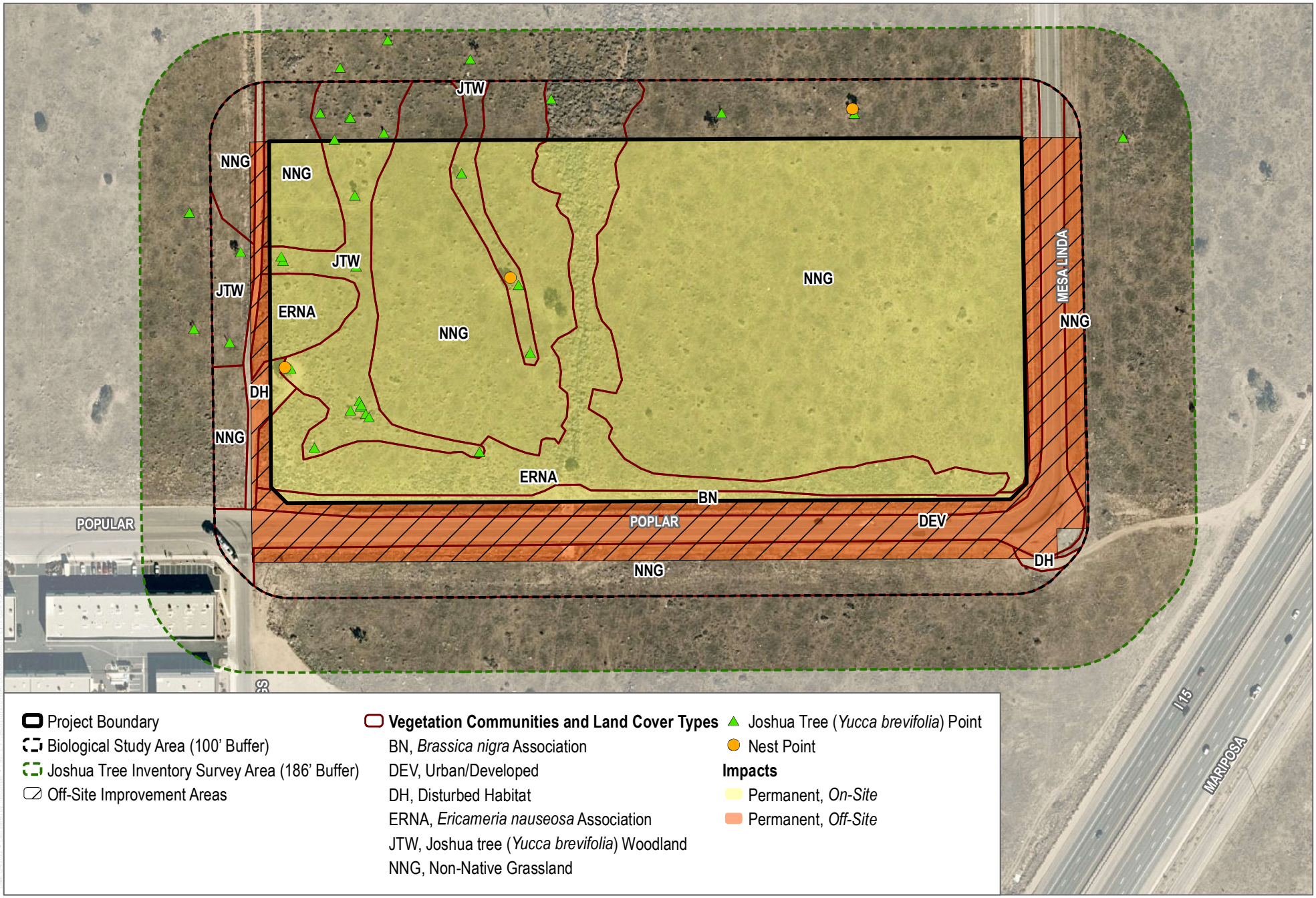

SOURCE: Esri World Imagery Basemap; County of San Bernadino 2017

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FIGURE 4.3-3

Impacts to Biological Resources

Poplar 18 Project

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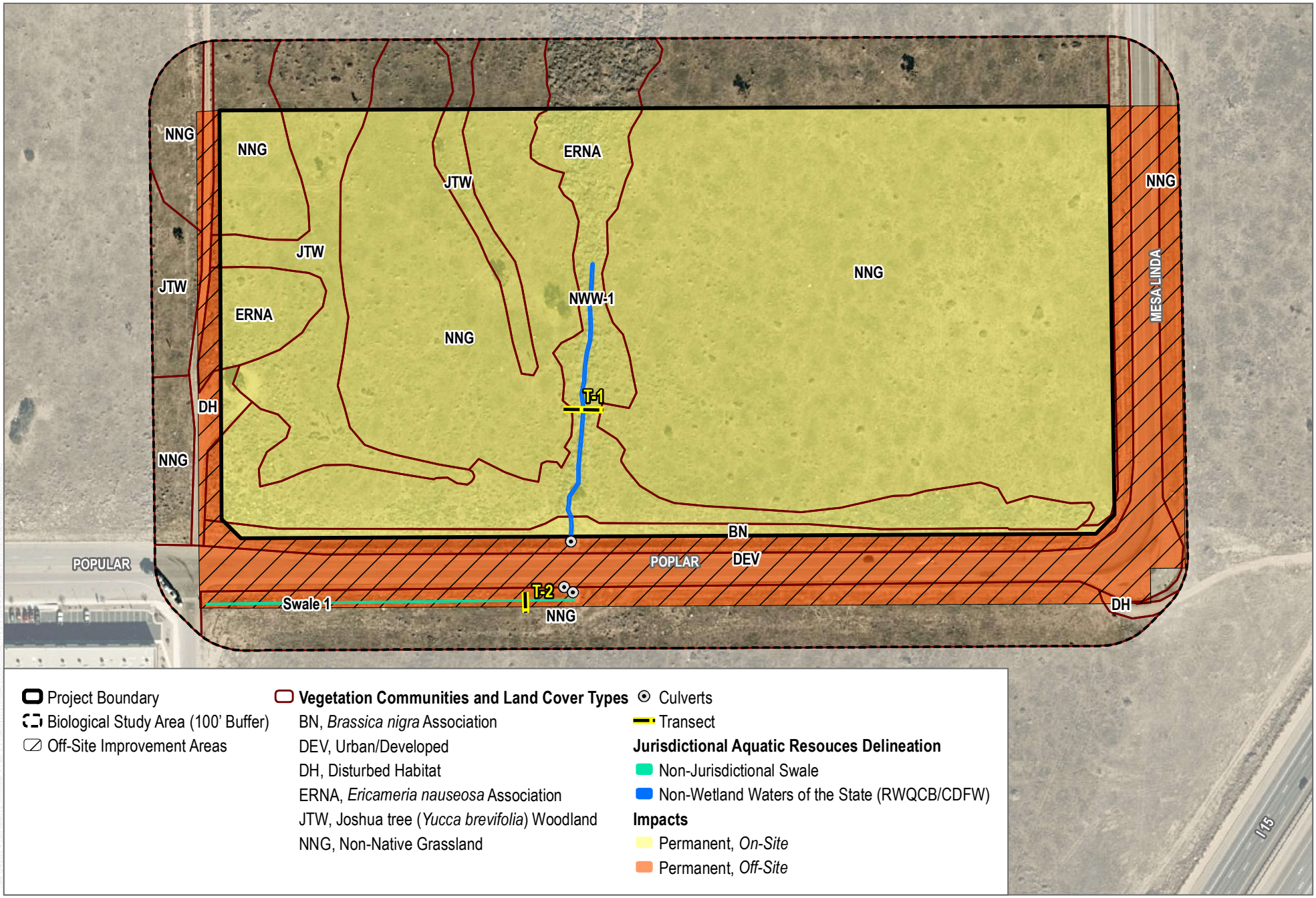

SOURCE: Esri Imagery Basemap; County of San Bernadino 2017

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0 90 180 Feet

FIGURE 4.3-4

Impacts to Jurisdictional Aquatic Resources

Poplar 18 Project

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4.4 Cultural, Tribal Cultural, and Paleontological Resources

This section describes the existing cultural, tribal cultural, and paleontological resources conditions of the Poplar 18 Project (Project) site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project.

In addition to the documents incorporated by reference (see Section 2.7 of Chapter 2 of this Environmental Impact Report [EIR]), the following analysis is based, in part, on the following sources:

- Cultural Resources Assessment Report, prepared by Dudek in August 2022 (Appendix D)
- Geotechnical Investigation, prepared by Southern California Geotechnical in April 2022 (Appendix E)

4.4.1 Existing Conditions

Prehistoric Setting

Evidence for continuous human occupation in Southern California spans the last 10,000 years. Various attempts to parse out variability in archaeological assemblages over this broad period have led to the development of several cultural chronologies; some of these are based on geologic time, most are based on temporal trends in archaeological assemblages, and others are interpretive reconstructions. Each of these reconstructions describes essentially similar trends in assemblage composition in more or less detail. However, given the direction of research and differential timing of archaeological study following intensive development in Riverside County, chronology building in the Inland Empire must rely on data from neighboring regions to fill the gaps. To be more inclusive, this research employs a common set of generalized terms used to describe chronological trends in assemblage composition: Paleoindian (before 7500 BP), Archaic (10,000–1500 BP), Late Prehistoric (1500 BP–AD 1769), and Ethnohistoric (after AD 1769).

Paleoindian Period (before 7500 years ago)

Evidence for Paleoindian occupation in the region is tenuous. Our knowledge of associated cultural pattern(s) is informed by a relatively sparse body of data that has been collected from within an area extending from coastal San Diego, through the Mojave Desert, and beyond. A very unique technology defined by fluted projectile points and a highly formal lithic tool kit with almost no processing equipment is often considered to be the earliest evidence of human adaptation to North America. Widely known as “Clovis,” regional manifestations of this toolkit show important variability both in projectile point style and tool kit composition. Importantly, the attributes of “Clovis” are uncommon in California, with very few examples of the diagnostic, “fluted” Clovis point. There is, however, a notable exception from Crystal Cove State Park in southern Orange County (Fitzgerald and Rondeau 2012). This, along with other potential attributes of Clovis culture along the California Coast remain undated, and most of the earliest well-dated sites from the region contain rather different archaeological assemblages (Erlandson et al. 2007).

While the earliest evidence for human activity in California comes from the Channel Islands, ca. 13,000 BP, it does not exhibit obvious cultural similarity with the Clovis phenomenon. However, in the southern Central Valley fluted Clovis points date from ca. 11,000–10,500 BP (Rogers and Yohe 2020). One of the earliest dated archaeological assemblages in coastal Southern California (excluding the Channel Islands) comes from SDI-4669/W-12 in La Jolla, with human remains dating to ca. 9900–9050 BP (Bada et al. 1984). The burial is part of a larger site complex that

contained more than 29 human burials associated with an assemblage that fits the Archaic profile (i.e., large amounts of ground stone, battered cobbles, and expedient flake tools) (Kennedy 1983). In contrast, typical Paleoindian assemblages include large stemmed projectile points, high proportions of formal lithic tools, bifacial lithic reduction strategies, and relatively small proportions of ground stone tools. Prime examples of this pattern come from Naval Air Weapons Station China Lake near Ridgecrest (Davis 1978). These sites contained fluted and unfluted stemmed points and large numbers of formal flake tools (e.g., shaped scrapers, blades). Fluted points from SBR-2355 and SBR-2356, also in the Mojave Desert, are considered quite ancient (on the thickness of obsidian hydration rinds) and co-occur with a diverse assemblage that also contains stemmed points, typically attributed to the Lake Mojave archaeological culture. Other typical Paleoindian sites in the desert include the Komodo site (MNO-679)—a multi-component fluted point site, and MNO-680—a single component Great Basined Stemmed point site (Basgall 1987, 1988; Basgall et al. 2002). At MNO-679 and -680, ground stone tools were rare while finely made projectile points were common.

Turning back to coastal Southern California, the fact that some of the earliest dated assemblages are dominated by processing tools runs counter to traditional image of Paleoindians as highly mobile big-game hunters. Evidence for the latter—that is, typical Paleoindian assemblages—may have been located along the coastal margin at one time, prior to glacial desiccation and a rapid rise in sea level during the early Holocene (before 7500 BP) that submerged as much as 16 kilometers of the San Diego coastline since people first arrived in California, ca. 13,000 years ago (ICF 2013). If this were true, however, it would also be expected that such sites would be located on older landforms near the current coastline. Some sites, such as SDI-210 along Agua Hedionda Lagoon, contain stemmed points similar in form and age to Silver Lake and Lake Mojave projectile points from the high desert (Basgall and Hall 1993; Warren et al. 2004). However, sites of this nature are extremely rare; more typical are sites that contain large numbers of milling tools intermingled with older projectile point forms. Separating cultural components on the basis of artifact form and frequency is therefore difficult.

Warren et al. (2004) claim that a biface manufacturing tradition at the Harris site complex (SDI-149) is representative of typical Paleoindian occupation in the San Diego region that possibly dates between ca. 11,200 and 8200 BP (on the basis of radiocarbon dates from the Harris site itself). Termed San Dieguito (also see Rogers 1945), assemblages at the Harris site are qualitatively distinct from most others in the San Diego region because the site has large numbers of well-made bifaces (including projectile points), formal flake tools, a biface reduction trajectory, and relatively small amounts of processing tools (also see Warren 1964; Warren 1968). Despite the unique assemblage composition, the definition of San Dieguito as a separate cultural tradition is hotly debated. Gallegos (1987, 2017) suggested that the San Dieguito pattern is simply the inland manifestation of a broader economic pattern. This interpretation of San Dieguito has been widely accepted in recent years, in part because of the difficulty in distinguishing San Dieguito components from other assemblage constituents. In other words, it is easier to ignore San Dieguito as a distinct socioeconomic pattern than it is to draw it out of mixed assemblages.

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

San Dieguito sites are rare in the inland valleys, with one possible candidate, RIV-2798/H, located on the shore of Lake Elsinore. Excavations at Locus B at RIV-2798/H produced a toolkit consisting predominately of flaked stone tools, including crescents, points, and bifaces, and lesser amounts of ground stone tools, among other items (Grenda 1997). A calibrated and reservoir-corrected radiocarbon date on a shell from this site points to an early occupation, ca. 8880–8525 BP. Grenda suggested this site represents seasonal exploitation of lacustrine resources and small game and resembles coastal San Dieguito assemblages and spatial patterning.

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

Archaic Period (10,000 – 1500 years ago)

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

The Archaic pattern, which has also been termed the Milling Stone Horizon (among other things), is relatively easy to define with assemblages that consist primarily of processing tools, such as milling stones, hand stones, battered cobbles, heavy crude scrapers, incipient flake-based tools, and cobble-core reduction. These assemblages occur in all environments across the region with little variability in tool composition. Low assemblage variability over time and space among Archaic sites has been equated with cultural conservatism (Basgall and Hall 1990; Byrd and Reddy 2002; Warren 1968; Warren et al. 2004). Despite enormous amounts of archaeological work at Archaic sites, little change in assemblage composition occurred until the bow and arrow, and then ceramics, were adopted after 1500 BP (Griset 1996; Hale 2009; Schaefer 2012). Even then, assemblage formality remained low. After the bow was adopted, small arrow points appear in large quantities and already low amounts of formal flake tools are replaced by increasing amounts of expedient flake tools. Similarly, shaped milling stones and hand stones decreased in proportion relative to expedient, unshaped ground stone tools (Hale 2009). Thus, the terminus of the Archaic period is equally as hard to define as its beginning because basic assemblage constituents and patterns of manufacturing investment remain stable, complemented only by the addition of the bow and ceramics.

Late Prehistoric Period (1500 BP–AD 1769)

The period of time following the Archaic and before Ethnohistoric times (AD 1769) is commonly referred to as the Late Prehistoric (McDonald and Eighmey 2004; Rogers 1945; Wallace 1955); however, several other subdivisions continue to be used to describe various shifts in assemblage composition. In general, this period is defined by the addition of arrow points and ceramics, as well as the widespread use of bedrock mortars. The fundamental Late Prehistoric assemblage is very similar to the Archaic pattern but includes arrow points and large quantities of fine debitage from producing arrow points, as well as ceramics, and cremations. The appearance of mortars and pestles is difficult to place in time because most mortars are on bedrock surfaces. Some argue that the Ethnohistoric intensive acorn economy extends as far back as 1500 BP (Bean and Shipek 1978). However, there is no substantial evidence that reliance on acorns, and the accompanying use of mortars and pestles, occurred before 600 BP. In Riverside County and the surrounding region, milling stones and hand stones persisted in higher frequencies than

mortars and pestles until the last 500 years (Basgall and Hall 1990); even then, weighing the economic significance of milling stone-hand stone versus mortar-pestle technology is tenuous due to incomplete information on archaeological assemblages.

Ethnohistoric Period (after AD 1769)

The history of the Native American communities prior to the mid-1700s has largely been reconstructed through later mission-period and early ethnographic accounts. The first records of the Native American inhabitants of the region come predominantly from European merchants, missionaries, military personnel, and explorers. These briefs, and generally peripheral, accounts were prepared with the intent of furthering respective colonial and economic aims and were combined with observations of the landscape. They were not intended to be unbiased accounts regarding the cultural structures and community practices of the newly encountered cultural groups. The establishment of the missions in the region brought more extensive documentation of Native American communities, though these groups did not become the focus of formal and in-depth ethnographic study until the early twentieth century (Bean and Shipek 1978; Boscana 1846; Harrington 1934; Laylander 2000; Sparkman 1908; White 1963). The principal intent of these researchers was to record the precontact and culturally specific practices, ideologies, and languages that had survived the destabilizing effects of missionization and colonialism. This research, often understood as "salvage ethnography," was driven by the understanding that traditional knowledge was being lost due to the impacts of modernization and cultural assimilation. Alfred Kroeber applied his "memory culture" approach (Lightfoot 2005, p. 32) by recording languages and oral histories within the region. Ethnographic research by Dubois, Kroeber, Harrington, Spier, and others during the early twentieth century seemed to indicate that traditional cultural practices and beliefs survived among local Native American communities.

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

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

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

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

Serrano

Traditionally, the Serrano lived in an area east of the Gabrielino and north of the Cahuilla, near present-day western San Bernardino County and northeastern Los Angeles County (Laylander 2010). The Serrano occupied an area in and around the San Bernardino Mountains between approximately 1,500 and 11,000 feet amsl. Their territory extended west along the northern slope of the San Gabriel Mountains, east as far as Twentynine Palms, north along the Mojave River, and south to the San Jacinto area. Kroeber (1925) divided the Serrano into four distinct groups within the western Mojave Desert: the Kitanemuk, Tataviam, Serrano, and Vanyume. Each group held a distinct territory within the region (Kroeber 1925). According to Bean and Smith (1978, p. 570), "the Serrano resided in an area that extended east of the Cajon Pass, located in the San Bernardino Mountains, to Twenty-nine Palms, the north foothills of the San Bernardino Mountains and south to include portions of the Yucaipa Valley."

Serrano social organization was based on patrilineal and patrilocal lineages. Exogamy rules required that a man could not marry a woman related to them within five generations. Women moved to their husband's village but kept their identity as a member of their natal lineage.

The Serrano were mainly hunters and gatherers who occasionally fished. Game hunted included mountain sheep, deer, antelope, rabbits, small rodents, and various birds, particularly quail. Vegetable staples consisted of acorns, piñon nuts, bulbs and tubers, shoots and roots, berries, mesquite, barrel cacti, and Joshua tree (Bean and Smith 1978). A variety of materials was used for hunting, gathering, and processing food, as well as for shelter, clothing, and luxury items. Shells, wood, bone, stone, plant materials, and animal skins and feathers were used for making baskets, pottery, blankets, mats, nets, bags and pouches, cordage, awls, bows, arrows, drills, stone pipes, musical instruments, and clothing (Bean and Smith 1978).

The majority of the Serrano lived in small villages, close to sources of fresh water (Benedict 1924). Houses and ramadas were round, dome-shaped, and constructed of poles covered with bark and tule mats (Benedict 1924; Kroeber 1925). The Serrano also had sweat houses and ceremonial houses for religious activities. Further, according to Benedict (1924), a typical Serrano settlement was a village with multiple small satellite camps surrounding it. Most Serrano villages also had a ceremonial house used as a religious center. Other structures within the village might include granaries and sweathouses (Bean and Smith 1978). According to DeBarros (2004), one of the more prominent Serrano villages was called Guapiabit, and it was located in Summit Valley

Historic Setting

Post-Contact history for the State of California is generally divided into three periods: the Spanish Period (1769–1821), Mexican Period (1822–1848), and American Period (1848–present). Although Spanish, Russian, and British explorers visited the area for brief periods between 1529 and 1769, the Spanish Period in California begins with the establishment in 1769 of a settlement at San Diego and the founding of Mission San Diego de Alcalá, the first of 21 missions constructed between 1769 and 1823. Independence from Spain in 1821 marks the beginning of the Mexican Period, and the signing of the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican–American War, signals the beginning of the American Period when California became a territory of the United States.

Background Research

Cultural Resources Records Search

Dudek referenced a CHRIS records search that was previously completed for another project immediately adjacent to the present Project site (completed February 5, 2021), which included a search of any previously recorded cultural resources and investigations within a 1-mile radius of the Project site. The CHRIS search also included a review of the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, and the California State Historic Resources Inventory list. The confidential records search results are provided in Confidential Appendix B of Appendix D.

Due to COVID-19 restrictions, the SCCIC notified researchers that they are only able to provide data for San Bernardino County that has already been digitized. As such, not all available data known to CHRIS may be provided in the records search. Additionally, the SCCIC is currently unable to provide quality assurance/quality control of their records searches, a once routine procedure prior to COVID-19 restrictions. Therefore, some discrepancies within the records search are possible. Dudek reviewed the available SCCIC records to determine whether the implementation of the Project would have the potential to impact any known and unknown cultural resources.

Previously Conducted Cultural Resources Studies

Results of the CHRIS records search indicate that 52 previous cultural resources studies have been conducted within 1 mile of the Project site between 1973 and 2016. Of the 52 studies, 5 studies, SB-01025, SB-01026, SB-01027, SB-02476, and SB-08205, either overlap or are immediately adjacent to the Project site and together address approximately one-third of the Project site. Of these 5 reports, 4 studies, SB-01025, SB-01026, SB-01027, and SB-02476, consist of large-scale studies related to water district improvements that do not directly assess the Project site. Furthermore, report SB-08205 was not digitized and therefore not provided. Table 4.4-1, below, provides a complete list of all 52 previous cultural resources studies within 1 mile of the Project site.

Table 4.4-1. Previously Conducted Cultural Resources Studies within 1 Mile of the Project Site

SCCIC Report Number	Authors	Year	Title	Proximity to Project Site
SB-00191	Smith, Gerald A.	1973	Archaeological, Historical and Paleontological Site Survey for County Service Area No. 70 Improvement Zone "J", Assessment of Impact and Recommendations	Outside
SB-00986	Reynolds, Robert E.	1980	Baldy Mesa Water Lines, Cultural Resources Assessment	Outside
SB-01025	Harris, Ruth	1973	Archaeological, Historical, and Paleontological Site Survey for County Service Area No. 70 Improvement Zone "J", Assessments of Impact and Recommendations	**Subsumes Project site**
SB-01026	Harris, Ruth	1974	Archaeological, Historical, and Paleontological Site Survey for County Service Area No. 70 Improvement Zone "J", Assessments of Impact and Recommendations	**Subsumes Project site**

Table 4.4-1. Previously Conducted Cultural Resources Studies within 1 Mile of the Project Site

SCCIC Report Number	Authors	Year	Title	Proximity to Project Site
SB-01027	Reynolds, Robert E.	1980	Cultural Resources Assessment: Baldy Mesa Water Lines, County Service Area 70, Improvement Zone J, San Bernardino County, California	**Subsumes Project site**
SB-02202	McKenna, Jeanette A.	1990	A Phase I Archaeological Investigation of Proposed Water Pipeline Routes and reservoir/Pumping Locations, in the Baldy Mesa/Phelan Area, San Bernardino County, California	Outside
SB-02229	Shinn, Juanita R.	1991	Archaeological Assessment of 10 Acre Parcel for Creative Boundaries	Outside
SB-02238	Knell, Edward J.	1991	Cultural Resources Reconnaissance of Twenty One Acres Near Hesperia, San Bernardino County, California	Outside
SB-02395	White, Robert S.	1991	An Archaeological Assessment of Tentative Tract 14596, a 235.33-Acre Parcel Located in Hesperia, San Bernardino County	Outside
**SB-02476	McKenna, Jeanette A.	1991	A Phase I Linear Survey: Cultural Resources Investigations for the Hesperia Improvement District, Hesperia, San Bernardino County, California	**Subsumes Project site**
SB-02507	Sundberg, Frederick A. and Nancy Whitney-Desautels	1992	Archaeological and Paleontological Survey for a Three Mile Segment of Phelan Road, San Bernardino County, California	Outside
SB-02674	Singer, Clay A., John E. Atwood, and Barbie S. Laney	1992	Cultural Resources Survey and Impact Assessment for APN 404-281-36 in the Baldy Mesa Area of San Bernardino County, California	Outside
SB-02730	McKenna, Jeanette A.	1993	Cultural Resources Investigations of the Tracy Smith Property, APN 404-092-53 (TPM 14387), San Bernardino County, California	Outside
SB-02732	Parr, Robert E.	1992	An Archaeological Assessment of Tentative Parcel Map #14242 Baldy Mesa, San Bernardino County, CA	Outside
SB-02803	Love, Bruce	1993	Main St./I-15 Interchange, Hesperia	Outside
SB-03110	Brock, James and Christine L. D'Ilorio	1996	Historic Property Survey and Historic Architectural Evaluation Report for the Widening of Phelan Road from Baldy Mesa Road to State Hwy 395, San Bernardino County, California	Outside
SB-03366	Brechibiel, Brant	1998	Cultural Resource Records Search and Survey Report for a PMBS Services Telecommunications Facility: CM 239-01 in the City of Hesperia, California	Outside

Table 4.4-1. Previously Conducted Cultural Resources Studies within 1 Mile of the Project Site

SCCIC Report Number	Authors	Year	Title	Proximity to Project Site
SB-03448	Alexandrowicz, John Stephen	2000	A Historical Resources Identification Investigation for the Little Sisters Truck Wash, City of Hesperia	Outside
SB-04036	Cerreto, Ricard and Christy Malan	2004	Cultural Resource Assessment for Parcel 3, APN: 3064-591-17, City of Hesperia, San Bernardino County, California	Outside
SB-04191	McKenna, Jeanette A.	2004	An Intensive Archaeological Survey of the Frontier Homes Property, Tract No. 16744 in the City of Hesperia, San Bernardino County, California	Outside
SB-04281	Cerreto, Richard, Christy Malan, and Katherine Ward	2004	Cultural Resources Assessment for APN: 3064-481-12, the City of Hesperia, San Bernardino County, CA	Outside
SB-04282	Fulton, Phil	2004	Cultural Resources Assessment: Cingular Wireless Facility No. SB 333-01, Hesperia, San Bernardino County, California	Outside
SB-04283	Budinger, Fred E.	2002	A Cultural Resources Phase I Archaeological Survey of the Parcel of the 138 Acre Hesperia Master Plan Parcel, City of Hesperia, San Bernardino County, California	Outside
SB-04284	Alexandrowicz, John Stephen	2001	Historic Archaeology at John E. Dufton's Homestead	Outside
SB-04285	Green, Julia K.	2004	Cultural Resources Inventory and Evaluation: Timbisha Shoshone Hotel and Casino, San Bernardino County, California	Outside
SB-04286	Love, Bruce	1999	08-SBD Hesperia Park and Ride Facility at the Intersection of US 395 and Joshua St Near the City of Hesperia	Outside
SB-04289	White, Robert S. and Laura S. White	2003	A Cultural Resources Assessment of the San Bernardino County Special Districts CSA 70 Zone J Casita Ave Water Pipeline Project Near Hesperia, San Bernardino Co	Outside
SB-04290	Hammond, Stephen and David Bricker	1997	The Realignment of US Highway 395 and Main ST in the City of Hesperia, San Bernardino County, California	Outside
SB-04309	McKenna, Jeanette A.	2000	Results of a Phase I Cultural Resources Investigation of the Nick Adams Property (APN: 3039-321-03), San Bernardino County, California	Outside
SB-04580	Hatheway, Roger	2005	A Phase I Historical and Archaeological Survey of the Caliente Industrial Park Property, Assessor Parcel # 3039-321-08-0000, City of Hesperia, California.	Outside

Table 4.4-1. Previously Conducted Cultural Resources Studies within 1 Mile of the Project Site

SCCIC Report Number	Authors	Year	Title	Proximity to Project Site
SB-04582	Duff, Gabrielle and Manuel R. Palacios-Fest	2005	Archaeological and Paleontological Survey of the Ludwig Property, Hesperia, San Bernardino County, California.	Outside
SB-04796	Brunzell, David	2005	Cultural Resource Assessment Vista Del Valle City of Victorville San Bernardino County, California	Outside
SB-04975	Wetherbee, Matthew	2005	Historical/Archaeological Resources Survey Report: Baldy Mesa Water District Arsenic Treatment Project, Cities of Victorville and Hesperia, San Bernardino County, California.	Outside
SB-05107	Chandler, Evelyn N, Cotterman, Cary D, and Mason, Roger D	2002	Cultural Resources Survey of the Proposed California Charter Academy Hesperia, San Bernardino County, California	Outside
SB-05216	McKenna, Jeanette A.	2006	Results of a Phase 1 Cultural resources Investigation for the Proposed Wal-Mart Supercenter Approximately 38 Acres in the City of Hesperia, San Bernardino County, California	Outside
SB-05452	McKenna, Jeanette A.	2007	Results of a Phase I Cultural Resources Investigation for Approximately 20 Acres of Land (APN 3039-321-10) In the City of Hesperia, San Bernardino County, California	Outside
SB-05698	Hogan, Michael	2007	Historical/Archaeological Resources Survey Report: US Highway 395 Realignment EIR, Victorville Area, San Bernardino County, California.	Outside
SB-05818	Budinger, Fred E.	2007	An Archaeological Survey of 10-Acres (APN 3064-601-01) for the Proposed Holiday Inn Hesperia Project to located Southeast of the Intersection of Main Street and Mesa Linda Street in the City of Hesperia, San Bernardino County, California 92392	Outside
SB-06162	Bonner, Wayne and Aislin-Kay, Marnie	2008	Cultural Resource Records Search and Site Visit Results for Royal Street Communications California, LLC Candidate LA3329A (Outpost Road), 8391 Outpost Road, Oak Hills, San Bernardino County, California	Outside
SB-06164	Sander, Jay	2007	Cultural Resources Inventory of APN 3064-561-12 Hesperia, San Bernardino County, California	Outside
SB-06333	Horne, Melinda C.	2005	Cultural Resources Survey for the Mojave Water Agency Water Banking Project	Outside
SB-06510	White, Laura S.	2005	A Cultural Resources Assessment of TT 16751, A 21.96-Acre Parcel Located Adjacent to Sultana Street, East of Escondido Avenue, City of Hesperia, San Bernardino County	Outside

Table 4.4-1. Previously Conducted Cultural Resources Studies within 1 Mile of the Project Site

SCCIC Report Number	Authors	Year	Title	Proximity to Project Site
SB-06600	Tang, Bai, Smallwood, Josh, John J. Eddy, Harry M. Quinn, Terri Jacquemain, Daniel Ballester, and Laura Hensley Shaker	2008	Extended Phase I Historical/Archaeological Resources Study: Northeast Recycled Water Expansion Projects, In and Near the Cities of Rancho Cucamonga and Fontana, San Bernardino County, California	Outside
SB-06602	Wlodarski, Robert J.	2009	Cultural Resources Record Search and Archaeological Survey Results for the proposed Royal Street Communications, California, LLC, Site LAee28A (Vacant Lot TMO-Pine Colo) located at 9980 Lassen Street, Hesperia, San Bernardino County, California 92345	Outside
SB-06652	ESA	2010	Preliminary Archaeological Survey Report for 98 Linear Miles of the east Branch Extension of the California Aqueduct for the DWR East Branch Enlargement Project Los Angeles and San Bernardino Counties (California)	Outside
SB-07156	Tang, Bai "Tom", Daniel Ballester, and Nina Gallardo	2011	Historical/Archaeological Resources Survey Report: Water Supply System Improvements Projects, Fiscal Years 2010/2011 – 2014/2015, Victorville Water District, San Bernardino County, California.	Outside
SB-07493	Dahdul, Miriam, Daniel Ballester, John D. Goodman II, and Nina Gallardo	2013	Historical/Archaeological Resources Survey Report: Westside Terraces Project, Assessor's Parcel No's 3064-441-01 to -03, City of Hesperia, San Bernardino County, California.	Outside
SB-07971	McDougall, Dennis	2007	Cultural Resources Survey of Approximately 522.7 Acres Within the Oro Grande Wash North - Recharge Basins Project Area for the Mojave Water Agency Water Banking Project	Outside
SB-08019	Hogan, Michael	2016	Archaeological Survey Report Park and Ride Facility Expansion Project City of Hesperia, San Bernardino County, California	Outside
SB-08179	Hogan, Michael	2015	Archaeological/Paleontological Monitoring Program, Tractor Supply Company Retail Facility Project, 12543 Main Street, City of Hesperia, San Bernardino County	Outside
**SB-08205	McKenna, Jeanette A.	2015	A Phase I Cultural Resources Investigation of the Proposed Summit Leadership Academy, High Desert Campus, City of Hesperia, San Bernardino Co., California	Adjacent

Table 4.4-1. Previously Conducted Cultural Resources Studies within 1 Mile of the Project Site

SCCIC Report Number	Authors	Year	Title	Proximity to Project Site
SB-08232	Tang, Bai, Jesse Yorck, Daniel Ballester, and Nina Gallardo	2016	Historical/Archaeological Resources Survey Report Country Inn and Suites Project	Outside

Note:
* Reports have not been digitized and are therefore unavailable due to current SCCIC Covid-19 protocols.

Previously Recorded Cultural Resources

The CHRIS records search identified two previously recorded cultural resources within the Project site: P-36-004179/CA-SBR-004179H and P-36-010288/CA-SBR-010288H. One of these resources, P-36-004179/CA-SBR-004179H is a historic-period unpaved road, and one resource, P-36-010288/CA-SBR-010288H, consists of a late nineteenth century homestead. A discussion of these two previously recorded cultural resources is provided below.

The CHRIS records search identified an additional 35 previously recorded cultural resources within the 1-mile records search radius. These resources consist of 8 built environment resources, 24 historic-period archaeological resources, and 3 prehistoric archaeological resources. The built environment resources consist of 6 unpaved roads and 2 paved roads. The historic-period archaeological resources consist of 8 household refuse scatters, 8 household refuse dumps, 1 metal can scatter, 1 homestead site, and 6 isolates consisting of bottle glass shards and/or metal cans. The prehistoric archaeological resources consist of 1 low-density lithic scatter and 2 isolated tested or battered cobbles. The prehistoric archaeological resources are generally distributed to the north, west, and south of the Project site along the eastern bank of the Oro Grande Wash. The nearest prehistoric resource to the Project site is located approximately 170 meters (560 feet) south of the Project site and consists of an isolated tested cobble. Table 4.4-2, below, provides a summary of all 35 previously recorded cultural resources within 1 mile of the Project site followed by discussion of these two previously recorded cultural resources that overlap the Project site.

Table 4.4-2. Previously Recorded Cultural Resources Within a 1-Mile Radius of the Project Site

Primary (P-36-)	Trinomial (CA-SBR-)	Resource Age and Type	Resource Description	NRHP/CRHR Eligibility	Recording Events	Proximity to Project Site
004179	004179H	Built Environment: Road	Historic route known as the Canal Lane Historic Road.	7R: Not evaluated	1980 (R. Reynolds); 1980 (R. Reynolds); 2007 (D. Ballester); 2007 (D. Ballester); 2009 (ESA); 2010 (M. Valask)	**Overlaps**
004251	004251H	Built Environment: Road	Historic road known as the Baldy Mesa	6Z: Ineligible for NRHP,	1980 (R. Reynolds); 1991 (J. Petersen);	936m (3070 ft)

Table 4.4-2. Previously Recorded Cultural Resources Within a 1-Mile Radius of the Project Site

Primary (P-36-)	Trinomial (CA-SBR-)	Resource Age and Type	Resource Description	NRHP/CRHR Eligibility	Recording Events	Proximity to Project Site
			Pole Line; poles have since been removed leaving only the access road intact.	CRHR, or Local	1993 (K. Becker); 2009 (K. Anderson); 2010 (J. Coleman); 2011 (J. Trampier); 2018 (C. Bennett)	east of the Project site
004266	004266	Archaeological site: Prehistoric	Prehistoric site consisting of low-density lithic scatter, core, fire-affected rock, and two secondary flakes.	7R: Not evaluated	1980 (R. Reynolds); 1993 (K. Becker)	1032m (3385 ft) southwest of the Project site
004267	004267H	Built Environment: Road	Historic road known as the Oro Grande Wash/Oak Hill Cutoff Road. Most recent record of this site claims it has been destroyed and no evidence of the original road remains.	7R: Not evaluated	1980 (R.Reynolds); 1993 (K. Becker); 2007 (D. Ballester); 2007 (M. Linder)	815m (2675 ft) north of the Project site
004268	004268H	Built Environment: Road	Historic road known as the Oro Grande Wash/White Road Cutoff. Most recent record of this site claims it has been destroyed and no evidence of the original road remains.	6Z: Ineligible for NRHP, CRHR, or Local	1980 (R. Reynolds); 1993 (K. Becker); 1993 (J. Mckenna); 1995 (J. Brock); 2007 (D. Ballester)	985m (3230 ft) north of the Project site
004275	004275H	Built Environment: Road	Historic road known as Houghton's Crossing Toll Road.	6Z: Ineligible for NRHP, CRHR, or Local	1980 (R. Reynolds); 1991 (Knell); 1993 (K. Becker); 2002 (Cotterman)	600m (1968 ft) east of the Project site

Table 4.4-2. Previously Recorded Cultural Resources Within a 1-Mile Radius of the Project Site

Primary (P-36-)	Trinomial (CA-SBR-)	Resource Age and Type	Resource Description	NRHP/CRHR Eligibility	Recording Events	Proximity to Project Site
007545	007545H	Built Environment: Road	Historic highway known as State Route 395.	6Z: Ineligible for NRHP, CRHR, or Local	1993 (T. Wahoff and L. Peterson); 1996 (D. Bricker); 1997 (D. Bricker); 2000 (J. Underwood and S. Rosel); 2007 (D. Ballester); 2009 (K. Anderson); 2010 (M. Valasik); 2010 (S. Jow); 2013 (L. Honey); 2013 (D. Martinez); 2014 (J. Hall and C. Morgan)	455m (1495 ft) northwest of the Project site
007680	007680H	Archaeological site: Historic-period	Historic refuse dump consisting of nails, glass, ceramics, metal fragments, and vehicle parts form a Model A Ford.	7R: Not evaluated	1993 (J. McKenna and Reeves)	1440m (4725 ft) southwest of the Project site
007755	007755H	Archaeological site: Historic-period	Historic site consisting of glass fragments, ironstone bowl fragments, cans, Pepsi glass bottle, and a glass bottle.	7R: Not evaluated	1993 (K. Becker)	1344m (4410 ft) northwest of the Project site
007756	007756H	Archaeological site: Historic-period	Historic trash scatter consisting of glass bottles, glass fragments, umbrella parts, tin cans, metal fragments, and ironstone dish fragments.	7R: Not evaluated	1993 (K. Becker)	1320m (4430 ft) northwest of the Project site
007757	007757H	Archaeological site: Historic-period	Historic trash scatter consisting of a variety of can and glass artifacts.	7R: Not evaluated	1993 (K. Becker)	1152m (3780 ft) northwest of the Project site

Table 4.4-2. Previously Recorded Cultural Resources Within a 1-Mile Radius of the Project Site

Primary (P-36-)	Trinomial (CA-SBR-)	Resource Age and Type	Resource Description	NRHP/CRHR Eligibility	Recording Events	Proximity to Project Site
007758	007758H	Built Environment: Road	Historic segments of paved road.	7R: Not evaluated	1993 (K. Becker)	528m (1732 ft) northwest of the Project site
008077	008077H	Archaeological site: Historic-period	Historic trash scatter consisting of various cans, glass fragments, ceramic fragments, asphalt fragments, vehicle parts, and various modern debris.	7R: Not evaluated	1995 (Brock and James)	1296m (4252 ft) northwest of the Project site
008082	008082H	Built Environment: Road	Historic road known as Phelan Road.	6Z: Ineligible for NRHP, CRHR, or Local	1995 (Brock and James); 2007 (D. Ballester)	1008m (3307 ft) north of the Project site
010287	010287H	Archaeological site: Historic-period	Historic site consisting of dirt path, a temporary homestead site and various isolated refuse objects including tin cans, and metal hinges.	7R: Not evaluated	2000 (J. Alexandrowicz)	195m (630 ft) south of the Project site
010288	010288H	Archaeological site: Historic-period	Historic property known as the John E. Dufton Homestead.	6Z: Ineligible for NRHP, CRHR, or Local	2000 (J. Alexandrowicz); 2015 (J. Mckenna)	Overlaps

Table 4.4-2. Previously Recorded Cultural Resources Within a 1-Mile Radius of the Project Site

Primary (P-36-)	Trinomial (CA-SBR-)	Resource Age and Type	Resource Description	NRHP/CRHR Eligibility	Recording Events	Proximity to Project Site
010920	010920H	Archaeological site: Historic-period	Historic trash dump consisting of tin cans, metal fragments, glass fragments, lumber, and ceramic fragments.	6Z: Ineligible for NRHP, CRHR, or Local	2002 (C. Cotterman)	600m (1968 ft) east of the Project site
010921	010921H	Archaeological site: Historic-period	Historic refuse deposit consisting of metal artifacts, tin cans, glass bottle fragments, and ceramic fragments.	6Z: Ineligible for NRHP, CRHR, or Local	2002 (C. Cotterman)	744m (2440 ft) southeast of the Project site
012056	012056H	Archaeological site: Historic-period	Historic site consisting of structural remains and low-density trash scatter including paint cans, food cans, glass fragments, couch springs, wire screen, and architectural material.	7R: Not evaluated	2005 (G. Duff)	600m (1968 ft) northeast of the Project site
012339	012217H	Archaeological site: Historic-period	Historic high-density trash scatter consisting of ceramic fragments, glass bottle fragments, and various cans.	7R: Not evaluated	2005 (S. Norris)	504m (1654 ft) northwest of the Project site
012340	012218H	Archaeological site: Historic-period	Historic refuse deposit consisting of a ceramic plate, ceramic fragments, and various cans.	7R: Not evaluated	2005 (S. Norris)	430m (1415 ft) north of the Project site

Table 4.4-2. Previously Recorded Cultural Resources Within a 1-Mile Radius of the Project Site

Primary (P-36-)	Trinomial (CA-SBR-)	Resource Age and Type	Resource Description	NRHP/CRHR Eligibility	Recording Events	Proximity to Project Site
012341	012219H	Archaeological site: Historic-period	Historic refuse deposit consisting of glass bottle fragments, porcelain fragments, various cans, and a brick.	7R: Not evaluated	2005 (S. Norris)	552m (1810 ft) northwest of the Project site
012342	012220H	Archaeological site: Historic-period	Historic refuse deposit consisting of porcelain fragments, clear glass fragments, and various cans.	7R: Not evaluated	2005 (S. Norris)	385m (1260 ft) northwest of the Project site
012343	012221H	Archaeological site: Historic-period	Historic low-density trash scatter consisting of a horseshoe, kerosene lamp burner, bullet cartridge, glass fragments, porcelain lids, and various cans.	7R: Not evaluated	2005 (K. Becker)	288m (995 ft) north of the Project site
012344	012222H	Built Environment: Road	Historic road 6 to 8 feet wide and heavily disturbed due to recreational use of off-road vehicles.	7R: Not evaluated	2005 (V. Austerman and L. Lee)	865m (2835 ft) northwest of the Project site
012345	012223H	Built Environment: Road	Historic unpaved dirt road.	7R: Not evaluated	2005 (V. Austerman and L. Lee)	550m (1810 ft) northwest of the Project site
012346	012224H	Built Environment: Road	Historic unpaved north to south running dirt road.	7R: Not evaluated	2005 (V. Austerman and L. Lee)	335m (1100 ft) northwest of the Project site

Table 4.4-2. Previously Recorded Cultural Resources Within a 1-Mile Radius of the Project Site

Primary (P-36-)	Trinomial (CA-SBR-)	Resource Age and Type	Resource Description	NRHP/CRHR Eligibility	Recording Events	Proximity to Project Site
012347	—	Archaeological isolate: Prehistoric	Prehistoric isolate described as a tested quartzite cobble with 3 flake scars.	6Z: Ineligible for NRHP, CRHR, or Local	2005 (K. Becker, T. Diaz, and M. Knypstra)	720m (2360 ft) northwest of the Project site
013356	012556H	Archaeological site: Historic-period	Historic refuse dump of 6 fragments of sun-altered manganese glass, 13 ceramic shards, and various metal cans.	7R: Not evaluated	2007 (D. Ballester)	985m (3230 ft) north of the Project site
020263	—	Archaeological isolate: Prehistoric	Prehistoric isolate described as a tested obsidian nodule with two or three flake scars.	6Z: Ineligible for NRHP, CRHR, or Local	2004 (Cerreto and Cunningham)	195m (630 ft) south of the Project site
020473	—	Archaeological isolate: Historic-period	Historic isolate described as a glass bottle with inverted base.	6Z: Ineligible for NRHP, CRHR, or Local	2005 (G. Duff)	1152m (3780 ft) northeast of the Project site
020556	—	Archaeological isolate: Historic-period	Historic isolate described as an aqua glass shard.	6Z: Ineligible for NRHP, CRHR, or Local	2005 (K. Pollock, P. Stanton, L. Lee, and K. Sewell)	1320m (4430 ft) northwest of the Project site
020557	—	Archaeological isolate: Historic-period	Historic isolate described as two hole-in-cap meat cans.	6Z: Ineligible for NRHP, CRHR, or Local	2005 (K. Pollock, P. Stanton, L. Lee, and K. Sewell)	1392m (4567 ft) northwest of the Project site
020558	—	Archaeological isolate: Historic-period	Historic isolate described as a hole-in-cap can.	6Z: Ineligible for NRHP, CRHR, or Local	2005 (K. Pollock, P. Stanton, L. Lee, and K. Sewell)	1440m (4725 ft) northwest of the Project site
026211	016620H	Archaeological site:	Historic refuse scatter consisting of ceramic	7R: Not evaluated	2013 (D. Ballester)	1056m (3465 ft)

Table 4.4-2. Previously Recorded Cultural Resources Within a 1-Mile Radius of the Project Site

Primary (P-36-)	Trinomial (CA-SBR-)	Resource Age and Type	Resource Description	NRHP/CRHR Eligibility	Recording Events	Proximity to Project Site
		Historic-period	fragments, metal artifacts, red brick, and amethyst glass fragments.			north of the Project site
026212	016621H	Archaeological site: Historic-period	Historic refuse scatter consisting of hole-in-cap cans, lard buckets, and beef cans.	7R: Not evaluated	2013 (D. Ballester)	1320m (4330 ft) north of the Project site
026213	016622H	Archaeological site: Historic-period	Historic trash dump consisting of various cans, bottle caps, glass bottle fragments, and assorted domestic items.	7R: Not evaluated	2013 (D. Ballester)	1128m (3700 ft) north of the Project site
033090	—	Archaeological isolate: Historic-period	Historic isolate described as three amethyst glass fragments and one sardine can.	6Z: Ineligible for NRHP, CRHR, or Local	2018 (R. Goodwin, M. Jenkins, and A. Garcia)	1560m (5118 ft) northwest of the Project site
033091	—	Archaeological isolate: Historic-period	Historic isolate described as a condensed milk can and steel church-key beverage can.	6Z: Ineligible for NRHP, CRHR, or Local	2018 (R. Goodwin, M. Jenkins, and A. Garcia)	1512m (4960 ft) northwest of the Project site

P-36-004179 [CA-SBR-04179H]

Resource P-36-004179/CA-SBR-004179H is a historic-period unpaved road that runs generally north south for approximately 7 miles (11.3 kilometers). An approximate 130-foot (40-meter) segment of the road traverses the northwestern corner of the Project site. Reynolds formerly recorded P-36-004179/CA-SBR-004179H in 1980 as the historic-period roadway known as the Toll Road-Lanes Crossing that connected Brown's Toll Road with the Salt Lake Trail. Portions of the road were revisited in the subsequent years, and the site record was updated with varying results. Ballester revisited a segment of the road in 2007 and stated that the road appeared modern and "retains no identifiable characteristics to suggest that it is a historic-era road." Additional updates from Anderson in 2009

and Valask in 2010 state that segments of P-36-004179/CA-SBR-004179H recorded within their study areas were unable to be relocated.

P-36-010288 [CA-SBR-010288H]

Resource P-36-010288/CA-SBR-010288H is a historic-period homestead site that measures approximately 2,620 feet by 2,620 feet (800 by 800 meters) at an elevation of 3,630 feet above mean sea level (amsl). The site subsumes the entirety of the Project site. Alexandrowicz initially recorded the site in 2000 as a late nineteenth to early twentieth century homestead consisting of structural debris and household refuse scatters. Site dimensions were determined by artifact distribution and measured approximately 209 feet by 140 feet. Alexandrowicz surmised that at least some of refuse scatter may be considered road toss associated with the previously recorded resource Toll Road-Lanes Crossing (P-36-004179/CA-SBR-004179H). Important to note is that the artifact scatter Alexandrowicz recorded is outside of the current Project site. It was not until McKenna expanded the site boundary in 2015 that the boundary of P-36-010288/CA-SBR-010288H overlapped the current Project site.

Historical Maps and Aerial Photographs Review

Preparation of the Cultural Resources Assessment Report (Appendix D) included consulting historical topographic maps and aerial photographs to understand the development of the Project site and surrounding area. Topographic maps from 1902 to 2018 and aerial photographs from 1938 to 2016 were also reviewed as part of the archival research effort. Overall, the aerial photographs and topographic maps show that the Project site has remained vacant and undeveloped since at least 1938 and relatively undisturbed since at least 1902, while the surrounding area steadily increased in development.

Geotechnical Report Review

Southern California Geotechnical, Inc. conducted a geotechnical study for the proposed project site in April of 2022. *Geotechnical Investigation Proposed I-15 Business Park Building 3 NWC Mesa Linda Street and Poplar Street Hesperia, California for Covington Realty Advisors, LLC* (Southern California Geotechnical Inc. 2022), documents the subsurface geotechnical conditions within the 17.87-acre proposed Project site. The report details the results of seven subsurface exploratory borings performed by a hollow-stem auger drill rig. These borings were placed at accessible locations throughout the proposed Project site to a maximum depth ranging from 15 to 30 feet below ground surface (bgs) to determine subsurface conditions. All of the borings encountered native alluvium extending from the surface to the maximum depth of each boring. Native soil characteristics typically consisted of 0 to 5.5 feet of loose to medium dense silty fine to coarse sands, loose fine to coarse sandy silts, and loose silty fine sands to fine sandy silts and 30+ feet of medium dense to very dense silty fine to coarse sands, fine to medium sands, and fine to coarse sandy silts with varying gravel, clay, and cobbles.

Results of the geotechnical reports indicate that should cultural deposits exist within the current Project site, they may be encountered within the native younger and older alluvium soils that extend from surface elevation to a maximum depth of 30+ feet bgs. Cultural deposits typically exist within A soil horizon (topsoil) and B soil horizon (subsoil) that locations not exposed to recent alluvial deposits usually extend to an approximate depth of 6 feet bgs. However, in areas where environmental conditions include alluvial activity, the depth where cultural material can be found has the potential of being considerably deeper.

Cultural Resources Pedestrian Survey

Dudek Lead Archaeologist, Linda Kry, and Dudek Associate Paleontologist/Archaeologist, Kira Archipov, conducted a pedestrian survey of the Project site on October 19, 2021, using standard archaeological survey procedures and techniques. The intensive-level survey methods consisted of a pedestrian survey conducted in parallel transects, spaced no more than 10 meters apart (approximately 30 feet), traversing east to west. The ground surface was inspected for prehistoric artifacts (e.g., flaked stone tools, tool-making debris, ground stone tools, ceramics, fire-affected rock), soil discoloration that might indicate the presence of a cultural midden, soil depressions, features indicative of structures and/or buildings (e.g., standing exterior walls, post holes, foundations), and historical artifacts (e.g., metal, glass, ceramics, building materials). In reference to metal cans, these resources were only considered if they were observed to be within discrete deposits or determined to be from a primary depositional location. Ground disturbances such as burrows, cut banks, trails, and drainages were also visually inspected for exposed subsurface materials. Additionally, the locations of the two previously recorded overlapping resources, P-36-004179/CA-SBR-004179H and P-36-010288/CA-SBR-010288H, were revisited in order to document the current site conditions. Site updates were recorded on Department of Parks and Recreation (DPR) 523 forms and included in Confidential Appendix C of the Cultural Resources Assessment Report (Appendix D of this EIR). No artifacts were collected during the survey.

All fieldwork was documented using field notes and an Apple Generation 7 iPad (iPad) equipped with ESRI Collector and Avenza PDF Maps software with close-scale georeferenced field maps of the Project site, and aerial photographs. Location-specific photographs were taken using the iPad's 12-mega-pixel resolution camera. Cultural resources identified during this inventory within the Project site were to be recorded on DPR forms, using the Instructions for Recording Historical Resources. All field notes, photographs, and records related to the current study are on file at Dudek's Pasadena, California, office. All field practices met the Secretary of Interior's standards and guidelines for a cultural resources inventory.

The Project site is composed of an open field with various unimproved dirt roads, low-lying dried vegetation, and the occasional taller tree. The intensive-level pedestrian survey provided 100% coverage of the Project site. Ground surface visibility ranged from good to excellent (70%–100%) throughout the Project site. In areas of moderate ground coverage, surface scrapes were occasionally implemented, when necessary, to enhance detection of archaeological materials that may have been obscured on the surface.

There is evidence of disturbance throughout the Project site. Modern debris was noted throughout the Project site and includes large items such as furniture, electronics, vehicle parts, tires, and clothing. The amount of modern refuse encountered during the survey suggests that the Project site is used for illegal dumping. Portions of the Project site, especially adjacent to Poplar Street and Mesa Linda Street, have been subject to previous grading. Numerous informal dirt roads caused by off-road vehicle use traverse the Project site. No new cultural resources were identified within the Project site as a result of the pedestrian survey.

Dudek revisited the location of the two previously recorded cultural resources within the Project site that were identified during the CHRIS records search. The following paragraphs provide a summary of findings.

P-36-004179 [CA-SBR-04179H]

As mapped, a portion of resource P-36-004179/CA-SBR-004179H, a historic period dirt road informally called "Toll Road-Lanes Crossing," intersects the northwest corner of the Project site. The approximate 930-foot (283-meter) road segment was not relocated during the pedestrian survey. According to the DPR prepared for P-36-004179/CA-

SBR-004179H, multiple sources found no evidence of the road within their respective study areas. The mapped location of P-36-004179/CA-SBR-004179H within the current Project site was found to be overgrown with vegetation, and no evidence of the historic-period road remained. This suggests that either the unpaved road was ephemeral and succumbed to environmental conditions that erased any evidence of the road, or that the resource was mapped incorrectly in the original recording. Dudek documented this finding on a DPR 523 Update Form, which will be submitted to the SCCIC. An update of the record for P-36-004179/CA-SBR-004179H has been made and is included in Confidential Appendix C, DPR Forms, of EIR Appendix D (this confidential appendix will be available at Dudek's Pasadena office and submitted to the SCCIC). No further cultural resources considerations are required for this resource.

P-36-010288 [CA-SBR-010288H]

As mapped, resource P-36-010288/CA-SBR-010288H subsumes the entirety of the Project site. According to the DPR form prepared for P-36-010288/CA-SBR-010288H, the mapped boundary of the resource consists of the entire 160- acre homestead of John E. Dufton, though only a small portion of the total property boundary has been previously surveyed. The previously surveyed areas are outside of the current Project site, and therefore, any artifacts or features identified within areas outside of the current Project site were not revisited.

The current Project surveyed approximately 17.87 acres of the John E. Dufton homestead that were not previously surveyed. No artifacts, features, or structural remnants of the homestead were identified within the current Project site. Additionally, McKenna (2005) determined that the resource was not a significant resource as defined by the California Environmental Quality Act (CEQA) and not eligible for listing on the CRHR; therefore, no further cultural resources considerations are required for this feature during this current Project or any future projects.

Native American Coordination

Assembly Bill 52 Consultation

The Project is subject to compliance with Assembly Bill (AB) 52 (California Public Resources Code [PRC] Section 21074), which requires consideration of impacts to Tribal Cultural Resources (TCRs) as part of the CEQA process and requires the lead agency to notify any tribal groups (who have requested notification) of the proposed Project. Pursuant to AB 52, the City of Hesperia (City) sent Project notification letters on August 17, 2022, via U.S. Postal Service certified mailing and email, to tribal representatives of the Cabazon Band of Mission Indians, Torres Martinez Desert Cahuilla Indians, and San Manuel Band of Mission Indians inviting each tribe to engage in tribal consultation, if desired. The communications with the contacted tribes did not result in the identification of any TCRs. Because AB 52 is a government-to-government process including consultation regarding sensitive information, all records of correspondence related to AB 52 notification and any subsequent consultation are on file with the City. The notification letters contained a Project description, outline of AB 52 timing, an invitation to consult, a Project location map, and contact information for the appropriate lead agency representative.

Geological and Paleontological Setting

The Project area is located within the Mojave Desert Geomorphic Province, which is characterized by rugged mountain ranges with intervening alluvial fans, bajadas, and valleys that have no drainage to the ocean (CGS 2002). According to surficial geological mapping by Dibblee (1965) at a 1:62,500 scale, Morton and Miller (2006) at a 1:100,000 scale, and the Technical Background Report in Support of the Cultural Resource Element: City of Hesperia General Plan Update (City of Hesperia 2010), the Project area is underlain by Holocene (< 11,700 years

ago) (Cohen et al. 2022) alluvial fan deposits (map units Qa and Qyf_3). Holocene alluvial deposits are typically an unconsolidated mixture of clay, silt, sand, and gravel.

San Bernardino County is host to numerous localities that have yielded significant paleontological resources. Paleontological resources are the preserved fossilized remains of plants and animals. Fossils and traces of fossils are preserved in sedimentary rock units, particularly fine- to medium-grained marine, lake, and stream deposits such as limestone, siltstone, sandstone, or shale, and in ancient soils (paleosols). They can also be recovered from coarse-grained sediments, such as conglomerates or coarse alluvium. Fossils are rarely preserved in igneous or metamorphic rock units (County of San Bernardino 2007).

More specifically, the City encompasses a wide variety of geological formations that differ in age and fossil-bearing sensitivity. Although the City is situated primarily on surface exposures of Holocene alluvial fan deposits having low paleontological sensitivity, well-dissected Pleistocene alluvial fan deposits are also mapped within the City. These deposits have a higher potential to contain fossil resources and can underlie Holocene alluvial deposits at shallow depths below the surface in the Mojave and Colorado Deserts (Stewart et al. 2012).

Holocene alluvial deposits are generally considered to be too young geologically to contain significant nonrenewable paleontological resources (i.e., fossils), and are thus typically assigned a low paleontological sensitivity. Additionally, the Technical Background Report in Support of the Cultural Resource Element: City of Hesperia General Plan Update (City of Hesperia 2010) determined that the Project has a low paleontological sensitivity, with the exception of Building 2, which is in a medium sensitivity area.

Paleontological Resources Records Search

Dudek requested a paleontological records search from the Natural History Museum of Los Angeles County (NHMLA) on July 29, 2022, and the results were received on August 6, 2022. The NHMLA reported no fossil localities from within the Project site; however, they have nearby localities from similar sediments that likely underlie the Project site at depth (Pleistocene alluvial deposits and the Pleistocene Shoemaker Gravel). Fossil locality LACM VP (Los Angeles County Museum Vertebrate Paleontology) 1224 produced a fossil camel (Camelidae) from the Shoemaker Gravel north of Hesperia in southern Victorville from an unknown depth bgs (NHMLA 2022). LACM VP 3353 yielded a fossil horse (*Equus*) also from an unknown depth bgs from the Shoemaker Gravel in Hesperia. Another fossil horse (*Equus*) (LACM VP 3352) was reported from the Shoemaker Gravels of northern Victorville (NHMLA 2022). LACM VP 3498 produced horse (*Equus*), deer (Cervidae), and antelope (Antilocapridae) from an unknown depth bgs in the Shoemaker Gravel on the west bank of the Mojave River, north of the Project site. From between 10 and 11 feet bgs, a fossil vole (*Microtus mexicanus*) (LACM VP 7786) was recovered near the Southern California Logistics Airport in Victorville. Finally, the NHMLA reported a Holocene locality, LACM VP 5942–5950, along Avenue S that produced kingsnake (*Lampropeltis*), gopher snake (*Pituophis*), lizards (Lacertilia, *Gambelia*), birds (Aves), and rodents (Rodentia, *Thomomys*, *Chaetodipus*, and *Dipodomys*) from 0 to 9 feet bgs.

4.4.2 Relevant Plans, Policies, and Ordinances

Federal

There are no federal plans or policies related to cultural or historical resources that are applicable to the Project.

State

The California Register of Historical Resources

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

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

(2) Is associated with the lives of persons important in our past.

(3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

(4) Has yielded, or may be likely to yield, information important in prehistory or history.

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

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

California Environmental Quality Act

The following CEQA statutes (PRC Section 21000 et seq.) and CEQA Guidelines (14 CCR 15000 et seq.) are of relevance to the analysis of archaeological, historic, TCRs, and paleontological resources:

- PRC Section 21083.2(g) defines "unique archaeological resource."
- PRC Section 21084.1 and CEQA Guidelines Section 15064.5(a) define "historical resources." In addition, CEQA Guidelines Section 15064.5(b) defines the phrase "substantial adverse change in the significance of an historical resource"; it also defines the circumstances when a project would materially impair the significance of a historical resource.
- PRC Section 21074(a) defines "tribal cultural resources."
- PRC Section 5097.98 and CEQA Guidelines Section 15064.5(e) set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.

- PRC Sections 21083.2(b) and 21083.2(c) and CEQA Guidelines Section 15126.4 provide information regarding the mitigation framework for archaeological and historic resources, including examples of preservation-in-place mitigation measures. Preservation in place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context and may also help avoid conflict with religious or cultural values of groups associated with an archaeological site.

Under CEQA, a project may have a significant impact on the environment if it may cause "a substantial adverse change in the significance of an historical resource" (PRC Section 21084.1; 14 CCR 15064.5[b]). If a site is listed or eligible for listing in the CRHR, or included in a local register of historic resources, or identified as significant in a historical resources survey (meeting the requirements of PRC Section 5024.1[q]), it is a "historical resource" and is presumed to be historically or culturally significant for the purposes of CEQA (PRC Section 21084.1; 14 CCR 15064.5[a]). The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption (PRC Section 21084.1; 14 CCR 15064.5[a]).

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

1. Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or
2. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the PRC or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the PRC, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
3. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register [CRHR] as determined by a lead agency for purposes of CEQA (14 CCR 15064.5[b][2]).

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

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

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

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

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

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

CEQA Guidelines require that all private and public activities not specifically exempted be evaluated against the potential for environmental damage, including effects to paleontological resources. Paleontological resources, which are limited, nonrenewable resources of scientific, cultural, and educational value, are recognized as part of the environment under these state guidelines. This study satisfies project requirements in accordance with CEQA (13 PRC 21000 et seq.).

Paleontological resources are explicitly afforded protection by CEQA, specifically in Section VII(f) of CEQA Guidelines Appendix G, the "Environmental Checklist Form," which addresses the potential for adverse impacts to "unique paleontological resource[s] or site[s] or … unique geological feature[s]." This provision covers fossils of signal importance – remains of species or genera new to science, for example, or fossils exhibiting features not previously recognized for a given animal group – as well as localities that yield fossils significant in their abundance, diversity, preservation, and so forth.

PRC Section 5097.5

PRC Section 5097.5 (Stats 1965, c 1136, p. 2792) regulates removal of paleontological resources from state lands, defines unauthorized removal of fossil resources as a misdemeanor, and requires mitigation of disturbed sites.

California Health and Safety Code Section 7050.5

California law protects human remains, Native American burials, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. California Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the County Coroner has examined the remains and determined that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the PRC (PRC Section 7050.5[b]). If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact

the Native American Heritage Commission (NAHC) within 24 hours (PRC Section 7050.5[c]). The NAHC will notify the "most likely descendant" (MLD). With the permission of the landowner, the MLD may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the MLD by NAHC. The MLD may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

Assembly Bill 52

The legislature added the requirements regarding tribal cultural resources through 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 (AB 52 Section 1[b][7]).

Section 1 of the bill states the legislature's intent as follows (AB 52 Section 1[b]):

> In recognition of California Native American tribal sovereignty and the unique relationship of California local governments and public agencies with California Native American tribal governments, and respecting the interests and roles of project proponents, it is the intent of the Legislature, in enacting this act, to accomplish all of the following: (1) Recognize that California Native American prehistoric, historic, archaeological, cultural, and sacred places are essential elements in tribal cultural traditions, heritages, and identities. (2) Establish a new category of resources in CEQA called "tribal cultural resources" that considers the tribal cultural values in addition to the scientific and archaeological values when determining impacts and mitigation. (3) Establish examples of mitigation measures for tribal cultural resources that uphold the existing mitigation preference for historical and archaeological resources of preservation in place, if feasible. (4) Recognize that California Native American tribes may have expertise with regard to their tribal history and practices, which concern the tribal cultural resources with which they are traditionally and culturally affiliated. Because CEQA calls for a sufficient degree of analysis, tribal knowledge about the land and tribal cultural resources at issue should be included in environmental assessments for projects that may have a significant impact on those resources. (5) In recognition of their governmental status, establish a meaningful consultation process between California Native American tribal governments and lead agencies, respecting the interests and roles of all California Native American tribes and project proponents, and the level of required confidentiality concerning tribal cultural resources, at the earliest possible point in the CEQA environmental review process.

To accomplish those goals, the legislature added or amended the following sections in the PRC: 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 5097.94.

Native American Historic Cultural Sites

The Native American Historic Resources Protection Act (PRC Section 5097 et seq.) addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the NAHC to resolve disputes regarding the disposition of such remains. In addition, the Native American Historic Resource Protection Act makes it a misdemeanor punishable by up to 1 year in jail to deface or destroy a Native American historic or cultural site that is listed or may be eligible for listing in the CRHR.

California Native American Graves Protection and Repatriation Act

The California Native American Graves Protection and Repatriation Act (California Repatriation Act), enacted in 2001, requires all state agencies and museums that receive state funding and that have possession or control over collections of human remains or cultural items, as defined, to complete an inventory and summary of these remains and items on or before January 1, 2003, with certain exceptions. The California Repatriation Act also provides a process for the identification and repatriation of these items to the appropriate tribes.

Local

City of Hesperia Code of Ordinances

The following sections of the City of Hesperia Code of Ordinances are relevant to the Project.

Article VIII. Historical Resources Designation and Protection

Section 16.20.270 – Purpose

The purpose of this article is to ensure the protection, enhancement, perpetuation and use of structures and sites of historic architectural, and engineering significance, located within the city, that are of cultural and aesthetic benefit to the community.

Section 16.20.290 – Landmark Designation Review Criteria

When designating a landmark, the city council shall consider the following criteria in making its determination:

A. Historical and Cultural Significance.
   1. The proposed landmark is particularly representative of an historical period, type, style, region, or way of life;
   2. The proposed landmark is an example of a type of building which was once common but is now rare;
   3. The proposed landmark is of greater age than most of its kind;
   4. The proposed landmark was connected with someone who is or was renowned, important, or a local personality;
   5. The proposed landmark is connected with a business or use which was once common but is now rare; or
   6. The architect or builder was significant;
   7. The site is the location of an important historic event or building.

B. Historic Architectural and Engineering Significance.
   1. The construction materials or engineering methods used in the proposed landmark are unusual, significant, or uniquely effective.
   2. The design of the proposed landmark contains details and materials that possess extraordinary or unique aesthetic qualities.

C. Neighborhood and Geographic
   1. The proposed landmark materially benefits the historic character of the neighborhood.
   2. The proposed landmark in its location represents an established and familiar visual feature of the neighborhood, community or city.

City of Hesperia General Plan

The City of Hesperia General Plan contains the following goals and policies that address cultural resources and are applicable to the Project (City of Hesperia 2010).

Conservation Element

Goal CN-5. The City shall establish policies and procedures in compliance with state and Federal laws and regulations to identify and properly protect found historical, cultural and paleontological artifacts and resources.

Policy CN-5.1. Encourage the preservation of historical, paleontological and cultural resources.

Policy CN-5.2. In those areas where surveys and records indicate historical, cultural or paleontological resources may be found, appropriate surveys and record searches shall be undertaken to determine the presence of such resources, if any.

Policy CN-5.3. All historical, paleontological and cultural resources discovered shall be inventoried and evaluated according to CEQA regulations and the California Office of Historic Preservation.

Policy CN-5.4. The City shall coordinate with the Archeological Information Center at the San Bernardino County Museum in reviewing potential records and in preserving such artifacts as may be found.

Policy CN-5.5. Through its CEQA and other environmental procedures, the City shall notify appropriate Native American representatives of possible development and shall comply with all State and Federal requirements concerning the monitoring and preservation of Native American artifacts and places.

4.4.3 Thresholds of Significance

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

A. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.
B. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.
C. Disturb any human remains, including those interred outside of dedicated cemeteries.
D. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is 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).
E. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead

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

F. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

G. Result in a cumulatively considerable impact to cultural, tribal cultural, or paleontological 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 CEQA Guidelines Section 15064.5?

Less than Significant with Mitigation Incorporated. As defined by the CEQA Guidelines (14 CCR 15000 et seq.), a "historical resource" is considered to be a resource that is listed in or eligible for listing in the NRHP or CRHR, has been identified as significant in a historical resource survey, or is listed on a local register of historical resources. Under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource" (PRC Section 21084.1; 14 CCR 15064.5[b]). If a site is listed or eligible for listing in the CRHR, or included in a local register of historic resources, or identified as significant in a historical resources survey (meeting the requirements of PRC Section 5024.1[q]), it is a historical resource and is presumed to be historically or culturally significant for the purposes of CEQA (PRC Section 21084.1; 14 CCR 15064.5[a]).

A cultural resources records search, review of literature and archival resources (historic maps, aerial photographs, topographic maps), and a field survey were conducted for the Project site. The CHRIS records search identified two (2) previously recorded cultural resources, including one (1) historic-period unpaved roads and one historic-period homestead site within the Project site. Although a portion of the Project site is included within a historic-period homestead property (P-36-010288/CA-SBR-010288H), a review of historical topographic maps and aerial photographs indicate that the specific area within the archaeological site where the Project is proposed was never occupied and has remained vacant and relatively undisturbed since at least 1902. Moreover, the homestead site (P-36-010288/CA-SBR-010288H) was previously evaluated and determined ineligible for listing on the CRHR, and therefore, future construction would not cause a significant impact to this resource. The other resource that overlaps the Project site, an unpaved road (P-36-004179/CA-SBR-004179H) has not been evaluated. However, the pedestrian survey determined that the mapped location of this resource within the current Project site was found to be overgrown with vegetation, and no evidence of the historic-period road remained. This suggests that either the unpaved road was ephemeral and succumbed to environmental conditions that erased any evidence of the road, or that the resource was mapped incorrectly in the original recording. Therefore, the Project would not cause a substantial adverse change in the significance of a known historical resource pursuant to Section 15064.5. However, the potential for intact cultural deposits to exist within native soils (below between surface and 30+ feet below existing ground surface) to the depths of assumed ground disturbance is unknown. In the event that unanticipated cultural resources are encountered during Project implementation, an assessment and evaluation of the resource would be conducted potentially resulting in the determination that the resource is historical in accordance with the definition outlined in Section 15064.5. As a result, the Project has a potential to impact and thus cause a substantial adverse change in the significance of a yet unknown historical resource.

Thus, mitigation is required to address impacts related to the inadvertent discovery of yet unknown historical resources, as outlined in Mitigation Measure (MM) CUL-1, MM-CUL-2, and MM-CUL-3. MM-CUL-1 requires that all

project construction personnel participate in a Workers Environmental Awareness Program training for the proper identification and treatment of inadvertent discoveries. MM-CUL-2 requires the retention of an on-call qualified archaeologist to address inadvertent discoveries. MM-CUL-3 requires construction work occurring within 100 feet of a cultural resource discovery be immediately halted until the qualified archaeologist, meeting the Secretary of Interior's Professional Qualification Standards for Archaeology, can assess and evaluate the discovery pursuant to CEQA. Additionally, MM-CUL-3 requires the inadvertent discovery clause be included on all construction plans. With implementation of MM-CUL-1, MM-CUL-2, and MM-CUL-3, significant impacts to historical resources would be reduced to less than significant with mitigation incorporated.

Threshold B: Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

Less than Significant with Mitigation Incorporated. A CHRIS database records search, NAHC Sacred Lands File search, background research, including a review of a geotechnical report, and an archaeological pedestrian survey were conducted as part of a Cultural Resources Assessment that was prepared for the Project (Appendix D). As discussed under Threshold A, the CHRIS records search identified two previously recorded cultural resources, including one historic-period unpaved road and one historic-period homestead site within the Project site. None of the identified resources would be impacted by the Project.

A review of a geotechnical report (Southern California Geotechnical Inc. 2022) prepared for the Project site determined that native younger and older alluvium soils were encountered from surface elevation to the maximum depth explored of 30+ feet below existing ground surface within all seven subsurface exploratory boring locations. A review of historical topographic maps and aerial photographs indicate that the specific area within the archaeological site where the Project is proposed was never occupied and has remained vacant and relatively undisturbed since at least 1902. An intensive-level pedestrian survey of the Project site was conducted on October 19, 2021. Ground surface visibility ranged from good to excellent (70%–100%) throughout the Project site. Disturbances observed throughout the Project site included modern debris scattered throughout the Project site, including large items such as furniture, electronics, vehicle parts, tires, and clothing. The amount of modern refuse encountered during the survey suggests that the Project site is used for illegal dumping. Portions of the Project site, especially areas adjacent to Poplar Street and Mesa Linda Street, have been subject to previous grading. Numerous informal dirt roads caused by off-road vehicle use traverse the Project site. No new cultural resources were identified within the Project site as a result of the pedestrian survey and the survey results.

Although the overall potential for archaeological resources to exist within the Project site is considered low, it is still possible that unknown intact archaeological resources could be encountered subsurface during ground-disturbing activities within native soils. Specifically, and in consideration of the findings of the geotechnical report prepared for the Project (Appendix E), the potential remains for intact archaeological deposits to be encountered within native younger and older alluvium identified within the Project site from surface elevation to a maximum depth of 30+ feet below existing ground surface. For this reason, the Project site should be treated as potentially sensitive for archaeological resources, and MM-CUL-1 through MM-CUL-3 are required to reduce potential impacts to unanticipated archaeological resources. MM-CUL-1 requires that all project construction personnel participate in a Workers Environmental Awareness Program training for the proper identification and treatment of inadvertent discoveries. MM-CUL-2 requires the retention of an on-call qualified archaeologist to conduct spot monitoring to respond to any inadvertent archaeological discoveries. MM-CUL-3 requires construction work occurring within 100 feet of a cultural resource discovery be immediately halted until the qualified archaeologist, meeting the Secretary of Interior's Professional Qualification Standards for Archaeology, can assess and evaluate the discovery pursuant to CEQA. Additionally, MM-CUL-3 requires the inadvertent discovery clause be included on all construction plans.

With implementation of MM-CUL-1, MM-CUL-2, and MM-CUL-3, potentially significant impacts to unknown archaeological resources would be reduced to less than significant with mitigation incorporated.

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

Less than Significant with Mitigation Incorporated. A cultural resources records search, review of literature and archival resources (historic maps, aerial photographs, topographic maps), and a field survey were conducted for the Project site. The CHRIS records search results and archival document review did not identify any location within or near the Project where human burials/remains exist, including those interred outside of formal cemeteries. Neither did the pedestrian survey identify any evidence of human remains or archaeological resources that may suggest the potential presence of human burials/remains, including those interred outside of formal cemeteries. However, in the unlikely event that human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98, pursuant to MM-CUL-4. The County Coroner must be notified of the inadvertent discovery immediately. If the remains are determined to be Native American, the County Coroner will notify the NAHC, which will determine and notify an MLD. With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD will have the opportunity to offer recommendations for the disposition of the remains. With incorporation of MM-CUL-4, impacts associated with human remains would be less than significant.

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

AND

Threshold E: Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less than Significant with Mitigation Incorporated. The Project is subject to compliance with AB 52 (PRC Section 21074), which requires consideration of impacts to "tribal cultural resources" as a part of the CEQA process, and requires the City of Hesperia, as the CEQA lead agency, to notify any groups who have requested notification of proposed projects that are subject to AB 52 compliance and are under the jurisdiction of the agency. On August 17, 2022, the City sent out AB 52 notification letters to tribal representatives of the Cabazon Band of Mission Indians, Torres Martinez Desert Cahuilla Indians, and San Manuel Band of Mission Indians, now known as the Yuhaaviatam of San Manuel Nation (Yuhaaviatam), inviting each tribe to engage in tribal consultation, if desired.

The Yuhaaviatam responded to the AB 52 notification letter via email to the City on September 6, 2022. The Yuhaaviatam did not request formal consultation but requested mitigation measures to address inadvertent

discovery of cultural resources (archaeological and tribal) be considered. The Yuhaaviatam also stated that they consider any further obligation of the City in accordance with AB-52 is complete with the exception that the Yuhaaviatam be contacted if the Project is approved and implemented and if an inadvertent discovery occurs. As a result of the Yuhaaviatam's request, MM-CUL-5 through MM-CUL-9 have been included as a condition of the Project.

As previously discussed in Section 4.4.1, no previously recorded archaeological resources of Native American origin or tribal cultural resources listed in the CRHR or a local register were identified within the Project site as a result of the SCCIC records search nor as a result of information provided from consulting tribes. Therefore, the project would not adversely affect TCRs that are listed or eligible for listing in the state or local register.

The Project site has been thoroughly researched, surveyed, and analyzed to identify the level of potential for TCRs. TCRs have not been identified through tribal consultation under AB 52, and the lead agency has not identified any TCRs within the project site that would warrant discretionary designation of a resource as a TCR. Results of the NAHC Sacred Lands File were negative for the presence of TCRs within the Project site. Notwithstanding, MM-CUL-3 and MM-CUL-4 are required to help ensure the proper treatment of TCRs and human remains that may be inadvertently encountered during ground-disturbing activities. With incorporation of MM-CUL-3, MM-CUL-4, and MM-CUL-5 through MM-CUL-9, impacts associated with TCRs would be less than significant.

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

Less than Significant with Mitigation Incorporated. The City encompasses a wide variety of geological formations that differ in age and paleontological sensitivities. The Project site, however, is underlain by Holocene alluvial fan deposits. Holocene alluvium and alluvial fan deposits are generally considered to be too young geologically to contain significant nonrenewable paleontological resources (i.e., fossils) and are typically assigned a low paleontological sensitivity. However, Holocene alluvial deposits become older and have increased paleontological sensitivity with depth, where they become old enough to preserve and yield significant paleontological resources. Additionally, the Technical Background Report in Support of the Cultural Resource Element: City of Hesperia General Plan Update (City of Hesperia 2010) determined that the Project site has low to medium paleontological sensitivity. Holocene and Pleistocene alluvial deposits are not considered unique geological features.

Despite the low potential for paleontological resources to occur on the Project site, it is always possible that intact fossil deposits are present at subsurface levels and could be uncovered during ground-disturbing activities. As such, MM-CUL-10 would ensure that if paleontological resources are exposed during construction activities, all construction work occurring within the vicinity of the find would stop until a qualified paleontologist can evaluate the significance of the find and determine whether or not additional study is warranted. With incorporation of MM- CUL-10, impacts associated with paleontological resources would be less than significant.

Threshold G: Would the Project result in a cumulatively considerable impact to cultural, tribal cultural, or paleontological resources?

Less than Significant with Mitigation Incorporated. The geographic scope of the cumulative cultural resources analysis is the region surrounding the Project site. Ongoing development and growth in the broader Project area may result in a cumulatively significant impact to cultural resources due to the continuing disturbance areas, which could potentially contain significant, buried archaeological resources, paleontological resources, or TCRs. However, as discussed above, the individual, Project-level impacts associated with cultural, tribal cultural, and paleontological resources were found to be less than significant with the incorporation of mitigation measures (MM-CUL-1 through

MM-CUL-10). The Project would be required by law to comply with all applicable federal, state, and local requirements related to historical, archaeological, paleontological, and tribal cultural resources. Other related cumulative projects would similarly be required to comply with all such requirements and regulations, to be consistent with the provisions set forth by CEQA and the CEQA Guidelines, and to implement all feasible mitigation measures should a significant project-related and/or cumulative impact be identified. As such, cumulative impacts would be less than significant with mitigation incorporated.

4.4.5 Mitigation Measures and Level of Significance After Mitigation

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

The Project would have a less than significant with mitigation incorporated with regard to the substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5 for activities occurring on the Project site. With incorporation of MM-CUL-1 through MM-CUL-3, impacts associated with archaeological resources would be less than significant with mitigation incorporated.

MM-CUL-1 Workers Environmental Awareness Program (WEAP) Training. All construction personnel and monitors who are not trained archaeologists should be briefed regarding unanticipated discoveries prior to the start of construction activities. A basic presentation should be prepared and presented by a qualified archaeologist to inform all personnel working on the Project about the archaeological sensitivity of the area. The purpose of the WEAP training is to provide specific details on the kinds of archaeological materials that may be identified during construction of the Project and explain the importance of and legal basis for the protection of significant archaeological resources. Each worker should also learn the proper procedures to follow in the event that cultural resources or human remains are uncovered during ground-disturbing activities. These procedures include work curtailment or redirection, and the immediate contact of the on-call archaeologist and if appropriate, tribal representative. Necessity of training attendance should be stated on all construction plans.

MM-CUL-2 On-Call Archaeological Construction Monitoring. In consideration of the general sensitivity of the Project site for cultural resources, a qualified archaeologist should be retained to conduct spot monitoring as well as on-call response in the case of an inadvertent discovery of archaeological resources. A qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, should oversee and adjust monitoring efforts as needed (increase, decrease, or discontinue monitoring frequency) based on the observed potential for construction activities to encounter cultural deposits. The archaeologist should be responsible for maintaining monitoring logs. Following the completion of construction, the qualified archaeologist should provide an archaeological monitoring report to the lead agency and the South Central Coastal Information Center with the results of the archaeological monitoring program.

MM-CUL-3 Inadvertent Discovery of Archaeological Resources. In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities for the Project, all construction work occurring within 100 feet of the find should immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find and determine whether or not additional study is warranted. Depending upon the significance of the find under the California Environmental Quality Act (CEQA; 14 CCR 15064.5(f); California PRC Section 21082), the archaeologist may simply record the find and allow work to continue. If the discovery proves significant under CEQA, additional work, such as preparation of an archaeological treatment plan, testing, or data recovery, may be warranted. If the discovery is Native American in nature, consultation with and/or monitoring by a tribal representative may be necessary.

Threshold B: Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

The Project would result in potentially significant impacts with regard to a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5. With incorporation of MM-CUL-1 through MM-CUL-3, impacts associated with archaeological resources would be less than significant with mitigation incorporated.

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

The Project would result in potentially significant impacts associated with the disturbance of human remains, including those interred outside of formal cemeteries. With incorporation of MM-CUL-4, impacts associated with human remains would be less than significant with mitigation incorporated.

MM-CUL-4 Inadvertent Discovery of Human Remains. In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are found, the County Coroner shall be notified within 24 hours of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined, within two working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission (NAHC) in Sacramento within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descendant (MLD) from the deceased Native American. The MLD shall complete their inspection within 48 hours of being granted access to the site. The MLD would then determine, in consultation with the property owner, the disposition of the human remains.

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

AND

Threshold E: Would the Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

The Project would result in potentially significant impacts associated with a substantial adverse change in the significance of a currently unknown or unidentified TCR if one or more are inadvertently encountered as a result of ground-disturbing activities. With the incorporation of previously outlined MM-CUL-3, MM-CUL-4, and MM-CUL-5 through MM-CUL-9, impacts associated with TCRs would be less than significant with mitigation incorporated.

MM-CUL-5 In the event that cultural resources are discovered during project activities, all work in the immediate vicinity of the discovery (within a 60-foot buffer) shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the other portions of the project outside of the buffered area may continue during this assessment period. Additionally, the Yuhaaviatam of San Manuel Nation Cultural Resources Department (Yuhaaviatam) shall be contacted, as detailed within MM-CUL-8, regarding any pre-contact and/or historic-era resources of a Native American origin and be provided information after the archaeologist makes his/her initial assessment of the nature of the discovery.t.

MM-CUL-6 If significant pre-contact and/or historic-era tribal cultural resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the archaeologist shall develop a Monitoring and Treatment Plan, the drafts of which shall be provided to the Yuhaaviatam of San Manuel Nation Cultural Resources Department for review and comment, as detailed within MM-CUL-8. The archaeologist shall monitor the remainder of the project and implement the Plan accordingly.

MM-CUL-7 If human remains or funerary objects are encountered during any activities associated with the project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 and that code enforced for the duration of the Project.

MM-CUL-8 The Yuhaaviatam of San Manuel Nation Cultural Resources Department (Yuhaaviatam) shall be notified, as detailed in MM-CUL-5, of any pre-contact and/or historic-era cultural resources discovered during project implementation and be provided information regarding the nature of the discovery, so as to provide tribal input with regards to significance and treatment. Should

the discovery be deemed significant, as defined by CEQA (as amended, 2015), a cultural resources Monitoring and Treatment Plan shall be created by the archaeologist, in coordination with the Yuhaaviatam, and all subsequent discoveries shall be subject to this Plan. This Plan shall allow for a monitor to be present representing the Yuhaaviatam for the remainder of the Project, should the Yuhaaviatam elect to place a monitor on site.

MM-CUL-9 Any and all archaeological/cultural documents created as a part of the project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the applicant and Lead Agency for dissemination to the Yuhaaviatam of San Manuel Nation Cultural Resources Department (Yuhaaviatam). The Lead Agency and/or applicant shall, in good faith, consult with the Yuhaaviatam throughout the life of the project.

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

The Project would result in potentially significant impacts associated with the destruction of a unique paleontological resource or site or unique geologic feature. With incorporation of MM-CUL-10, impacts associated with paleontological resources would be less than significant with mitigation incorporated.

MM-CUL-10 If paleontological resources are exposed during Project construction activities, all construction work occurring within 100 feet of the find shall immediately stop until a qualified paleontologist, as outlined in the Society of Vertebrate Paleontology (2010) guidelines, can evaluate the significance of the find and determine whether or not additional study is warranted. If the discovery proves significant under the California Environmental Quality Act, discovered fossils or samples of such fossils shall be collected and identified by the qualified paleontologist. Significant specimens recovered shall be properly recorded, treated, and donated to the San Bernardino County Museum, Division of Geological Sciences, or other repository with permanent retrievable paleontological storage. A final report shall be prepared and submitted to the City of Hesperia that itemizes any fossils recovered, with maps to accurately record the original location of recovered fossils and evidence that the resources were curated by an established museum repository.

Threshold G: Would the Project result in a cumulatively considerable impact to cultural, tribal cultural, or paleontological resources?

The Project would result in potentially significant cumulative impacts to cultural, tribal cultural, or paleontological resources. With implementation of MM-CUL-1 through MM-CUL-10, cumulative Project impacts would be less than significant with mitigation incorporated.

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4.5 Energy

This section describes the existing energy conditions of the Poplar 18 Project (Project) site and vicinity, identifies associated regulatory requirements and evaluates potential impacts related to implementation of the Project.

In addition to the documents incorporated by reference (see Section 2.7 of Chapter 2 of this Environmental Impact Report [EIR]), the following analysis is based, in part, on the following source:

- Air Quality and GHG Emission Estimates by Dudek in October 2022 (Appendix B-1).

4.5.1 Existing Conditions

Electricity

According to the U.S. Energy Information Administration, California used approximately 250,379 gigawatt hours of electricity in 2019 (EIA 2021a). By sector in 2019, commercial uses utilized 46% of the state's electricity, followed by 35% for residential uses, and 19% for industrial uses (EIA 2021a). Electricity usage in California for differing land uses varies substantially by the type of uses in a building, type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building. Due to the state's energy efficiency building standards and efficiency and conservation programs, California's electricity use per capita in the commercial sector is lower than any other state except Hawaii (EIA 2021b).

Southern California Edison (SCE) provides electricity to the Project. SCE, a subsidiary of Edison International, serves approximately 180 cities in 11 counties across central and Southern California. According to the California Public Utilities Commission (CPUC), approximately 84 billion kilowatt-hours of electricity were used in SCE's service area in 2017. Demand forecasts anticipate that approximately 75 billion kilowatt-hours of electricity would be used in SCE's service area in 2020 (CPUC 2020).

SCE receives electric power from a variety of sources. According to the 2019 SCE Power Content Label, renewable energy accounts for 35% of the overall energy resources, with geothermal resources at 6%, wind power at 12%, large hydroelectric sources at 1% and solar energy is at 16% (SCE 2020).

Natural Gas

According to the U.S. Energy Information Administration, California used approximately 2,154,030 million cubic feet of natural gas in 2019 (EIA 2020b). In 2019 (the most recent year for which data is available), by sector, industrial uses utilized 36% of the state's natural gas, followed by 33% from electric power, 19% from residential, 11% from commercial, and 1% from transportation uses (EIA 2021a). While the supply of natural gas in the United States and production in the lower 48 states has increased greatly since 2008, California produces little, and imports 91% of its supply of natural gas (EIA 2021c).

The Southern California Gas Company (SoCalGas) provides the Project with natural gas service. The territory serviced by SoCalGas encompasses approximately 20,000 square miles and more than 500 communities. In the California Energy Demand mid-energy demand scenario, natural gas demand is projected to have an annual growth rate of 0.03% in SoCalGas's service territory. In 2024, the total capacity available is estimated to be 3.8 billion cubic feet per day (California Gas and Electric Utilities 2020). This amount is approximately equivalent to 3.88 billion thousand British thermal units (kBTU) per day, or 38.8 million therms per day. Over the course of a year, the available capacity would therefore be 14.2 billion therms per year, which is well above the existing and future anticipated natural gas demand in the area serviced by SoCalGas.

Petroleum

According to the U.S. Energy Information Administration, California used approximately 681 million barrels of petroleum in 2018, with the majority (584 million barrels) used for the transportation sector (EIA 2021d). There are 42 U.S. gallons in a barrel, so this equates to a total daily use of approximately 78.4 million gallons of petroleum among all sectors and 67.2 million gallons for the transportation sector. In California, petroleum fuels refined from crude oil are the dominant source of energy for transportation sources. Petroleum usage in California includes petroleum products such as motor gasoline, distillate fuel, liquefied petroleum gases, and jet fuel. California has implemented policies to improve vehicle efficiency and to support use of alternative transportation, which are described in Section 4.5.2.

4.5.2 Relevant Plans, Policies, and Ordinances

Federal

Federal Energy Policy and Conservation Act

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

Energy Policy Act of 2005

In January 2005, the Energy Policy Act was signed into law. It addresses energy production in the United States, including: energy efficiency; renewable energy; oil and gas; coal; Tribal energy; nuclear matters and security; vehicles and motor fuels, including ethanol; hydrogen; electricity; energy tax incentives (hydropower and geothermal energy); and climate change technology. The Energy Policy Act provides loan guarantees for entities that develop or use innovative technologies that avoid the by-production of greenhouse gases. Another provision of the Energy Policy Act is the Renewable Fuel Standard (RFS), which increases the amount of biofuel that must be mixed with gasoline sold in the United States.

Energy Independence and Security Act of 2007

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

- Expansion of the RFS (Section 202)
- Appliance and Lighting Efficiency Standards (Sections 301–325)
- Building Energy Efficiency (Sections 411–441)

The RFS requires ever-increasing levels of renewable fuels to replace petroleum (EPA 2017). The U.S. Environmental Protection Agency (EPA) is responsible for developing and implementing regulations to ensure that transportation fuel sold in the United States contains a minimum volume of renewable fuel. The RFS program regulations were developed in collaboration with refiners, renewable fuel producers, and many other stakeholders.

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

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

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

State

Warren–Alquist Act

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

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

Integrated Energy Policy Report

Senate Bill (SB) 1389 (Bowen, Chapter 568, Statutes of 2002) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state'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 (California Public Resources Code, Section 25301a). The Energy Commission prepares these assessments and associated policy recommendations every two years, with updates in alternate years, as part of the Integrated Energy Policy Report (IEPR).

The 2019 IEPR was adopted January 31, 2020, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2019 IEPR focuses on a variety of topics such as 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 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 2019). The 2020 IEPR Update was adopted in March 2021. The 2020 IEPR Update is divided into three volumes, Volume One is focused on California's transportation future and the transition to zero-emission vehicles (ZEVs). Volume Two addresses the viability and improvements in microgrid technology and infrastructure and its ability to contribute to a clean and resilient energy system. Volume Three is framed by California's energy demand outlook and plan for increases in energy demand resulting from growth in plug-in electric vehicles (EVs; CEC 2021).

State of California Energy Action Plan

The CEC and CPUC approved the first State of California Energy Action Plan in 2003. The plan established shared goals and specific actions to ensure the provision of adequate, reliable, and reasonably priced electrical power and natural gas supplies; it also identified cost-effective and environmentally sound energy policies, strategies, and actions for California's consumers and taxpayers. In 2005, the CEC and CPUC adopted a second Energy Action Plan to reflect various policy changes and actions of the prior 2 years.

At the beginning of 2008, the CEC and CPUC determined that it was not necessary or productive to prepare a new energy action plan. This determination was based, in part, on a finding that the state's energy policies have been significantly influenced by the passage of Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006 (discussed below). Rather than produce a new energy action plan, the CEC and CPUC prepared an "update" that examines the state's ongoing actions in the context of global climate change.

Senate Bill 1078 (2002)

SB 1078 established the California Renewables Portfolio Standard (RPS) Program and required that a retail seller of electricity purchase a specified minimum percentage of electricity generated by eligible renewable energy resources as defined in any given year, culminating in a 20% standard by December 31, 2017. These retail sellers include electrical corporations, community choice aggregators, and electric service providers. The bill relatedly required the CEC to certify eligible renewable energy resources, design and implement an accounting system to verify compliance with the RPS by retail sellers, and allocate and award supplemental energy payments to cover above-market costs of renewable energy.

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

SB 107 (2006) accelerated the RPS established by SB 1078 by requiring that 20% of electricity retail sales be served by renewable energy resources by 2010 (not 2017). Additionally, SB X1-2 (2011) requires all California utilities to generate 33% of their electricity from eligible renewable energy resources by 2020. Specifically, SB X1-2 sets a three-stage compliance period: by December 31, 2013, 20% had to come from renewables; by December 31, 2016, 25% had to come from renewables; and by December 31, 2020, 33% will come from renewables.

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

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

Consequently, utility energy generation from non-renewable resources is expected to be reduced overtime and any project's reliance on non-renewable energy sources would also be reduced.

Assembly Bill 1007 (2005)

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

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

In 2006, the state legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020. In 2016, the Legislature enacted SB 32, which extended the horizon year of the state's codified GHG reduction planning targets from 2020 to 2030, requiring California to reduce its GHG emissions to 40% below 1990 levels by 2030. In accordance with AB 32 and SB 32, CARB prepared scoping plans to guide the development of statewide policies and regulations for the reduction of GHG emissions. Many of the policy and regulatory concepts identified in the scoping plans focused on increasing energy efficiencies, using renewable resources, and reducing the consumption of petroleum-based fuels (such as gasoline and diesel). As such, the state's GHG emissions reduction planning framework creates co-benefits for energy-related resources. Additional information on AB 32 and SB 32 is provided in Section 4.6.2 in Section 4.6, Greenhouse Gas Emissions, of this EIR.

California Building Standards

Part 6 of Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. Part 6 establishes energy efficiency standards for residential and non-residential buildings constructed in California to reduce energy demand and consumption. Part 6 is updated periodically to incorporate and consider new energy efficiency technologies and methodologies.

The 2019 Title 24 standards are the currently applicable building energy efficiency standards, which became effective on January 1, 2020. The 2019 Title 24 Building Energy Efficiency Standards would further reduce energy used and associated GHG emissions compared to prior standards. In general, single-family residences built to the 2019 standards are anticipated to use approximately 7% less energy due to energy efficiency measures than those built to the 2016 standards; once rooftop solar electricity generation is factored in, single-family residences built under the 2019 standards would use approximately 53% less energy than those under the 2016 standards (CEC 2018). Nonresidential buildings built to the 2019 standards are anticipated to use an estimated 30% less energy than those built to the 2016 standards (CEC 2018).

The 2022 Title 24 standards will improve upon the 2019 standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The CEC updates the Title 24 Energy Code every 3 years. The CEC adopted the 2022 Title 24 Energy Code in August 2021 and the California Building Standards Commission approved incorporating the updated code into the California Green Building Standards Code (CALGreen Code) in December 2021. The 2022 Energy Code will go into effect on January 1, 2023. The 2022 Energy Code focuses on four key areas in newly constructed homes and businesses:

- Encouraging electric heat pump technology for space and water heating, which consumes less energy and produces fewer emissions than gas-powered units.
- Establishing electric-ready requirements for single-family homes to position owners to use cleaner electric heating, cooking, and EV charging options whenever they choose to adopt those technologies.
- Expanding solar photovoltaic (PV) system and battery storage standards to make clean energy available onsite and complement the state's progress toward a 100% clean electricity grid.
- Strengthening ventilation standards to improve indoor air quality.

The CALGreen Code instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, and state-owned buildings, as well as schools and hospitals. The current code is the 2019 California Building Code. The mandatory standards require the following:

- In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for low-emitting, fuel-efficient and carpool/van pool vehicles.
- Construction shall facilitate future installation of EV supply equipment.
- Shade trees shall be planted to comply with specifications for surface parking areas, landscape areas, and hardscape areas.
- Water conserving plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with efficiency standards.
- Outdoor potable water use in landscaped areas shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources Model Water Efficient Landscape Ordinance, whichever is more stringent.
- Outdoor recycled water supply systems shall be installed in accordance with applicable state codes.
- Installations of heating, ventilation, and air conditioning (HVAC); refrigeration; and fire suppression equipment shall comply with specified standards.

CALGreen Code standards also include voluntary efficiency measures that are implemented at the discretion of agencies and applicants.

State Vehicle Standards

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

In 2012, CARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot, and global-warming gases with requirements for greater numbers of ZEVs into a single package of standards called Advanced Clean Cars (ACC). By 2025, when the rules would be fully implemented, new automobiles would emit 34% fewer global-warming gases and 75% fewer smog-forming emissions (CARB 2011).

In 2019, the EPA and National Highway Traffic Safety Administration published the Safer Affordable Fuel-Efficient Vehicles Rule Part One: One National Program (SAFE-1) (84 FR 51310), which revoked California's authority to set its own GHG emissions standards and set ZEV mandates in California. In March 2020, Part Two was issued which set carbon dioxide (CO_2) emissions standards and corporate average fuel economy standards for passenger vehicles and light-duty trucks for model years 2021 through 2026. In March 2022, EPA reinstated California's authority under the Clean Air Act to implement its own GHG emission standards and ZEV sales mandate. EPA's action concludes its reconsideration of the 2019 SAFE-1 rule by finding that the actions taken under the previous administration as a part of SAFE-1 were decided in error and are now entirely rescinded.

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

Advanced Clean Cars Program

The ACC I program (January 2012) is an emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package of regulations: the low-emission vehicle (LEV) regulation for criteria air pollutant and GHG emissions and a technology forcing regulation for ZEVs that contributes to both types of emission reductions (CARB 2021a). The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars. To improve air quality, CARB has implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that in 2025 cars will emit 75% less smog-forming pollution than the average new car sold in 2015. The ZEV program will act as the focused technology of the ACC I program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid EVs in the 2018 to 2025 model years.

The ACC II program is currently in development to establish the next set of LEV and ZEV requirements for model years after 2025 to contribute to meeting federal ambient air quality ozone standards and California's carbon neutrality standards (CARB 2021a). The main objectives of ACC II are:

1. Maximize criteria and GHG emission reductions through increased stringency and real-world reductions.
2. Accelerate the transition to ZEVs through both increased stringency of requirements and associated actions to support wide-scale adoption and use.

An ACC II rulemaking package, which will consider technological feasibility, environmental impacts, equity, economic impacts, and consumer impacts, is anticipated to be presented to CARB for consideration in June 2022.

Advanced Clean Trucks Program

The purpose of the Advanced Clean Transportation Regulation (June 2020) is to accelerate the market for ZEVs in the medium- and heavy-duty truck sector (CARB 2021b). Requiring medium- and heavy-duty vehicles to transition to zero-emissions technology will reduce health risks to people living in and visiting California and is needed to help

California meet established near- and long-term air quality and climate mitigation targets. The regulation has two components including (1) a manufacturer sales requirement and (2) a reporting requirement:

1. **Zero-emission truck sales:** Manufacturers who certify Class 2b–8 chassis or complete vehicles with combustion engines will be required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales would need to be 55% of Class 2b–3 truck sales, 75% of Class 4–8 straight truck sales, and 40% of truck tractor sales.
2. **Company and fleet reporting:** Large employers including retailers, manufacturers, brokers, and others will be required to report information about shipments and shuttle services. Fleet owners with 50 or more trucks will be required to report about their existing fleet operations. This information will help identify future strategies to ensure that fleets purchase available zero-emission trucks and place them in service where suitable to meet their needs.

Sustainable Communities Strategy

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

Local

City of Hesperia General Plan

Policies pertaining to reducing the use of energy resources are addressed in the Conservation Element of the General Plan (City of Hesperia 2010). The following policies from the Conservation Element are applicable to the Project:

Goal CN-1. Conserve water resources within the Upper Mojave River Groundwater Basin.

Policy CN-1.1. Promote the use of desert vegetation with low water usage and drought tolerant materials in landscaped areas.

Policy CN-1.6. Encourage the use of low-water consumption fixtures in homes and businesses.

Goal CN-2. Establish building and development standards to maximize the reclamation of water resources.

Policy CN-2.2. Encourage the use of reclaimed water for irrigation and other non-potable uses.

Goal CN-6. Provide programs and incentives to encourage residents, businesses and developers to reduce consumption and efficiently use energy resources.

Policy CN-6.2. Encourage the use of green building standards and Leadership in Energy and Environmental Design (LEED) or similar programs in both private and public projects.

Goal CN-7. Develop, promote and implement policies to reduce and limit GHG emissions.

Policy CN-7.4. Promote the utilization of alternative energy resources such as wind and solar in new development.

Policy CN-7.5. Promote the utilization of environmentally sensitive construction materials to limit impacts on the ozone, global climate change and mineral resources.

Policy CN-7.7. Promote energy conservation through site layout, building design, natural light and efficient mechanical and electrical products in development.

Policy CN-7.8. Continue the existing recycling program and utilization of the material recovery facility program while exploring additional methods of reducing waste.

Policy CN-7.9. Promote sustainable principles in development that conserves such natural resources as air quality and energy resources.

4.5.3 Thresholds of Significance

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

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

Methodology

In June 2021, the South Coast Air Quality Management District, in conjunction with the California Air Pollution Control Officers Association and other California air districts, released the latest version, at the time of Project analysis, of the California Emissions Estimator Model (CalEEMod), Version 2020.4.0. The purpose of this model is to calculate construction-source and operational-source criteria pollutant and GHG emissions from direct and indirect sources as well as energy usage (CAPCOA 2021). Accordingly, CalEEMod has been used to determine the Project's anticipated transportation and facility energy demands. For purposes of this analysis, the 2024 analysis year was utilized to determine the average vehicle fuel economy used throughout the duration of the Project.

Construction

Construction of the Project would result in energy consumption primarily associated with use of off-road construction equipment, on-road vendor (material delivery) trucks, and worker vehicles. All details for construction criteria air pollutants discussed in the Methodology subsection in Section 4.2.3 of Section 4.2, Air Quality, are also applicable for the estimation of construction-related energy consumption. As such, see Section 4.2.3 for a discussion of construction calculation methodology and assumptions used in the energy analysis. In addition to those assumptions discussed in Section 4.2.3, the following methodology was used to estimate construction energy consumption.

Electricity

Electricity is not expected to be consumed in large quantity during Project construction, as construction equipment and vehicles are not electric but rather diesel- or gas-powered. Although electrical service will be established to serve construction, the amount of electricity that will be used is likely to be small. Temporary electric power for as-necessary lighting and electronic equipment, such as computers inside temporary construction trailers, would be provided by SCE.

Natural Gas

Natural gas is not anticipated to be required during construction of the Project. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed below under the "petroleum" subsection.

Petroleum

Potential impacts were assessed through projected traffic trip generation during construction as provided by the CalEEMod outputs in the air quality calculations (Appendix B-1). Fuel consumption from construction equipment was estimated by converting the total CO_2 emissions from each construction phase to gallons using conversion factors for CO_2 to gallons of gasoline or diesel. The conversion factor for gasoline is 8.78 kilograms per metric ton of CO_2 per gallon, and the conversion factor for diesel is 10.21 kilograms per metric ton of CO_2 per gallon (The Climate Registry 2021). Heavy-duty construction equipment associated with construction activities and vendor trucks were assumed to use diesel fuel. It was assumed that construction workers would travel to and from the Project site in gasoline-powered vehicles. Fuel consumption from worker and vendor trips was estimated by converting the total CO_2 emissions from the construction phase to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel.

Operation

Energy consumption in support of or related to Project operations would include transportation energy demands (energy consumed by on-road vehicles accessing the Project site) and facilities energy demands (energy consumed by building operations and site maintenance activities).

Electricity

The Project's operational phase would require electricity for multiple purposes including, but not limited to, building heating and cooling, lighting, and appliances, including refrigeration, electronics, equipment, machinery, electric forklifts and yard trucks. Energy would also be consumed during operation of the Project related to water usage, solid waste disposal, and EV trips. CalEEMod Version 2020.4.0 was used to analyze electrical usage, other than EV trips, during operation; the default value for electricity consumption for the proposed warehouse land uses was applied for the Project (CAPCOA 2021). Electric vehicles analyzed for the Project operation include electric powered pallet jacks, forklifts and yard trucks and are based on vendor information of typical expected units. Details of these calculations and assumptions are provided in Appendix B-1.

Natural gas

Natural gas consumption during operation would be required for various purposes, including, but not limited to, building heating and cooling. Natural gas would be supplied to the Project by SoCalGas. Default natural gas generation rates in CalEEMod for the proposed land use and climate zone were used.

Petroleum

The fuel consumption resulting from the Project's operational phase would be attributable to vehicles traveling to and from the Project site. The maximum daily trip rates, taken from the EIR's transportation analysis (Appendix I), were 1,281 primary trips per day, which were assumed 7 days per week. Consistent with the EIR's transportation analyses, the primary trips per day are based on daily trip rates of 4.87 and 2.129 for land uses of general light industrial and high-cube fulfillment center warehouse, respectively. Energy that would be consumed by Project-generated traffic is a function of total VMT and estimated vehicle fuel economies for the vehicles accessing the Project site. With respect to estimated VMT, and based on the trip frequency and trip length methodologies cited in the Project's Air Quality Impact Analysis (Appendix C-1), the Project would generate an estimated 5,795,521 annual VMT along area roadways for all worker vehicles and 3,440,555 annual VMT for trucks. In total, the Project is anticipated to generate 8,236,075 annual VMT at final buildout (Appendix B-1).

4.5.4 Impacts Analysis

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

Less-than-Significant Impact. The Project consumption of energy resources during construction and operation would be less than significant, as discussed in further detail below.

Electricity

Construction Electricity Usage

Temporary electric power for as-necessary lighting and electronic equipment, such as computers inside temporary construction trailers, would be provided by SCE. The electricity used for such activities would be temporary, would be substantially less than that required for Project operation, and would therefore have a negligible contribution to the Project's overall energy consumption.

Operational Electricity Usage

The operational phase would require electricity for multiple purposes, including building heating and cooling, lighting, electronics, electric pumps, and EVs as described above. CalEEMod was used to estimate Project emissions from electricity uses (see the Project's Air Quality Impact Analysis for calculations). Default electricity generation rates in CalEEMod were used based on the proposed land use and climate zone. Table 4.5-1 shows the estimated annual Operational Electricity Demand by land use.

Table 4.5-1. Project Annual Operational Electricity Demand Summary

Electricity Demand	kWh/year
General Heavy Industry	1,439,890
High-Cube Fulfillment Center Warehouse	625,380
Parking	40,635
Water/Wastewater	1,028,112
Electric Vehicles (Off-road Equipment)	430,394
Total Project Electricity Demand	**2,898,395**

Source: Appendix B-1.
Note: kWh = kilowatt hour.

As shown in Table 4.5-1, the Project is anticipated to consume approximately 2,898,400 kilowatt-hours of electricity per year. The Project proposes conventional industrial uses reflecting contemporary energy efficient/energy conserving designs and operational programs. Uses proposed by the Project are not inherently energy intensive, and the Project electricity demands in total would be comparable to other projects of similar scale and configuration. Additionally, the Project would be required to comply with the applicable Title 24 standards which would further ensure that the Project energy demands would not be inefficient, wasteful, or otherwise unnecessary and impacts would be less than significant.

Natural Gas

Construction Natural Gas Usage

Natural gas is not anticipated to be required during construction of the Project. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed under the subsection "Petroleum," below. Any minor amounts of natural gas that may be consumed as a result of Project construction would be temporary and negligible, and would not have an adverse effect; therefore, impacts would be less than significant.

Operational Natural Gas Usage

Natural gas consumption during operation would be required for various purposes, including, but not limited to, building heating and cooling. Default natural gas generation rates in CalEEMod for the proposed land use and climate zone were used. Table 4.5-2 presents the annual operational natural gas demand.

Table 4.5-2. Project Annual Operational Natural Gas Demand Summary

Natural Gas Demand	kBTU/year
General Heavy Industry	4,692,700
High-Cube Fulfillment Center Warehouse	541,816
Parking	0
Water/Wastewater	0
Total Project Electricity Demand	**5,234,516**

Source: Appendix B-1.
Note: kBTU = kilo-British Thermal Units

As shown in Table 4.5-2 the Project is estimated to have a total natural gas demand of 5,234,516 kBTU per year. The Project proposes conventional industrial uses reflecting contemporary energy efficient/energy conserving designs and operational programs. Uses proposed by the Project are not inherently energy intensive, and the Project natural gas demands in total would be comparable to other projects of similar scale and configuration. Additionally, the Project is subject to statewide mandatory energy requirements as outlined in Title 24, Part 6, of the California Code of Regulations. Prior to Project approval, the applicant would ensure that the Project would meet Title 24 requirements applicable at that time, as required by state regulations through their plan review process. Thus, the natural gas consumption of the Project would not be considered inefficient or wasteful, and impacts would be less than significant.

Petroleum

Construction Petroleum Usage

Petroleum would be consumed throughout construction of the Project. Fuel consumed by construction equipment would be the primary energy resource expended over the course of construction, and VMT associated with the transportation of construction materials and construction worker commutes would also result in petroleum consumption. Heavy-duty construction equipment associated with construction activities and haul trucks involved in relocating dirt around the Project site are assumed to use diesel fuel. Construction workers would travel to and from the Project site throughout the duration of construction. It is assumed that construction workers would travel to and from the Project site in gasoline-powered vehicles.

Heavy-duty construction equipment of various types would be used during Project construction. CalEEMod was used to estimate construction equipment usage; results are included in Appendix B-1 of this EIR. The estimated diesel fuel usage from construction equipment, and vendor trucks, as well as estimated gasoline fuel usage from worker vehicles is shown in Table 4.5-3.

Table 4.5-3. Construction Petroleum Demand

Project	Off-road Equipment (diesel)	Vendor Trucks (diesel)	Haul Trucks (Diesel)	Worker Vehicles (gasoline)
	Gallons			
Site Preparation	505.44	0	0	54.89
Grading	8,076.80	0	0	494.00
Building Construction	14,959.34	14,734.71	0	23,584.49
Paving	1,977.36	0	0	175.65
Architectural Coating	250.45	0	0	724.53
Total	**25,769.38**	**14,734.71**	**0**	**25.033.55**

Source: Appendix B-1.

In summary, construction of the Project is conservatively anticipated to consume 25,034 gallons of gasoline and 40,504 gallons of diesel. Notably, the Project would be subject to CARB's In-Use Off-Road Diesel Vehicle Regulation that applies to certain off-road diesel engines, vehicles, or equipment greater than 25 horsepower. The regulation (1) imposes limits on idling, requires a written idling policy, and requires a disclosure when selling vehicles; (2) requires all vehicles to be reported to CARB (using the Diesel Off-Road Online Reporting System) and labeled; (3) restricts the adding of older vehicles into fleets starting on January 1, 2014; and (4) requires fleets to reduce their emissions by retiring, replacing, or repowering older engines or installing Verified Diesel Emission Control Strategies (i.e., exhaust retrofits). The fleet must either show that its fleet average index was less than or equal to the calculated fleet average target rate, or that the fleet has met the Best Achievable Control Technology requirements. Project construction would represent a "single-event" petroleum demand and would not require on-going or permanent commitment of petroleum resources for this purpose. Overall, the Project would not be unusual as compared to overall local and regional demand for energy resources and would not involve characteristics that require equipment that would be less energy-efficient than at comparable construction sites in the region or state. Therefore, impacts would be less than significant

Operational Petroleum Usage

During operations, the majority of fuel consumption resulting from the Project would involve the use of motor vehicles traveling to and from the Project site, as well as fuels used for alternative modes of transportation that may be used by employees of the Project.

Petroleum fuel consumption associated with motor vehicles traveling to and from the Project site is a function of the VMT as a result of Project operation. The annual VMT attributable to the Project is expected to be 9,236,075 VMT (Appendix B-1). Fuel demand estimates for the Project are provided in Table 4.5-4.

Table 4.5-4. Total Project-generated Transportation Annual Fuel Demand

Vehicle Type	Vehicle MT CO_2	Kg/CO_2/Gallon	Estimated Annual Fuel Consumption (gallons)
Gasoline	3,244.52	8.78	369,536
Diesel	1,926.14	10.21	188,652
		Total	**558,187**

Source: Appendix B-1.

As summarized on Table 4.5-4, the Project would result in an estimated annual fuel demand of 558,187 gallons of fuel. Fuel would be provided by current and future commercial vendors. Trip generation and VMT generated by the Project are consistent with other industrial uses of similar scale and configuration. That is, the Project does not propose uses or operations that would inherently result in excessive and wasteful vehicle trips and VMT, nor associated excess and wasteful vehicle energy consumption.

Enhanced fuel economies realized pursuant to federal and state regulatory actions, and related transition of vehicles to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells) would likely decrease future gasoline fuel demands per VMT. Location of the Project proximate to regional and local roadway systems tends to reduce VMT within the region, acting to reduce regional vehicle energy demands. The Project would implement sidewalks, facilitating and encouraging pedestrian access. In compliance with the CALGreen Code, the Project would promote the use of bicycles as an alternative mean of transportation by providing short-term and/or long-term bicycle parking accommodations. Facilitating pedestrian and bicycle access for employees would reduce VMT and associated energy consumption. As supported by the preceding discussions, Project transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary and impacts would be less than significant.

Renewable Energy Potential

The Project shall include rooftop solar panels for each proposed warehouse to the extent feasible, with a capacity that matches the maximum allowed for distributed solar connections to the grid, other renewable energy systems including wind turbine generation, geothermal generation, energy storage and other renewable energy generation features are not considered technically or economically feasible and/or demonstrated for a similar project. Additionally, site constraints include limited land availability and incompatibility with land use for large-scale power generation facilities as well as unknown interconnection feasibility and compatibility with utility provider systems. For these reasons other onsite renewable energy systems are not considered feasible for the proposed Project.

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

Less-than-Significant Impact. The Project would be subject to and would comply with, at a minimum, the California Building Energy Efficiency Standards (24 CCR Part 6). Part 6 of Title 24 establishes energy efficiency standards for non-residential buildings constructed in California in order to reduce energy demand and consumption. As such, the Project would comply with the California code requirements for energy efficiency.

Part 11 of Title 24 sets forth voluntary and mandatory energy measures that are applicable to the Project under the CALGreen Code. The CALGreen Code institutes mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, high-rise residential, state-owned buildings, schools, and hospitals, as well as certain residential and non-residential additions and alterations. Additionally, energy consumed by the Project's operation is calculated to be comparable to energy consumed by other industrial uses of similar scale and intensity that are constructed and operating in California. On this basis, the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. This impact would be less than significant.

Threshold C: Would the Project result in a cumulatively considerable energy impact?

Less-than-Significant Impact. Cumulative projects that could exacerbate the Project's impacts include any projects that could result in wasteful, inefficient, or unnecessary use of energy. However, the Project would not result in wasteful, inefficient, or unnecessary use of energy during construction or operation. Construction will result in short-term and temporary energy demands. Operation of the Project would not result in a wasteful, inefficient or unnecessary use of energy or conflict with an applicable plan. Therefore, the Project would have a less-than-significant impact with regards to cumulative energy impacts.

4.5.5 Mitigation Measures and Level of Significance After Mitigation

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

The Project would have a less-than-significant impact with regard to the wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation. No mitigation is required.

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

The Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency and impacts would be less than significant. No mitigation is required.

Threshold C: Would the Project result in a cumulatively considerable energy impact?

The Project would have a less-than-significant impact with regards to cumulative energy impacts. No mitigation is required.

4.5.6 References Cited

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4.6 Greenhouse Gas Emissions

This section describes the existing greenhouse gas (GHG) conditions of the Poplar 18 Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project.

In addition to the documents incorporated by reference (see Section 2.7 of Chapter 2 of this Environmental Impact Report [EIR]), the following analysis is based, in part, on the following sources:

- Air Quality and Greenhouse Gas Emissions Calculations prepared by Dudek in October 2022 (Appendix B-1)
- Traffic Impact Analysis prepared by Dudek in October 2022 (Appendix I)

4.6.1 Existing Conditions

Climate Change Overview

Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind patterns, lasting for an extended period of time (decades or longer). The Earth's temperature depends on the balance between energy entering and leaving the planet's system. Many factors, both natural and human, can cause changes in Earth's energy balance, including variations in the sun's energy reaching Earth, changes in the reflectivity of Earth's atmosphere and surface, and changes in the greenhouse effect, which affects the amount of heat retained by Earth's atmosphere (EPA 2017a).

The greenhouse effect is the trapping and build-up of heat in the atmosphere (troposphere) near the Earth's surface. The greenhouse effect traps heat in the troposphere through a threefold process as follows: short-wave radiation emitted by the Sun is absorbed by the Earth, the Earth emits a portion of this energy in the form of long-wave radiation, and GHGs in the upper atmosphere absorb this long-wave radiation and emit it into space and toward the Earth. The greenhouse effect is a natural process that contributes to regulating the Earth's temperature and creates a pleasant, livable environment on the Earth. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and causing the Earth's surface temperature to rise.

The scientific record of the Earth's climate shows that the climate system varies naturally over a wide range of time scales and that, in general, climate changes prior to the Industrial Revolution in the 1700s can be explained by natural causes, such as changes in solar energy, volcanic eruptions, and natural changes in GHG concentrations. Recent climate changes, in particular the warming observed over the past century, however, cannot be explained by natural causes alone. Rather, it is extremely likely that human activities have been the dominant cause of that warming since the mid-twentieth century and is the most significant driver of observed climate change (IPCC 2013; EPA 2017a). Human influence on the climate system is evident from the increasing GHG concentrations in the atmosphere, positive radiative forcing, observed warming, and improved understanding of the climate system (IPCC 2013). The atmospheric concentrations of GHGs have increased to levels unprecedented in the last 800,000 years, primarily from fossil fuel emissions and secondarily from emissions associated with land use changes (IPCC 2013). Continued emissions of GHGs will cause further warming and changes in all components of the climate system.

Greenhouse Gases

A GHG is any gas that absorbs infrared radiation in the atmosphere; in other words, GHGs trap heat in the atmosphere. As defined in California Health and Safety Code Section 38505(g), for purposes of administering many of the state's primary GHG emissions reduction programs, GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3) (see also 14 CCR 15364.5).[1] Some GHGs, such as CO_2, CH_4, and N_2O, are emitted into the atmosphere through natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Manufactured GHGs, which have a much greater heat-absorption potential than CO_2, include fluorinated gases, such as HFCs, PFCs, and SF_6, which are associated with certain industrial products and processes. The following paragraphs provide a summary of the most common GHGs and their sources.[2]

Carbon Dioxide. CO_2 is a naturally occurring gas and a by-product of human activities and is the principal anthropogenic GHG that affects the Earth's radiative balance. Natural sources of CO_2 include respiration of bacteria, plants, animals, and fungus; evaporation from oceans; volcanic out-gassing; and decomposition of dead organic matter. Human activities that generate CO_2 are from the combustion of fuels such as coal, oil, natural gas, and wood and changes in land use.

Methane. CH_4 is produced through both natural and human activities. CH_4 is a flammable gas and is the main component of natural gas. Methane is produced through anaerobic (without oxygen) decomposition of waste in landfills, flooded rice fields, animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion.

Nitrous Oxide. N_2O is produced through natural and human activities, mainly through agricultural activities and natural biological processes, although fuel burning and other processes also create N_2O. Sources of N_2O include soil cultivation practices (microbial processes in soil and water), especially the use of commercial and organic fertilizers, manure management, industrial processes (such as in nitric acid production, nylon production, and fossil-fuel-fired power plants), vehicle emissions, and using N_2O as a propellant (such as in rockets, racecars, and aerosol sprays).

Fluorinated Gases. Fluorinated gases (also referred to as F-gases) are powerful synthetic GHGs emitted from many industrial processes. Fluorinated gases are commonly used as substitutes for stratospheric ozone-depleting substances (e.g., chlorofluorocarbons [CFCs], hydrochlorofluorocarbons [HCFCs], and halons). The most prevalent fluorinated gases include the following:

- **Hydrofluorocarbons:** HFCs are compounds containing only hydrogen, fluorine, and carbon atoms. HFCs are synthetic chemicals used as alternatives to ozone-depleting substances in serving many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are used in manufacturing.
- **Perfluorocarbons:** PFCs are a group of human-made chemicals composed of carbon and fluorine only. These chemicals were introduced as alternatives (along with HFCs) to the ozone-depleting substances. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing. Since PFCs

[1] Climate forcing substances include GHGs and other substances such as black carbon and aerosols. This discussion focuses on the seven GHGs identified in the California Health and Safety Code Section 38505, because impacts associated with other climate forcing substances are not evaluated herein.

[2] The descriptions of GHGs are summarized from the Intergovernmental Panel on Climate Change's Second Assessment Report and Fourth Assessment Report (IPCC 1995, 2007), the California Air Resources Board's Glossary of Terms Used in GHG Inventories (CARB 2018), and the U.S. Environmental Protection Agency's Glossary of Climate Change Terms (EPA 2016).

have stable molecular structures and do not break down through the chemical processes in the lower atmosphere, these chemicals have long lifetimes, ranging between 10,000 and 50,000 years.

- **Sulfur Hexafluoride:** SF_6 is a colorless gas soluble in alcohol and ether and slightly soluble in water. SF_6 is used for insulation in electric power transmission and distribution equipment, semiconductor manufacturing, the magnesium industry, and as a tracer gas for leak detection.
- **Nitrogen Trifluoride:** NF_3 is used in the manufacture of a variety of electronics, including semiconductors and flat panel displays.

Chlorofluorocarbons. CFCs are synthetic chemicals that have been used as cleaning solvents, refrigerants, and aerosol propellants. CFCs are chemically unreactive in the lower atmosphere (troposphere) and the production of CFCs was prohibited in 1987 due to the chemical destruction of stratospheric ozone (O_3).

Hydrochlorofluorocarbons. HCFCs are a large group of compounds, whose structure is very close to that of CFCs—containing hydrogen, fluorine, chlorine, and carbon atoms—but including one or more hydrogen atoms. Like HFCs, HCFCs are used in refrigerants and propellants. HCFCs were also used in place of CFCs for some applications; however, their use in general is being phased out.

Black Carbon. Black carbon is a component of fine particulate matter, which has been identified as a leading environmental risk factor for premature death. It is produced from the incomplete combustion of fossil fuels and biomass burning, particularly from older diesel engines and forest fires. Black carbon warms the atmosphere by absorbing solar radiation, influences cloud formation, and darkens the surface of snow and ice, which accelerates heat absorption and melting. Black carbon is a short-lived species that varies spatially, which makes it difficult to quantify the global warming potential. Diesel particulate matter emissions are a major source of black carbon and are toxic air contaminants that have been regulated and controlled in California for several decades to protect public health. In relation to declining diesel particulate matter from the California Air Resources Board (CARB) regulations pertaining to diesel engines, diesel fuels, and burning activities, CARB estimates that annual black carbon emissions in California have reduced by 70% between 1990 and 2010, with 95% control expected by 2020 (CARB 2014). CARB's draft 2022 Scoping Plan Update (CARB 2022) identifies that in 2017 the inventory was approximately 8 million metric tons (MMT) carbon dioxide equivalent (CO_2e) of black carbon and that under current strategies black carbon from transportation is expected to be reduced by over 60% in year 2030.

Water Vapor. The primary source of water vapor is evaporation from the ocean, with additional vapor generated by sublimation (change from solid to gas) from ice and snow, evaporation from other water bodies, and transpiration from plant leaves. Water vapor is the most important, abundant, and variable GHG in the atmosphere and maintains a climate necessary for life.

Ozone. Tropospheric O_3, which is created by photochemical reactions involving gases from both natural sources and human activities, acts as a GHG. Stratospheric O_3, which is created by the interaction between solar ultraviolet radiation and molecular oxygen (O_2), plays a decisive role in the stratospheric radiative balance. Depletion of stratospheric O_3, due to chemical reactions that may be enhanced by climate change, results in an increased ground-level flux of ultraviolet-B radiation.

Aerosols. Aerosols are suspensions of particulate matter in a gas emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light.

Global Warming Potential

Gases in the atmosphere can contribute to climate change both directly and indirectly. Direct effects occur when the gas itself absorbs radiation. Indirect radiative forcing occurs when chemical transformations of the substance produce other GHGs, when a gas influences the atmospheric lifetimes of other gases, and/or when a gas affects atmospheric processes that alter the radiative balance of the Earth (e.g., affect cloud formation or albedo) (EPA 2020). The Intergovernmental Panel on Climate Change (IPCC) developed the global warming potential (GWP) concept to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The GWP of a GHG is defined as the ratio of the time-integrated radiative forcing from the instantaneous release of 1 kilogram of a trace substance relative to that of 1 kilogram of a reference gas (IPCC 2014). The reference gas used is CO_2; therefore, GWP-weighted emissions are measured in metric tons of CO_2 equivalent (MT CO_2e).

The current version of the California Emissions Estimator Model (CalEEMod) (Version 2020.4.0) assumes that the GWP for CH_4 is 25 (so emissions of 1 MT of CH_4 are equivalent to emissions of 25 MT of CO_2), and the GWP for N_2O is 298, based on the IPCC's Fourth Assessment Report (IPCC 2007). The GWP values identified in CalEEMod were applied to the Project.

Greenhouse Gas Inventories

Per the U.S. Environmental Protection Agency (EPA) Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2018 (EPA 2020), total U.S. GHG emissions were approximately 6,676.6 MMT CO_2e in 2018 (EPA 2020). The primary GHG emitted by human activities in the United States was CO_2, which represented approximately 81.3% of total GHG emissions (5,428.1 MMT CO_2e). The largest source of CO_2, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 92.8% of CO_2 emissions in 2018 (5,031.8 MMT CO_2e). Relative to 1990, gross U.S. GHG emissions in 2018 are higher by 3.7%, down from a high of 15.2% above 1990 levels in 2007. GHG emissions decreased from 2017 to 2018 by 2.9% (188.4 MMT CO_2e) and overall, net emissions in 2018 were 10.2% below 2005 levels (EPA 2020).

According to California's 2000–2017 GHG emissions inventory (2019 edition), California emitted 424 MMT CO_2e in 2017, including emissions resulting from out-of-state electrical generation (CARB 2019). The sources of GHG emissions in California include transportation, industry, electric power production from both in-state and out-of-state sources, residential and commercial activities, agriculture, high-GWP substances, and recycling and waste. The California GHG emission source categories and their relative contributions in 2017 are presented in Table 4.6-1.

Table 4.6-1. Greenhouse Gas Emissions in California

Source Category	Annual GHG Emissions (MMT CO_2e)	Percent of Total[a]
Transportation	169.86	40%
Industrial	89.40	21%
Electric power[b]	62.39	15%
Agriculture	32.42	8%
Residential	26.00	6%
Commercial	15.14	4%
High global-warming potential substances	19.99	5%

Table 4.6-1. Greenhouse Gas Emissions in California

Source Category	Annual GHG Emissions (MMT CO_2e)	Percent of Total[a]
Recycling and waste	8.89	2%
Total	**424.10**	**100%**

Source: CARB 2019.
Notes: GHG = greenhouse gas; MMT CO_2e = million metric tons of carbon dioxide equivalent per year.
Emissions reflect the 2017 California GHG inventory.
[a] Percentage of total has been rounded, and total may not sum due to rounding.
[b] Includes emissions associated with imported electricity, which account for 26.28 MMT CO_2e annually.

Between 2000 and 2017, per capita GHG emissions in California have dropped from a peak of 14.1 MT per person in 2001 to 10.7 MT per person in 2017, representing a 24% decrease. In addition, total GHG emissions in 2017 were approximately 5 MMT CO_2e less than 2016 emissions (CARB 2019).

The City of Hesperia has established a goal to reduce its communitywide GHG to reduce per capita GHG emissions 29% below business as usual by 2020 (City of Hesperia 2010a). The City's communitywide GHG emissions inventory for baseline year 2009 is presented in Table 4.6-2.

Table 4.6-2. City of Hesperia (Year 2009) Communitywide Greenhouse Gas Emissions Inventory

Community Sector	Total MT CO_2e/year	CO_2e (%)[1]
Transportation: Passenger Vehicles	199,414	31%
Transportation: Trucks	200,392	31%
Transportation: Other	7,454	1%
Natural Gas	34,507	5%
Electricity	135,824	21%
Solid Waste	28,394	4%
Wood Burning Fireplaces and Stoves	9,528	2%
Refrigerants	23,906	4%
Total	**639,419**	**100%**

Source: City of Hesperia 2010a.
Note: GHG = greenhouse gas; MT CO_2e = metric tons of carbon dioxide equivalent per year
[1] Totals may not sum due to rounding.

As shown on Table 4.6-2, approximately 63% of the City's GHG emissions in 2009 were attributed to transportation sources with the next highest attributed to electricity, which accounted for approximately 21%. All other sources each accounted for less than 5% of the City's GHG emissions in 2009.

Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through uncertain impacts related to future air temperatures and precipitation patterns. The 2014 IPCC Synthesis Report (IPCC 2014) indicated that warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. Signs that global climate change has occurred include warming of the atmosphere and ocean, diminished amounts of snow and ice, rising sea levels, and ocean acidification (IPCC 2014).

In California, climate change impacts have the potential to affect sea-level rise, agriculture, snowpack and water supply, forestry, wildfire risk, public health, frequency of severe weather events, and electricity demand and supply. The primary effect of global climate change has been a rise in average global tropospheric temperature. Reflecting the long-term warming trend since pre-industrial times, observed global mean surface temperature for the decade 2006–2015 was 0.87°C (likely between 0.75°C and 0.99°C) higher than the average over the 1850–1900 period (IPCC 2018). Scientific modeling predicts that continued emissions of GHGs at or above current rates would induce more extreme climate changes during the twenty-first century than were observed during the twentieth century. Human activities are estimated to have caused approximately 1.0°C (1.8°F) of global warming above pre-industrial levels, with a likely range of 0.8°C to 1.2°C (1.4°F to 2.2°F) (IPCC 2018). Global warming is likely to reach 1.5°C (2.7°F) between 2030 and 2052 if it continues to increase at the current rate (IPCC 2018).

Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. A scientific consensus confirms that climate change is already affecting California. The Office of Environmental Health Hazard Assessment identified various indicators of climate change in California, which are scientifically based measurements that track trends in various aspects of climate change. Many indicators reveal discernible evidence that climate change is occurring in California and is having significant, measurable impacts in the state. Changes in the state's climate have been observed including an increase in annual average air temperature with record warmth from 2012 to 2016, more frequent extreme heat events, more extreme drought, a decline in winter chill, an increase in cooling degree days and a decrease in heating degree days, and an increase in variability of statewide precipitation (OEHHA 2018).

Warming temperatures and changing precipitation patterns have altered California's physical systems—the ocean, lakes, rivers, and snowpack—upon which the state depends. Winter snowpack and spring snowmelt runoff from the Sierra Nevada and southern Cascade Mountains provide approximately one-third of the state's annual water supply. Impacts of climate on physical systems have been observed such as high variability of snow-water content (i.e., amount of water stored in snowpack), decrease in spring snowmelt runoff, glacier change (loss in area), rise in sea levels, increase in average lake water temperature and coastal ocean temperature, and a decrease in dissolved oxygen in coastal waters (OEHHA 2018).

Impacts of climate change on biological systems, including humans, wildlife, and vegetation, have also been observed including climate change impacts on terrestrial, marine, and freshwater ecosystems. As with global observations, species responses include those consistent with warming: elevational or latitudinal shifts in range, changes in the timing of key plant and animal life cycle events, and changes in the abundance of species and in community composition. Humans are better able to adapt to a changing climate than plants and animals in natural ecosystems. Nevertheless, climate change poses a threat to public health as warming temperatures and changes in precipitation can affect vector-borne pathogen transmission and disease patterns in California as well as the variability of heat-related deaths and illnesses. In addition, since 1950, the area burned by wildfires each year has been increasing.

The California Natural Resources Agency (CNRA) has released four California Climate Change Assessments (2006, 2009, 2012, and 2018), which have addressed the following: acceleration of warming across the state, more intense and frequent heat waves, greater riverine flows, accelerating sea level rise, more intense and frequent drought, more severe and frequent wildfires, more severe storms and extreme weather events, shrinking snowpack and less overall precipitation, and ocean acidification, hypoxia, and warming. To address local and regional governments' need for information to support action in their communities, the Fourth Assessment (CNRA 2018a) includes reports for nine regions of the state, including the Inland Deserts Region, which includes San Bernardino

County where the Project is located. Key projected climate changes for the Inland Desert Region include the following (CNRA 2018a):

- Continued future warming over the Inland Deserts region. Across the region, average maximum temperatures are projected to increase around 6°F to 10°F by the mid-century, and 8°F to 14°F by the late century.
- Extreme temperatures are also expected to increase. The hottest day of the year may be up to 9°F warmer for many locations across the Inland Deserts region by the late century under certain model scenarios. The number of extremely hot days is also expected to increase across the region.
- Despite small changes in average precipitation, dry and wet extremes are both expected to increase. By the late twenty-first century, the wettest day of the year is expected to increase across most of the Inland Deserts region, with some locations experiencing a 30% increase under certain model scenarios. The combination of more intense rainfall and drier soils in an already very dry region will increase the probability of flash floods.
- Projections indicate that wildfire may increase over Southern California, but there remains uncertainty in quantifying future changes of burned area over the Inland Deserts region.

4.6.2 Relevant Plans, Policies, and Ordinances

International

United Nations Framework Convention on Climate Change, Kyoto Protocol, and Paris Agreement

In 1992, numerous countries joined an international treaty—the United Nations Framework Convention on Climate Change (UNFCCC)—as a framework for international cooperation to combat climate change by limiting average global temperature increases and the resulting climate change, and coping with associated impacts. Currently, there are 197 Parties (196 states and 1 regional economic integration organization) in the UNFCCC (UNFCCC 2019).

By 1995, countries launched negotiations to strengthen the global response to climate change, and, 2 years later, adopted the Kyoto Protocol, which was the first international agreement to regulate GHG emissions. The Kyoto Protocol legally binds developed country Parties to emission reduction targets. The Protocol's first commitment period started in 2008 and ended in 2012. The second commitment period began on January 1, 2013, and will end in 2020. More than 160 countries signed the Kyoto Protocol (UNFCCC 2019). In 2001, President George W. Bush indicated that he would not submit the treaty to the U.S. Senate for ratification, which effectively ended the United States' involvement in the Kyoto Protocol. In 2015, At the COP21 sustainable development summit, held in Paris, all UNFCCC participants sign the "Paris Agreement" effectively replacing the Kyoto Protocol.

The 2015 Paris Agreement, adopted in Paris on December 12, 2015, marks the latest step in the evolution of the United Nations' climate change regime and builds on the work undertaken under the UNFCCC. The Paris Agreement charts a new course in the global effort to combat climate change. The Paris Agreement's central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C (UNFCCC 2019). The Paris Agreement also aims to strengthen the ability of countries to deal with the impacts of climate change. The Paris Agreement requires all Parties to put forward their best efforts through nationally determined contributions and to strengthen these efforts in the years ahead.

The Paris Agreement entered into force on November 4, 2016, 30 days after the date on which at least 55 Parties to the UNFCCC (including the United States), accounting in total for at least an estimated 55% of the total global GHG emissions, deposited their instruments of ratification, acceptance, approval or accession with the Depositary (UNFCCC 2019). On November 4, 2019, the Trump Administration gave formal notice of the Unites States' intention to withdraw from the Paris Agreement, which was formally recognized on November 4, 2019. The Biden Administration re-joined the Paris Agreement on January 21, 2021, which was accepted by the United Nations, and the United States formally re-entered into the Paris Agreement on February 29, 2021.

Federal

Massachusetts v. EPA

In *Massachusetts v. EPA* (April 2007), the U.S. Supreme Court directed the EPA administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In December 2009, the administrator signed a final rule with the following two distinct findings regarding GHGs under Section 202(a) of the federal Clean Air Act:

- The administrator found that elevated concentrations of GHGs—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—in the atmosphere threaten the public health and welfare of current and future generations. This is the "endangerment finding."
- The administrator further found the combined emissions of GHGs—CO_2, CH_4, N_2O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution that endangers public health and welfare. This is the "cause or contribute finding."

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the Clean Air Act.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (December 2007), among other key measures, includes the following, which aids in the reduction of national GHG emissions (EPA 2007):

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020, and directs National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy-efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

Federal Vehicle Standards

In response to the U.S. Supreme Court ruling previously discussed, the Bush Administration issued Executive Order (EO) 13432 in 2007 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In

2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011, and in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016 (75 FR 25324–25728).

In 2010, the Obama Administration issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021 (77 FR 62624–63200). On January 12, 2017, the EPA finalized its decision to maintain the current GHG emissions standards for model years 2022–2025 cars and light trucks (EPA 2017b).

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018 (76 FR 57106–57513). The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6%–23% over the 2010 baselines.

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program applies to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO_2 emissions by approximately 1.1 billion MT and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program (EPA and NHTSA 2016).

In August 2018, EPA and NHTSA proposed to amend certain fuel economy and GHG standards for passenger cars and light trucks and establish new standards for model years 2021 through 2026. Compared to maintaining the post-2020 standards now in place, the 2018 proposal would increase U.S. fuel consumption by about half a million barrels per day (2%–3% of total daily consumption, according to the Energy Information Administration) and would impact the global climate by 3/1000th of 1°C by 2100 (EPA and NHTSA 2018). California and other states have stated their intent to challenge federal actions that would delay or eliminate GHG reduction measures and have committed to cooperating with other countries to implement global climate change initiatives.

On September 27, 2019, the EPA and NHTSA published the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program (84 FR 51310), which became effective November 26, 2019. The Part One Rule revokes California's authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. On March 31, 2020, the EPA and NHTSA issued the Part Two Rule, which will go into effect 60 days after being published in the Federal Register. The Part Two Rule sets CO_2 emissions standards and corporate average fuel economy standards for passenger vehicles and light-duty trucks for model years 2021 through 2026. On January 20, 2021, the Biden Administration issued an Executive Order (EO) on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, which includes review of Part One Rule by April 2021 and review of the Part Two Rule by July 2021 (The White House 2021).

Clean Power Plan and New Source Performance Standards for Electric Generating Units

On October 23, 2015, EPA published a final rule (effective December 22, 2015) establishing the Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units (80 FR 64510–64660), also known as the Clean Power Plan. These guidelines prescribe how states must develop plans to reduce GHG emissions from existing fossil-fuel-fired electric generating units. The guidelines establish CO_2 emission performance rates representing the best system of emission reduction for two subcategories of existing fossil-fuel-fired electric generating units: (1) fossil-fuel-fired electric utility steam-generating units and (2) stationary combustion turbines. Concurrently, the EPA published a final rule (effective October 23, 2015) establishing Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units (80 FR 64661–65120). The rule prescribes CO_2 emission standards for newly constructed, modified, and reconstructed affected fossil-fuel-fired electric utility generating units. The U.S. Supreme Court stayed implementation of the Clean Power Plan pending resolution of several lawsuits.

The Inflation Reduction Act of 2022

The Inflation Reduction Act was signed into law by President Biden in August 2022. The bill includes specific investment in energy and climate reform and is projected to reduce GHG emissions within the U.S. by 40% as compared to 2005 levels by 2030. The bill allocates funds to boost renewable energy infrastructure (e.g., solar panels and wind turbines), includes tax credits for the purchase of electric vehicles (EVs), and includes measures that will make homes more energy efficient.

State

The statewide GHG emissions regulatory framework is summarized below by category: state climate change targets, building energy, renewable energy and energy procurement, mobile sources, solid waste, water, and other state regulations and goals. The following text describes EOs, legislation, regulations, and other plans and policies that would directly or indirectly reduce GHG emissions and/or address climate change issues.

State Climate Change Targets

The State of California has taken a number of actions to address climate change. These include EOs, legislation, and CARB plans and requirements. These are summarized below.

EO S-3-05. EO S-3-05 (June 2005) established the following statewide goals: GHG emissions should be reduced to 2000 levels by 2010, GHG emissions should be reduced to 1990 levels by 2020, and GHG emissions should be reduced to 80% below 1990 levels by 2050.

Assembly Bill 32. In furtherance of the goals established in EO S-3-05, the legislature enacted Assembly Bill (AB) 32. The bill is referred to as the California Global Warming Solutions Act of 2006 (September 27, 2006). AB 32 provided initial direction on creating a comprehensive multi-year program to limit California's GHG emissions at 1990 levels by 2020 and initiate the transformations required to achieve the state's long-range climate objectives.

CARB's 2007 Statewide Limit. In 2007, in accordance with California Health and Safety Code, Section 38550, CARB approved a statewide limit on the GHG emissions level for year 2020 consistent with the determined 1990 baseline (427 MMT CO_2e).

CARB's Climate Change Scoping Plan. One specific requirement of AB 32 is for CARB to prepare a scoping plan for achieving the maximum technologically feasible and cost-effective GHG emission reductions by 2020 (California Health and Safety Code, Section 38561[a]), and to update the plan at least once every 5 years. In 2008, CARB approved the first scoping plan. The Climate Change Scoping Plan: A Framework for Change (Scoping Plan) included a mix of recommended strategies that combined direct regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs calculated to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the state's long-range climate objectives. The key elements of the Scoping Plan include the following (CARB 2008):

1. Expanding and strengthening existing energy efficiency programs as well as building and appliance standards.
2. Achieving a statewide renewable energy mix of 33%.
3. Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85% of California's GHG emissions.
4. Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets.
5. Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard (LCFS) (17 CCR 95480 et seq.).
6. Creating targeted fees, including a public goods charge on water use, fees on high-GWP gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.

The Scoping Plan also identified local governments as essential partners in achieving California's goals to reduce GHG emissions because they have broad influence and, in some cases, exclusive authority over activities that contribute to significant direct and indirect GHG emissions through their planning and permitting processes, local ordinances, outreach and education efforts, and municipal operations. Specifically, the Scoping Plan encouraged local governments to adopt a reduction goal for municipal operations and for community emissions to reduce GHGs by approximately 15% from then levels (2008) by 2020. Many local governments developed community-scale local GHG reduction plans based on this Scoping Plan recommendation.

In 2014, CARB approved the first update to the Scoping Plan. The First Update to the Climate Change Scoping Plan: Building on the Framework (First Update) defined the state's GHG emission reduction priorities for the next 5 years and laid the groundwork to start the transition to the post-2020 goals set forth in EO S-3-05 and EO B- 16-2012. The First Update concluded that California is on track to meet the 2020 target but recommended a 2030 mid-term GHG reduction target be established to ensure a continuum of action to reduce emissions (CARB 2014). The First Update recommended a mix of technologies in key economic sectors to reduce emissions through 2050 including energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies. As part of the First Update, CARB recalculated the state's 1990 emissions level, using more recent GWPs identified by the IPCC, from 427 MMT CO_2e to 431 MMT CO_2e (CARB 2014).

In 2015, as directed by EO B-30-15, CARB began working on an update to the Scoping Plan to incorporate the 2030 target of 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80% below 1990 levels by 2050 as set forth in EO S-3-05. Governor Jerry Brown called on California to pursue a new and ambitious set of strategies, in line with the five climate change

pillars from his inaugural address, to reduce GHG emissions and prepare for the unavoidable impacts of climate change. In the summer of 2016, the legislature affirmed the importance of addressing climate change through passage of SB 32 (Chapter 249, Statutes of 2016) (discussed below).

In December 2017, CARB adopted the 2017 Climate Change Scoping Plan Update (2030 Scoping Plan) (CARB 2017). The 2030 Scoping Plan builds on the successful framework established in the initial Scoping Plan and First Update, while identifying new, technologically feasible and cost-effective strategies that will serve as the framework to achieve the 2030 GHG target and define the state's climate change priorities to 2030 and beyond. The strategies' known commitments include implementing renewable energy and energy efficiency (including the mandates of SB 350), increased stringency of the LCFS, measures identified in the Mobile Source and Freight Strategies, measures identified in the proposed Short-Lived Climate Pollutant Plan, and increased stringency of SB 375 targets. To fill the gap in additional reductions needed to achieve the 2030 target, it recommends continuing the cap-and-trade program and a measure to reduce GHGs from refineries by 20%.

CARB released the *Draft 2022 Scoping Plan Update* in May 2022, which outlines the state's plan to reach carbon neutrality by 2045 or earlier, while also assessing the progress the state is making toward reducing GHG emissions by at least 40 percent below 1990 levels by 2030, as is required by SB 32 and laid out in the Second Update. The carbon neutrality goal requires CARB to expand proposed actions from only the reduction of anthropogenic sources of GHG emissions to also include those that capture and store carbon (e.g., through natural and working lands, or mechanical technologies). The carbon reduction programs build on and accelerate those currently in place, including moving to zero-emission transportation; phasing out use of fossil gas use for heating homes and buildings; reducing chemical and refrigerants with high GWP; providing communities with sustainable options for walking, biking, and public transit; displacement of fossil-fuel fired electrical generation through use of renewable energy alternatives (e.g., solar arrays and wind turbines); and scaling up new options such as green hydrogen[3] (CARB 2022).

The *Draft 2022 Scoping Plan Update* also emphasizes that there is no realistic path to carbon neutrality without carbon removal and sequestration, and to achieve the state's carbon neutrality goal, carbon reduction programs must be supplemented by strategies to remove and sequester carbon. Strategies for carbon removal and sequestration include carbon capture and storage (CCS) from anthropogenic point sources, where CO_2 is captured as it leaves a facility's smokestack and is injected into geologic formations or used in industrial materials (e.g., concrete); and carbon dioxide removal (CDR) from ambient air, through mechanical (e.g., direct air capture with sequestration [DACS]) or nature-based (e.g., management of natural and working lands) applications.

In July 2021, Governor Gavin Newsom directed CARB to accelerate efforts to achieve the state's climate stabilization and GHG reduction goals, including to "identify a pathway for achieving carbon neutrality a full decade earlier than the existing target of 2045."

CARB's Regulations for the Mandatory Reporting of Greenhouse Gas Emissions. CARB's Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (17 CCR 95100–95157) incorporated by reference certain requirements that EPA promulgated in its Final Rule on Mandatory Reporting of Greenhouse Gases (CFR 40, Part 98). Specifically, Section 95100(c) of the Mandatory Reporting Regulation incorporated those requirements that EPA promulgated in the Federal Register on October 30, 2009; July 12, 2010; September 22, 2010; October 28,

[3] Green hydrogen refers to hydrogen that is generated by renewable energy or from low-carbon power, and has significantly lower associated carbon emissions than grey hydrogen, which is produced using natural gas and makes up the majority of hydrogen production. For the purposes of the *Draft 2022 Scoping Plan*, the term "green hydrogen" is not limited to only electrolytic hydrogen produced from renewables.

2010; November 30, 2010; December 17, 2010; and April 25, 2011. In general, entities subject to the Mandatory Reporting Regulation that emit over 10,000 MT CO_2e per year are required to report annual GHGs through the California Electronic GHG Reporting Tool. Certain sectors, such as refineries and cement plants, are required to report regardless of emission levels. Entities that emit more than the 25,000 MT CO_2e per-year threshold are required to have their GHG emission report verified by a CARB-accredited third party.

Executive Order B-18-12. EO B-18-12 (April 2012) directed state agencies, departments, and other entities under the governor's executive authority to take action to reduce entity-wide GHG emissions by at least 10% by 2015 and 20% by 2020, as measured against a 2010 baseline. EO B-18-12 also established goals for existing state buildings for reducing grid-based energy purchases and water use.

Senate Bills 605 and 1383. Senate Bill (SB) 605 (2014) requires CARB to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants in the state, and SB 1383 (2016) requires CARB to approve and implement that strategy by January 1, 2018. SB 1383 also establishes specific targets for the reduction of short-lived climate pollutants (40% below 2013 levels by 2030 for CH_4 and HFCs, and 50% below 2013 levels by 2030 for anthropogenic black carbon), and provides direction for reductions from dairy and livestock operations and landfills. Accordingly, and as mentioned above, CARB adopted its Short-Lived Climate Pollutant Reduction Strategy in March 2017. The Short-Lived Climate Pollutant Reduction Strategy establishes a framework for the statewide reduction of emissions of black carbon, CH_4, and fluorinated gases.

Executive Order B-30-15. EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under EO S-3-05 and AB 32. EO B-30-15 set an interim target goal of reducing GHG emissions to 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing GHG emissions to 80% below 1990 levels by 2050 as set forth in EO S-3-05. To facilitate achieving this goal, EO B-30-15 called for CARB to update the Scoping Plan to express the 2030 target in terms of MMT CO_2e. The EO also called for state agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets.

Senate Bill 32 and Assembly Bill 197. SB 32 and AB 197 (enacted in 2016) are companion bills. SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, in order to provide ongoing oversight over implementation of the state's climate policies. AB 197 also added two members of the Legislature to the CARB Board as nonvoting members; requires CARB to make available and update (at least annually via its website) emissions data for GHGs, criteria air pollutants, and TACs from reporting facilities; and requires CARB to identify specific information for GHG emissions reduction measures when updating the Scoping Plan.

Executive Order B-55-18. EO B-55-18 (September 2018) establishes a new statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." This EO directs CARB to "work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal."

Assembly Bill 1279. The Legislature enacted AB 1279, the California Climate Crisis Act, in September 2022. The bill declares the policy of the state to achieve net zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter. Additionally, the bill requires that by 2045, statewide anthropogenic GHG emissions be reduced to at least 85% below 1990 levels.

Assembly Bill 1757. AB 1757 (September 2022) requires the CNRA to determine a range of targets for natural carbon sequestration, and for nature-based climate solutions that reduce GHG emissions for future years 2030, 2038, and 2045. These targets are to be determined by no later than January 1, 2024, and are established to support the state's goals to achieve carbon neutrality and foster climate adaptation and resilience.

Building Energy

Title 24, Part 6. Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically established Building Energy Efficiency Standards that are designed to ensure new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. These energy efficiency standards are reviewed every few years by the Building Standards Commission and the California Energy Commission (CEC) (and revised if necessary) (California Public Resources Code [PRC] Section 25402[b][1]). The regulations receive input from members of industry, as well as the public, with the goal of "reducing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy" (PRC Section 25402). These regulations are carefully scrutinized and analyzed for technological and economic feasibility (PRC Section 25402[d]) and cost effectiveness (PRC Sections 25402[b][2] and [b][3]). As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

The 2019 Title 24 standards are the currently applicable building energy efficiency standards, and became effective on January 1, 2020. The 2019 Title 24 Building Energy Efficiency Standards will further reduce energy used and associated GHG emissions compared to prior standards. In general, single-family residences built to the 2019 standards are anticipated to use approximately 7% less energy due to energy efficiency measures than those built to the 2016 standards; once rooftop solar electricity generation is factored in, single-family residences built under the 2019 standards will use approximately 53% less energy than those under the 2016 standards (CEC 2018). Nonresidential buildings built to the 2019 standards are anticipated to use an estimated 30% less energy than those built to the 2016 standards (CEC 2018).

Title 24, Part 11. In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as California's Green Building Standards (CALGreen Code), and establishes minimum mandatory standards and voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential and state-owned buildings and schools and hospitals. The CALGreen 2019 standards, which are the current standards, became effective January 1, 2020.

For nonresidential projects, some of the key mandatory CALGreen 2019 standards include the following (24 CCR, Part 11):

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).

- Designated parking for clean air vehicles. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 of the CALGreen Code (5.106.5.2).
- EV charging stations. Construction shall comply with Section 5.106.5.3.1 (single charging space requirements) or Section 106.5.3.2 (multiple charging space requirements) to facilitate future installation of EV supply equipment (EVSE). The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. Table 5.106.5.3.3 of the CALGreen Code shall be used to determine if single or multiple charging space requirements apply for the future installation of EVSE (5.106.5.3).[4]
- Shade trees. Shade trees shall be planted to comply with Sections 5.106.12.1 (surface parking areas), 5.106.12.2 (landscape areas), and 5.106.12.3 (hardscape areas). Percentages shown shall be measured at noon on the summer solstice. Landscape irrigation necessary to establish and maintain tree health shall comply with Section 5.304.6. (5.106.12).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
  - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
  - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor-mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
  - Showerheads. Single showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
  - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute/20 [rim space (inches) at 60 psi] (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle/20 [rim space (inches) at 60 psi] (5.303.3.4.5).
- Outdoor potable water use in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources (DWR) Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).
- Recycled water supply systems. Recycled water supply systems shall be installed in accordance with Sections 5.305.1.1 (outdoor recycled water supply systems), 5.305.1.2 (technical requirements for outdoor recycled water supply systems), and the California Plumbing Code (5.305.1).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1 (construction waste management plan). 5.405.1.2 (waste management company), or 5.408.1.3 (waste stream

[4] Table 5.106.5.3.3 of the CALGreen Code establishes a range of EV charging space requirements based on the total number of parking places of a project. At the minimum, no EV charging spaces are required if the project has a total of 0 to 9 parking spaces. At the maximum, 6% of the total parking spaces are required to be EV charging spaces for projects with a total number of actual parking spaces of 201 and over.

reduction alternative); or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).

- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily 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 (5.408.3).
- Commissioning. For new buildings 10,000 square feet and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements. Commissioning shall be performed in accordance with this section by trained personnel with experience on projects of comparable size and complexity (5.410.2).
- Outdoor Air Quality. Installations of HVAC, refrigeration, and fire suppression equipment shall comply with Section 5.508.1.1 (no CFCs) and Section 5.508.1.2 (no halons).

The CALGreen standards also include voluntary efficiency measures that are implemented at the discretion of local agencies and applicants.

The 2022 Title 24 standards will improve upon the 2019 standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The CEC updates the Title 24 Energy Code every 3 years. The CEC adopted the 2022 Title 24 Energy Code in August 2021 and the California Building Standards Commission approved incorporating the updated code into the CALGreen Code in December 2021. The 2022 Energy Code will go into effect on January 1, 2023. The 2022 Energy Code focuses on four key areas in newly constructed homes and businesses:

- Encouraging electric heat pump technology for space and water heating, which consumes less energy and produces fewer emissions than gas-powered units.
- Establishing electric-ready requirements for single-family homes to position owners to use cleaner electric heating, cooking, and EV charging options whenever they choose to adopt those technologies.
- Expanding solar photovoltaic (PV) system and battery storage standards to make clean energy available onsite and complement the state's progress toward a 100% clean electricity grid.
- Strengthening ventilation standards to improve indoor air quality.

The CALGreen Code instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, and state-owned buildings, as well as schools and hospitals. The current code is the 2019 California Building Code. The mandatory standards require the following:

- In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for low-emitting, fuel-efficient and carpool/van pool vehicles.
- Construction shall facilitate future installation of EV supply equipment.
- Shade trees shall be planted to comply with specifications for surface parking areas, landscape areas, and hardscape areas.
- Water conserving plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with efficiency standards.
- Outdoor potable water use in landscaped areas shall comply with a local water efficient landscape ordinance or the current DWR Model Water Efficient Landscape Ordinance, whichever is more stringent.

- Outdoor recycled water supply systems shall be installed in accordance with applicable state codes.
- Installations of heating, ventilation, and air conditioning (HVAC); refrigeration; and fire suppression equipment shall comply with specified standards.

CALGreen standards also include voluntary efficiency measures that are implemented at the discretion of agencies and applicants.

Title 20. Title 20 of the California Code of Regulations requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. The CEC certifies an appliance based on a manufacturer's demonstration that the appliance meets the standards. New appliances regulated under Title 20 include refrigerators, refrigerator-freezers, and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwashers; clothes washers and dryers; cooking products; electric motors; low-voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems.

Senate Bill 1. SB 1 (August 2006, "Go Solar California" or "Million Solar Roofs") established a $3 billion rebate program to support the goal of the state to install rooftop solar energy systems with a generation capacity of 3,000 megawatts through 2016. The goals included establishing solar energy systems as a viable mainstream option for both homes and businesses within 10 years of adoption, and placing solar energy systems on 50% of new homes within 13 years of adoption.

Assembly Bill 1470 (Solar Water Heating). This bill established the Solar Water Heating and Efficiency Act of 2007. The bill includes findings and declarations of the legislature relating to the promotion of solar water heating systems and other technologies that reduce natural gas demand.

Renewable Energy and Energy Procurement

Senate Bill 1078. SB 1078 (September 2002) established the Renewables Portfolio Standard (RPS) program, which required an annual increase in renewable generation by the utilities equivalent to at least 1% of sales, with an aggregate goal of 20% by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20% of their power from renewable sources by 2010 (EO S-14-08 and EO S-21-09).

Senate Bill 1368. SB 1368 (September 2006) required the CEC to develop and adopt regulations for GHG emission performance standards for the long-term procurement of electricity by local publicly owned utilities.

Assembly Billl 1109. Enacted in 2007, AB 1109 required the CEC to adopt minimum energy efficiency standards for general-purpose lighting, to reduce electricity consumption by 50% for indoor residential lighting and 25% for indoor commercial lighting.

Executive Order S-14-08. EO S-14-08 (November 2008) focused on the contribution of renewable energy sources to meet the electrical needs of California while reducing the GHG emissions from the electrical sector. This EO required that all retail suppliers of electricity in California serve 33% of their load with renewable energy by 2020.

Executive Order S-21-09 and Senate Bill X1-2. EO S-21-09 (September 2009) directed CARB to adopt a regulation consistent with the goal of EO S-14-08 by July 31, 2010. On September 23, 2010, CARB initially approved

regulations to implement a Renewable Electricity Standard. However, this regulation was not finalized because of subsequent legislation (SB X1-2, Simitian, Statutes of 2011) signed by Governor Brown in April 2011.

SB X1-2 expanded the RPS by establishing a renewable energy target of 20% of the total electricity sold to retail customers in California per year by December 31, 2013, and 33% by December 31, 2020, and in subsequent years. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation (30 megawatts or less), digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and that meets other specified requirements with respect to its location. SB X1-2 applies to all electricity retailers in the state including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators.

Senate Bill 350. SB 350 (October 2015, Clean Energy and Pollution Reduction Act) further expanded the RPS by establishing a goal of 50% of the total electricity sold to retail customers in California per year be from renewable energy sources by December 31, 2030. In addition, SB 350 included the goal to double the energy efficiency savings in electricity and natural gas final end uses (e.g., heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the California Public Utilities Commission, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal. Regarding mobile sources, as one of its elements, SB 350 establishes a statewide policy for widespread electrification of the transportation sector, recognizing that such electrification is required for achievement of the state's 2030 and 2050 reduction targets (see California Public Utilities Code Section 740.12).

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

Senate Bill 1020. SB 1020 (September 2022) revises the standards from SB 100, requiring the following percentage of retail sales of electricity to California end-use customers to come from eligible renewable energy resources and zero-carbon resources: 90% by December 31, 2035, 95% by December 31, 2040, and 100% by December 31, 2045.

Mobile Sources

State Vehicle Standards (Assembly Bill 1493 and Executive Order B-16-12). AB 1493 (July 2002) was enacted in response to the transportation sector accounting for more than half of California's CO_2 emissions. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles that are primarily used for noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004. EO B-16-12 (March 2012) required that state entities under the governor's direction and control support and facilitate the rapid commercialization of zero-emissions vehicles. It ordered CARB, CEC, California Public Utilities Commission, and other relevant agencies to work with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to help achieve benchmark goals by 2015, 2020, and 2025. On a statewide basis, EO B-16-12 established a target reduction of GHG emissions from the transportation sector equaling 80% less than 1990 levels by 2050. This

directive did not apply to vehicles that have special performance requirements necessary for the protection of the public safety and welfare. As explained under the "Federal Vehicle Standards" description above, EPA and NHTSA approved the SAFE Vehicles Rule Part One and Two, which revoked California's authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. As the Biden Administration issued an EO to review Part One and Part Two, this analysis continues to utilize the best available information at this time, as set forth in EMFAC.

Heavy Duty Diesel. CARB adopted the final Heavy-Duty Truck and Bus Regulation, Title 13, Division 3, Chapter 1, Section 2025, on December 31, 2014, to reduce particulate matter and NO_x emissions from heavy-duty diesel vehicles. The rule requires particulate matter filters be applied to newer heavier trucks and buses by January 1, 2012, with older vehicles required to comply by January 1, 2015. The rule will require nearly all diesel trucks and buses to be compliant with the 2010 model year engine requirement by January 1, 2023. CARB also adopted an Airborne Toxic Control Measure to limit idling of diesel-fueled commercial vehicles on December 12, 2013. This rule requires diesel-fueled vehicles with gross vehicle weights greater than 10,000 pounds to idle no more than 5 minutes at any location (13 CCR 2485).

Executive Order S-1-07. EO S-1-07 (January 2007, implementing regulation adopted in April 2009) sets a declining LCFS for GHG emissions measured in CO_2e grams per unit of fuel energy sold in California. The target of the LCFS is to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020 (17 CCR 95480 et seq.). In September 2018, CARB approved amendments for the LCFS that require a 20% reduction in carbon intensity by year 2030. The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered.

Senate Bill 375. SB 375 (September 2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 requires CARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035 and to update those targets every 8 years. SB 375 requires each of the state's 18 regional metropolitan planning organizations to prepare a Sustainable Communities Strategy (SCS) as part of their Regional Transportation Plan (RTP) that will achieve the GHG reduction targets set by CARB. If a metropolitan planning organization is unable to devise an SCS to achieve the GHG reduction target, the metropolitan planning organization must prepare an alternative planning strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

Pursuant to Government Code Section 65080(b)(2)(K), a SCS does not (1) regulate the use of land; (2) supersede the land use authority of cities and counties; or (3) require that a city's or county's land use policies and regulations, including those in a general plan, be consistent with it. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing those strategies as part of the federally required metropolitan transportation planning process and the state-mandated housing element process.

In September 2010, CARB adopted the first SB 375 targets for the regional metropolitan planning organizations. The targets for the Southern California Association of Governments (SCAG) are an 8% reduction in emissions per capita by 2020 and a 13% reduction by 2035. Achieving these goals through adoption of an SCS is the responsibility of the metropolitan planning organizations. SCAG adopted its first RTP/SCS in April 2012. The plan quantified a 9% reduction by 2020 and a 16% reduction by 2035 (SCAG 2012). In June 2012, CARB accepted SCAG's quantification of GHG reductions and its determination the SCS, if implemented, would achieve SCAG targets. On April 4, 2016, the SCAG Regional Council adopted the 2016 RTP/SCS, which builds upon the progress made in the 2012

RTP/SCS. The updated RTP/SCS quantified an 8% reduction by 2020 and an 18% reduction by 2030 (SCAG 2016). In June 2016, CARB accepted SCAG's quantification of GHG reductions and its determination that the SCS, if implemented, would achieve SCAG targets. In March 2018, CARB approved SCAG's updated targets of an 8% reduction by 2020 and a 19% reduction by 2030, effective October 1, 2018, which are consistent with the reduction targets from the Connect SoCal (2020–2045 RTP/SCS). In September 2020, SCAG adopted its 2020–2045 RTP/SCS and CARB accepted the 2020–2045 RTP/SCS emission quantification in October 2020.

Advanced Clean Cars Program and Zero-Emissions Vehicle Program. The Advanced Clean Cars Program (January 2012) is a new emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package. The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars (CARB 2012). To improve air quality, CARB has implemented new emission standards to reduce smog-forming emissions beginning with 2015 model year vehicles. To reduce GHG emissions, CARB, in conjunction with the EPA and the NHTSA, adopted new GHG standards for model year 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34% in 2025. The Zero-Emissions Vehicle Program will act as the focused technology of the Advanced Clean Cars Program by requiring manufacturers to produce increasing numbers of zero-emissions vehicles and plug-in hybrid EVs in the 2018 to 2025 model years.

Assembly Bill 1236. AB 1236 (October 2015) required a city, county, or city and county to approve an application for the installation of EV charging stations, as defined, through the issuance of specified permits, unless the city or county makes specified written findings based upon substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety, and there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. The bill provided for appeal of that decision to the planning commission, as specified. The bill provided that the implementation of consistent statewide standards to achieve the timely and cost-effective installation of EV charging stations is a matter of statewide concern. The bill required EV charging stations to meet specified standards. The bill required a city, county, or city and county with a population of 200,000 or more residents to adopt an ordinance, by September 30, 2016, that created an expedited and streamlined permitting process for EV charging stations, as specified. The bill also required a city, county, or city and county with a population of less than 200,000 residents to adopt this ordinance by September 30, 2017.

Solid Waste

Assembly Bills 939, 341, and 1826. In 1989, AB 939, known as the Integrated Waste Management Act (California Public Resources Code, Sections 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board, which oversees a disposal reporting system. AB 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25% by 1995 and 50% by the year 2000.

AB 341 (Chapter 476, Statutes of 2011) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75% of solid waste generated be source-reduced, recycled, or composted by the year 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery (CalRecycle) to develop strategies to achieve the state's policy goal. CalRecycle conducted several general stakeholder workshops and several focused workshops and in August 2015 published a discussion document titled AB 341 Report to the Legislature, which identifies five priority strategies that CalRecycle believes would assist the state in reaching the 75% goal by 2020, legislative and regulatory recommendations, and an evaluation of program effectiveness (CalRecycle 2012).

AB 1826 (Chapter 727, Statutes of 2014, effective 2016) requires businesses to recycle their organic waste (i.e., food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste) depending on the amount of waste they generate per week. This law also requires local jurisdictions across the state to implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. The minimum threshold of organic waste generation by businesses decreases over time, which means an increasingly greater proportion of the commercial sector will be required to comply.

Water

Executive Order B-29-15. In response to the ongoing drought in California, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25% relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have become permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the DWR has modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

Executive Order B-37-16. Issued May 2016, EO B-37-16 directed the State Water Resources Control Board (SWRCB) to adjust emergency water conservation regulations through the end of January 2017 to reflect differing water supply conditions across the state. The SWRCB also developed a proposal to achieve a mandatory reduction of potable urban water usage that builds off the mandatory 25% reduction called for in EO B-29-15. The SWRCB and DWR will develop new, permanent water use targets that build upon the existing state law requirements that the state achieve 20% reduction in urban water usage by 2020. EO B-37-16 also specifies that the SWRCB permanently prohibit water-wasting practices such as hosing off sidewalks, driveways, and other hardscapes; washing automobiles with hoses not equipped with a shut-off nozzle; using non-recirculated water in a fountain or other decorative water feature; watering lawns in a manner that causes runoff, or within 48 hours after measurable precipitation; and irrigating ornamental turf on public street medians. In November, 2021,the DWR and SWRCB submitted a report to the Legislature recommending that urban water suppliers achieve an indoor water use efficiency standard of 55 gallons per capita per day by 2023, declining to 47 gallons per day by 2025, and 42 gallons by 2030 and beyond. If adopted by the Legislature, the standards recommended by DWR and SWRCB would be implemented at the water supplier level and would not apply to individual customers.

Other State Actions

Senate Bill 97. SB 97 (August 2007) directed the Governor's Office of Planning and Research to develop guidelines under the California Environmental Quality Act (CEQA) for the mitigation of GHG emissions. In 2008, the Office of Planning and Research issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents. The advisory indicated that the lead agency should identify and estimate a project's GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities (OPR 2008). The advisory further recommended that the lead agency determine significance of the impacts and impose all mitigation measures necessary to reduce GHG emissions to a level that is less than significant. CNRA adopted the CEQA Guidelines amendments in December 2009, which became effective in March 2010.

Under the amended CEQA Guidelines, a lead agency has the discretion to determine whether to use a quantitative or qualitative analysis or apply performance standards to determine the significance of GHG emissions resulting

from a particular project (14 CCR 15064.4[a]). The CEQA Guidelines require a lead agency to consider the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]). The CEQA Guidelines also allow a lead agency to consider feasible means of mitigating the significant effects of GHG emissions, including reductions in emissions through the implementation of project features or off-site measures. The adopted amendments do not establish a GHG emission threshold, but instead allow a lead agency to develop, adopt, and apply its own thresholds of significance or those developed by other agencies or experts. CNRA also acknowledges that a lead agency may consider compliance with regulations or requirements implementing AB 32 in determining the significance of a project's GHG emissions (CNRA 2009a).

With respect to GHG emissions, the CEQA Guidelines state in Section 15064.4(a) that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. The CEQA Guidelines note that an agency may identify emissions by either selecting a "model or methodology" to quantify the emissions or by relying on "qualitative analysis or other performance-based standards" (14 CCR 15064.4[a]). Section 15064.4(b) states that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment: (1) the extent a project may increase or reduce GHG emissions as compared to the existing environmental setting; (2) whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4[b]).

Executive Order S-13-08. EO S-13-08 (November 2008) is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. Therefore, the EO directs state agencies to take specified actions to assess and plan for such impacts. The final 2009 California Climate Adaptation Strategy report was issued in December 2009 (CNRA 2009b), and an update, Safeguarding California: Reducing Climate Risk, followed in July 2014 (CNRA 2014). To assess the state's vulnerability, the report summarizes key climate change impacts to the state for the following areas: agriculture, biodiversity and habitat, emergency management, energy, forestry, ocean and coastal ecosystems and resources, public health, transportation, and water. Issuance of the Safeguarding California: Implementation Action Plans followed in March 2016 (CNRA 2016). In January 2018, the CNRA released the Safeguarding California Plan: 2018 Update, which communicates current and needed actions that state government should take to build climate change resiliency (CNRA 2018b).

Local

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

Mojave Desert Air Quality Management District

The Project is within the Mojave Desert Air Basin portion of San Bernardino County, which is under the jurisdiction of the Mojave Desert Air Quality Management District (MDAQMD). The MDAQMD has adopted GHG emissions thresholds in its CEQA Guidelines, but has not adopted a comprehensive strategy for reducing GHG emissions. The MDAQMD threshold is 100,000 tons of CO_2e per year, or approximately 90,718 MT CO_2e per year (MDAQMD 2016).

Southern California Association of Governments

SB 375 requires metropolitan planning organizations to prepare and include an SCS in their RTP. The SCAG Regional Council adopted the 2012 RTP/SCS in April 2012 (SCAG 2012), the 2016–2040 RTP/SCS (2016

RTP/SCS) was adopted in April 2016, and the 2020-2045 RTP/SCS (2020 RTP/SCS or Connect SoCal) was adopted in September 2020. Please see Section 4.10, Transportation, for a discussion of SCAG's Connect SoCal, the 2020–2045 RTP/SCS. The 2012, 2016, and 2020 RTP/SCSs establish a development pattern for the region that, when integrated with the transportation network and other policies and measures, would reduce GHG emissions from transportation (excluding goods movement). The RTP/SCSs link the goals of sustaining mobility with the goals of fostering economic development; enhancing the environment; reducing energy consumption; promoting transportation-friendly development patterns; and encouraging all residents affected by socioeconomic, geographic, and commercial limitations to be provided with fair access. The RTP/SCSs do not require that local general plans, specific plans, or zoning be consistent with it but provide incentives for consistency for governments and developers.

General Plan

Policies pertaining to reducing GHGs are addressed in the Conservation Element of the General Plan (City of Hesperia 2010b). The following policies from the Conservation Element are applicable to the Project:

Goal CN-1. Conserve water resources within the Upper Mojave River Groundwater Basin.

Policy CN-1.1. Promote the use of desert vegetation with low water usage and drought tolerant materials in landscaped areas.

Policy CN-1.6. Encourage the use of low-water consumption fixtures in homes and businesses.

Goal CN-2. Establish building and development standards to maximize the reclamation of water resources.

Policy CN-2.2. Encourage the use of reclaimed water for irrigation and other non-potable uses.

Goal CN-6. Provide programs and incentives to encourage residents, businesses and developers to reduce consumption and efficiently use energy resources.

Policy CN-6.2. Encourage the use of green building standards and Leadership in Energy and Environmental Design (LEED) or similar programs in both private and public projects.

Goal CN-7. Develop, promote and implement policies to reduce and limit GHG emissions.

Policy CN-7.4. Promote the utilization of alternative energy resources such as wind and solar in new development.

Policy CN-7.5. Promote the utilization of environmentally sensitive construction materials to limit impacts on the ozone, global climate change and mineral resources.

Policy CN-7.7. Promote energy conservation through site layout, building design, natural light and efficient mechanical and electrical products in development.

Policy CN-7.8. Continue the existing recycling program and utilization of the material recovery facility program while exploring additional methods of reducing waste.

Policy CN-7.9. Promote sustainable principles in development that conserves such natural resources as air quality and energy resources.

Climate Action Plan

On July 20, 2010, the City of Hesperia adopted the Climate Action Plan (CAP), which provides a framework for reducing GHG emissions and managing resources to best prepare for a changing climate (City of Hesperia 2010b). The CAP recommends GHG emissions targets that are consistent with the reduction targets of the State of California and presents a number of strategies that will make it possible for the City to meet the recommended targets. Strategy CAP-1 specifies "projects that are consistent with this CAP could result in less than significant impacts regarding climate change" because GHG emissions from these projects are generally accounted for in this CAP and would be consistent with this CAP reduction target. To be consistent with this CAP, CEQA projects must implement the applicable implementation strategies listed in Section 4.2 of the CAP. Per CAP Implementation Action 1.5 (CAP- 1.5), projects that require a discretionary approval shall reduce operational GHG emissions by at least 12% without accounting for regulations discussed in the CAP.

4.6.3 Thresholds of Significance

The significance criteria used to evaluate the Project impacts to greenhouse gases/climate change are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to greenhouse gas emissions would occur if the Project would:

A. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
B. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.
C. Result in cumulatively considerable impacts with regard to greenhouse gas emissions.

The City has not adopted a numeric significance threshold for determining significant impacts associated with GHG emissions. Air districts typically act in an advisory capacity to local governments in establishing the framework for environmental review of air pollution impacts under CEQA. This may include recommendations regarding significance thresholds, analytical tools to estimate emissions and assess impacts, and mitigations for potentially significant impacts. Although air districts will also address some of these issues on a project-specific basis as responsible agencies, they may provide general guidance to local governments on these issues (SCAQMD 2008). While the Project is located within the jurisdiction of the MDAQMD, both MDAQMD and the South Coast Air Quality Management District (SCAQMD) recommended thresholds are discussed below. Because SCAQMD's thresholds are more stringent and are backed by substantial evidence from an expert agency, the SCAQMD's recommended thresholds are utilized for determining the potential significance of impacts for the Project, as discussed below.

On May 13, 2010, EPA finalized the GHG Tailoring Rule (75 FR 31514, June 3, 2010). The Tailoring Rule sets major source emissions thresholds that define when federal operating permits under Prevention of Significant Deterioration (PSD) or Title V are required. The Tailoring Rule establishes a threshold of 100,000 tons per year or 90,719 MT per year of GHGs from new sources above which sources are considered major sources requiring a federal operating permit. As such, the MDAQMD has adopted a significance threshold for GHGs of 100,000 tons per year. More specifically, 100,000 tons per year of GHG emissions from a single facility constitutes major sources that require a federal operating permit. Similarly, the MDAQMDs NO_x significance threshold of 25 tons per year is equal to the major source threshold applicable to areas designated severe non-attainment for ozone. As such, use of the EPA's determination of whether a Project is a major source and consequently establishing a threshold based on that is supported by substantial evidence.

The SCAQMD, which oversees the adjacent South Coast Air Basin, has recommended more stringent numeric CEQA significance thresholds for GHG emissions for lead agencies to use in assessing GHG impacts of residential and commercial development projects; however, these thresholds were not adopted. The SCAQMD formed a GHG CEQA Significance Threshold Working Group to work with SCAQMD staff on developing GHG CEQA significance thresholds until statewide significance thresholds or guidelines are established. From December 2008 to September 2010, the SCAQMD hosted working group meetings and revised the draft threshold proposal several times, although it did not officially provide these proposals in a subsequent document. The SCAQMD has continued to consider adoption of significance thresholds for residential and general land use development projects. The most recent proposal, issued in September 2010, uses the following tiered approach to evaluate potential GHG impacts from various uses (SCAQMD 2010):

Tier 1 Determine if CEQA categorical exemptions are applicable. If not, move to Tier 2.

Tier 2 Consider whether or not the proposed project is consistent with a locally adopted GHG reduction plan that has gone through public hearing and CEQA review, that has an approved inventory, includes monitoring, etc. If not, move to Tier 3.

Tier 3 Consider whether the project generates GHG emissions in excess of screening thresholds for individual land uses. The 10,000 MT CO_2e per year threshold for industrial uses and stationary projects would be recommended for use by all lead agencies. Under option 1, separate screening thresholds are proposed for residential projects (3,500 MT CO_2e per year), commercial projects (1,400 MT CO_2e per year), and mixed-use projects (3,000 MT CO_2e per year). Under option 2, a single numerical screening threshold of 3,000 MT CO_2e per year would be used for all non-industrial projects. If the project generates emissions in excess of the applicable screening threshold, move to Tier 4.

Tier 4 Consider whether the project generates GHG emissions in excess of applicable performance standards for the project service population (population plus employment). The efficiency targets were established based on the goal of AB 32 to reduce statewide GHG emissions to 1990 levels by 2020. The 2020 efficiency targets are 4.8 MT CO_2e per service population for project level analyses and 6.6 MT CO_2e per service population for plan level analyses. If the project generates emissions in excess of the applicable efficiency targets, move to Tier 5.

Tier 5 Consider the implementation of CEQA mitigation (including the purchase of GHG offsets) to reduce the project efficiency target to Tier 4 levels.

Based on the supporting analysis outlined in SCAQMD's draft GHG guidance and meeting notes, this 3,000 MT CO_2e per year level would capture 90 percent of GHG emissions from new residential or commercial projects in the region (SCAQMD 2008). This type of market capture analysis captures a substantial fraction of the GHG emissions from future development to accommodate for future population and job growth and excludes small development projects that would contibute a relatively small fraction of the cumulative statewide GHG emissions.

While the City has not adopted a numeric significance threshold, the City has previously relied on use of the 3,000 MT CO_2e per year threshold to evaluate the potential for the Project to resut in a signficnat GHG emissions impact under CEQA because it has been recommended by SCAQMD and SCAQMD is an expert agency in the Southern California region. Further, the SCAQMD provides substantial evidence that the thresholds are consistent with policy goals and 2050 GHG emissions reduction targets set by the State. Specifically, the thresholds were set at levels

that capture 90% of the GHG emissions form the above-described uses, consistent with EO S-3-05 target of reducing GHGs to 80% below 1990 levels by 2050.

Methodology

Emissions from construction and operation of the Project and existing land uses were estimated using the CalEEMod Version 2020.4.0.[5] Notably, the latest version of CalEEMod uses vehicle emission rates obtained from the EMissions FACtor model (EMFAC) 2017 web database (CAPCOA 2021). EMFAC2017 emission rates of all vehicle categories are based on aggregated model year and aggregated speed for all counties, air basins, air districts and statewide average for 31 scenario years that each includes three seasons (annual, summer, and winter).

Construction

Construction of the Project would result in GHG emissions primarily associated with use of off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. All details for construction criteria air pollutants discussed in Section 4.2.3 (Methodology, Construction Emissions subsection) of Section 4.2, Air Quality, are also applicable for the estimation of construction-related GHG emissions. See Section 4.2.3 for a discussion of construction emissions calculation methodology and assumptions used in the GHG emissions analysis.

Operation

Project operations would generate CO_2, CH_4, and N_2O emissions. Primary emissions sources would include:

- Area Source (landscape and site maintenance activities)
- Energy Source (combustion emissions associated with natural gas and electricity)
- Mobile Source (vehicles)
- On-Site Equipment Emissions
- Solid Waste
- Water Supply, Treatment, and Distribution

Area Source Emissions. Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. The emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod.

Energy Source Emissions. GHGs are emitted from buildings as a result of activities for which electricity and natural gas are typically used as energy sources. Combustion of any type of fuel emits CO_2 and other GHGs directly into the atmosphere; these emissions are considered direct emissions associated with a building; the building energy use

[5] CalEEMod is a statewide computer model developed in cooperation with air districts throughout the state to quantify criteria air pollutant emissions associated with the construction and operational activities from a variety of land use projects, such as residential, commercial, and industrial facilities. CalEEMod input parameters, including the Project land use type and size and construction schedule were based on information provided by the Project applicant, or default model assumptions if Project specifics were unavailable.

emissions do not include street lighting.[6] GHGs are also emitted during the generation of electricity from fossil fuels; these emissions are considered to be indirect emissions. GHG emissions associated with the natural gas and electricity usage associated with the Project were calculated by CalEEMod using default parameters.

Mobile Source Emissions. All details for criteria air pollutants discussed in Section 4.2, Air Quality, are also applicable for the estimation of operational mobile source GHG emissions. It was assumed that the warehouse would operate 7 days per week; therefore, 365 days of vehicle emissions were assumed. Regulatory measures related to mobile sources include AB 1493 (Pavley) and related federal standards. AB 1493 required that CARB establish GHG emission standards for automobiles, light-duty trucks, and other vehicles determined by CARB to be vehicles that are primarily used for noncommercial personal transportation in the state. In addition, the NHTSA and EPA have established corporate fuel economy standards and GHG emission standards, respectively, for automobiles and light-, medium-, and heavy-duty vehicles. Implementation of these standards and fleet turnover (replacement of older vehicles with newer ones) will gradually reduce emissions from the Project's motor vehicles. The effectiveness of fuel economy improvements was evaluated to the extent it was captured in the EMFAC2017 emission factors for motor vehicles in 2024.

On-Site Equipment Source Emissions. It is common for industrial buildings to require cargo handling equipment to move empty containers and empty chassis to and from the various pieces of cargo handling equipment that receive and distribute containers. The most common type of cargo handling equipment forklifts, pallet jacks and yard trucks which are designed for moving cargo containers. Yard trucks are also known as yard goats, utility tractors, hustlers, yard hostlers, and yard tractors. The cargo handling equipment is assumed to have a horsepower (hp) range of approximately 175 hp to 215 hp. For this particular Project, based on the maximum square footage of building space permitted by the Project, on-site modeled operational equipment includes a total of 50, electric-powered forklifts (forklifts and pallet jacks) and 2 electric-powered yard tractors operating at 8 hours a day for 365 days of the year. See Appendix B-2 for detail calculations.

Solid Waste. Industrial land uses will result in the generation and disposal of solid waste. A large percentage of this waste will be diverted from landfills by a variety of means, such as reducing the amount of waste generated, recycling, and/or composting. The remainder of the waste not diverted will be disposed of at a landfill. GHG emissions from landfills are associated with the anaerobic breakdown of material. GHG emissions associated with the disposal of solid waste associated with the Project were calculated by CalEEMod using default parameters.

Water Supply, Treatment, and Distribution. Indirect GHG emissions result from the production of electricity used to convey, treat, and distribute water and wastewater. The amount of electricity required to convey, treat, and distribute water depends on the volume of water as well as the sources of the water. GHG emissions associated with Project water consumption were calculated by CalEEMod using default parameters.

Project Design Features

The Project incorporates and expresses the following Project design features (PDFs) and attributes promoting energy efficiency and sustainability. Because these PDFs/attributes are integral to the Project, and/or are regulatory requirements, they are not considered to be mitigation measures. In addition, PDF-AQ-1, Zero-Emissions Off-Road Equipment has attributes promoting energy efficiency and sustainability.

[6] The CalEEMod emissions inventory model does not include indirect emission related to street lighting. Indirect emissions related to street lighting are expected to be negligible and cannot be accurately quantified at this time as there is insufficient information as to the number and type of street lighting that would occur.

PDF-GHG-1, Water Conversation. To reduce water demands and associated energy use, subsequent development proposals within the Project site would be required to implement a Water Conservation Strategy and demonstrate a minimum 20% reduction in indoor and outdoor water usage when compared to baseline water demand (total expected water demand without implementation of the Water Conservation Strategy). To implement this PDF, prior to the issuance of building permits for the Project, the Project applicant shall provide building plans that include the following water conservation measures:

- Install low-water use appliances and fixtures
- Restrict the use of water for cleaning outdoor surfaces and prohibit systems that apply water to non-vegetated surfaces
- Implement water-sensitive urban design practices in new construction
- Install rainwater collection systems where feasible.

PDF-GHG-2, Solid Waste Reduction. In order to reduce the amount of waste disposed at landfills, the Project would implement a 75% waste diversion program. To implement this PDF, prior to the issuance of building permits for the Project, the Project applicant shall provide building plans that include the following solid waste reduction measures:

- Provide storage areas for recyclables and green waste in new construction, and food waste storage, if a pick-up service is available.
- Evaluate the potential for onsite composting.

4.6.4 Impacts Analysis

Threshold A: Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Significant and Unavoidable Impact. MDAQMD follows the SCAQMD recommendation in calculating the total GHG emissions for construction activities by amortizing the emissions over the life of a project. This is done by dividing construction-period GHG emissions by a 30-year Project life then adding that number to the annual operational phase GHG emissions. As such, Project construction emissions were amortized over a 30-year period and added to the annual operational phase GHG emissions. The amortized construction emissions are presented in Table 4.6-3.

Table 4.6-3. Estimated Annual Construction GHG Emissions

Year	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
2023	623.75	0.08	0.03	633.34
			Amortized Construction Emissions	*21.11*

Notes: GHG = greenhouse gas; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent.
See Appendix C-1 for complete results.

As shown in Table 4.6-3, total estimated GHG emissions generated during construction of the Project are approximately 633 MT CO_2e. Estimated Project-generated construction emissions amortized over 30 years would be approximately 21 MT CO_2e per year.

Long-term operations of the Project would result in GHG emissions through mobile sources and on-site equipment, area sources (landscape maintenance equipment); energy use (natural gas and generation of electricity consumed by the Project); generation of electricity associated with wastewater treatment and with water supply, treatment, and distribution; and solid waste disposal. Annual GHG emissions from these sources were estimated using CalEEMod.

As explained in Section 4.6.2, the Project would be required to comply with all mandates imposed by the State of California and the MDAQMD. Not all of the applicable regulatory measures would directly lead to quantifiable emissions reductions for the Project. Therefore, not all of the above regulatory measures were quantified in this analysis. As discussed above in Section 4.6.3, in the Project Design Features, the regulatory measures that were quantified include the Renewable Portfolio Standards, Title 24 building code, the Pavley Fuel Efficiency Standards and reductions associated with PDF-GHG-1 and PDF-GHG-2. The Project's estimated annual GHG emissions with regulatory requirements and PDFs in place are shown in Table 4.6-4.

Table 4.6-4. Estimated Annual Operational GHG Emissions

Emission Source	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Area Source	0.02	<0.01	0.00	0.02
Energy Source	652.81	0.04	0.01	656.39
Mobile Sources	5,016.14	0.05	0.51	5,170.66
On-Site Equipment Sources	143.52	0.01	<0.01	144.21
Solid Waste	22.00	1.30	0.00	54.51
Water/Wastewater	206.67	2.52	0.06	287.7
Annual construction-related emissions amortized over 30 years				*21.11*
Total Project Emissions				**6,334.60**

Notes: GHG = greenhouse gas; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent; PDFs = Project design features.
See Appendix I for complete results.

As shown in Table 4.6-4, with applicable regulatory requirements and PDFs, the Project would result in approximately 6,335 MT CO_2e per year, which would exceed the SCAQMD GHG threshold of 3,000 MT CO_2e per year. Therefore, the Project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, and this would represent a cumulatively potentially significant impact. Mitigation measures would be required that would reduce Project-generated construction and operational GHG emissions. Mitigation measures MM-GHG-1 through MM-GHG-4 would reduce construction and operation-related GHG emissions. However, the effectiveness of the required mitigation measures cannot be accurately quantified at this time. No other feasible mitigation is available to further reduce GHG emissions from the Project. Therefore, Project-generated GHG emissions would still exceed the applied threshold of 3,000 MT CO_2e per year and impact would be significant and unavoidable.

Threshold B: Would the Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less-than-Significant Impact. As previously stated, pursuant to 15604.4 of the CEQA Guidelines, a lead agency may rely on qualitative analysis or performance-based standards to determine the significance of impacts from GHG emissions. As such, the Project's consistency with SB 32 (2017 Scoping Plan) and the City's CAP, is discussed below. It should be noted that the Project's consistency with the 2017 Scoping Plan also satisfies consistency with AB 32 since the 2017 Scoping Plan is based on the overall targets established by AB 32. Consistency with the 2008 Scoping Plan is not necessary, since the target year for the 2008 Scoping Plan was 2020, and the Project's buildout year is 2024. As such, the 2008 Scoping Plan does not apply and consistency with the 2017 Scoping Plan is relevant.

2017 Scoping Plan Consistency

The *2017 Scoping Plan* Update reflects the 2030 target of a 40% reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32. Table 4.6-5 summarizes the Project's consistency with the *2017 Scoping Plan*. As summarized in Table 4.6-7, the Project will not conflict with any of the provisions of the *Scoping Plan* and in fact supports seven of the action categories.

Table 4.6-5. Consistency with 2017 Scoping Plan

Action	Responsible Parties	Consistency
Implement SB 350 by 2030		
Increase the Renewables Portfolio Standard to 50% of retail sales by 2030 and ensure grid reliability.	California Public Utilities Commission, California Energy Commission (CEC), California Air Resources Board (CARB)	Consistent. The Project would use energy from Southern California Edison (SCE). SCE has committed to diversify its portfolio of energy sources by increasing energy from wind and solar sources. The Project would not interfere with or obstruct SCE energy source diversification efforts.
Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030.		Consistent. The Project would be constructed in compliance with the current California Building Code requirements at the time of construction. Specifically, new buildings must achieve compliance with the applicable 2019 or 2022 Building and Energy Efficiency Standards and the 2019 or 2022 California Green Building Standards requirements. The Project includes energy efficient field lighting and fixtures that meet the current Title 24 Standards throughout the Project Site and would be a modern development with energy efficient boilers, heaters, and air conditioning systems.
Reduce GHG emissions in the electricity sector through the implementation of the above measures and other actions as modeled in Integrated Resource Planning (IRP) to meet GHG emissions reductions planning targets in the IRP process. Load-serving entities and publicly- owned utilities meet GHG emissions reductions planning targets through a combination of measures as described in IRPs.		

Table 4.6-5. Consistency with 2017 Scoping Plan

Action	Responsible Parties	Consistency
Implement Mobile Source Strategy (Cleaner Technology and Fuels)		
At least 1.5 million zero emission and plug-in hybrid light-duty EVs by 2025.	CARB, California State Transportation Agency (CalSTA), Strategic Growth Council (SGC), California Department of Transportation (Caltrans), CEC, OPR, Local Agencies	Consistent. This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB zero emission and plug-in hybrid light-duty EV 2025 targets. As this is a CARB enforced standard, vehicles that access the Project are required to comply with the standards and will therefore comply with the strategy.
At least 4.2 million zero emission and plug-in hybrid light-duty EVs by 2030.		Consistent. This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB zero emission and plug-in hybrid light-duty EV 2030 targets. As this is a CARB enforced standard, vehicles that access the Project are required to comply with the standards and will therefore comply with the strategy.
Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean cars regulations.		Consistent. This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB efforts to further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean cars regulations. As this is a CARB enforced standard, vehicles that access the Project are required to comply with the standards and will therefore comply with the strategy.
Medium- and Heavy-Duty GHG Phase 2.		Consistent. This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB efforts to implement Medium- and Heavy-Duty GHG Phase 2. As this is a CARB enforced standard, vehicles that access the Project are required to comply with the standards and will therefore comply with the strategy.
Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20% of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100% of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NO_X standard.		Not applicable. This measure is not within the purview of this Project.

Table 4.6-5. Consistency with 2017 Scoping Plan

Action	Responsible Parties	Consistency
Last Mile Delivery: New regulation that would result in the use of low NO_X or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5% of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10% in 2025 and remaining flat through 2030.		Not applicable. This Project would not obstruct or interfere with implementation of SB 375 and would therefore not conflict with this measure.
Further reduce VMT through continued implementation of SB 375 and regional Sustainable Communities Strategies; forthcoming statewide implementation of SB 743; and potential additional VMT reduction strategies not specified in the Mobile Source Strategy but included in the document "Potential VMT Reduction Strategies for Discussion."		Not applicable. This Project would not obstruct or interfere with implementation of SB 375 and would therefore not conflict with this measure.
Increase stringency of SB 375 Sustainable Communities Strategy (2035 targets).	CARB	Not applicable. This Project would not obstruct or interfere with implementation of SB 375 and would therefore not conflict with this measure.
Harmonize project performance with emissions reductions and increase competitiveness of transit and active transportation modes (e.g. via guideline documents, funding programs, project selection, etc.).	CalSTA, SGC, OPR, CARB, Governor's Office of Business and Economic Development (GO-Biz), California Infrastructure and Economic Development Bank (IBank), Department of Finance (DOF), California Transportation Commission (CTC), Caltrans	Consistent. The Project would not obstruct or interfere with agency efforts to harmonize transportation facility project performance with emissions reductions and increase competitiveness of transit and active transportation modes.

Table 4.6-5. Consistency with 2017 Scoping Plan

Action	Responsible Parties	Consistency
By 2019, develop pricing policies to support low-GHG transportation (e.g. low-emission vehicle zones for heavy duty, road user, parking pricing, transit discounts).	CalSTA, Caltrans, CTC, OPR, SGC, CARB	Consistent. The Project would not obstruct or interfere with agency efforts to develop pricing policies to support low-GHG transportation.
Implement California Sustainable Freight Action Plan		
Improve freight system efficiency.	CalSTA, CalEPA, CNRA, CARB, Caltrans, CEC, GO-Biz	Consistent. This measure would apply to all trucks accessing the Project sites, including existing trucks or new trucks that are part of the statewide goods movement sector. The Project would not obstruct or interfere with agency efforts to improve freight system efficiency.
Deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.		Not applicable. This measure is not within the purview of this Project.
Adopt a Low Carbon Fuel Standard with a Carbon Intensity reduction of 18%.	CARB	Consistent. When adopted, this measure would apply to all fuel purchased and used by the Project in the state. The Project would not obstruct or interfere with agency efforts to adopt a Low Carbon Fuel Standard with a Carbon Intensity reduction of 18%.
Implement the Short-Lived Climate Pollutant Reduction Strategy by 2030		
40% reduction in methane and hydrofluorocarbon emissions below 2013 levels.	CARB, CalRecycle, CDFA, California State Water Resource Control Board (SWRCB), Local Air Districts	Not applicable. This measure is not within the purview of this Project.
50% reduction in black carbon emissions below 2013 levels.		
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.	CARB, CalRecycle, CDFA, SWRCB, Local Air Districts	Not applicable. This measure is not within the purview of this Project.
Implement the post-2020 Cap-and-Trade Program with declining annual caps.	CARB	Not applicable. The Project would not obstruct or interfere agency efforts to implement the post-2020 Cap-and-Trade Program.

Table 4.6-5. Consistency with 2017 Scoping Plan

Action	Responsible Parties	Consistency
By 2018, develop Integrated Natural and Working Lands Implementation Plan to secure California's land base as a net carbon sink		
Protect land from conversion through conservation easements and other incentives.	CNRA, Departments Within CDFA, CalEPA, CARB	Not applicable. The Project involves the conversion of vacant land to developed land. However, the Project site is not an identified property that needs to be conserved.
Increase the long-term resilience of carbon storage in the land base and enhance sequestration capacity		Not applicable. This measure is not within the purview of this Project.
Utilize wood and agricultural products to increase the amount of carbon stored in the natural and built environments		Consistent. To the extent appropriate for the proposed industrial buildings, wood products would be used in construction, including for the roof structure.
Establish scenario projections to serve as the foundation for the Implementation Plan		Not applicable. This measure is not within the purview of this Project.
Implement Forest Carbon Plan	CNRA, California Department of Forestry and Fire Protection (CAL FIRE), CalEPA and Departments Within	Not applicable. This measure is not within the purview of this Project.
Identify and expand funding and financing mechanisms to support GHG reductions across all sectors.	State Agencies and Local Agencies	Not applicable. This measure is not within the purview of this Project.

Source: CARB 2017.

As shown above, the Project would not conflict with any of the *2017 Scoping Plan* elements as any regulations adopted would apply directly or indirectly to the Project. Further, recent studies show that the state's existing and proposed regulatory framework will allow the state to reduce its GHG emissions level to 40% below 1990 levels by 2030.

Consistency with the CAP

As previously stated, the CAP presents a number of strategies that will make it possible for the City to meet the recommended GHG emissions targets that are consistent with the reduction targets of the state. The Project's consistency with applicable CAP strategies are presented in Table 4.6-6.

Table 4.6-6. Climate Action Plan Strategy Consistency Analysis

CAP Strategy		Project Consistency
CAP-1.5	Projects that require a discretionary approval shall reduce operational GHG emissions by at least 12%, without accounting for regulations discussed in the CAP. The project inventory should include all potential sources, including but not limited to those identified in this CAP.	Consistent. The inventory prepared in this report includes all applicable sources of GHG emissions including area, mobile, water use, wastewater, and solid waste. With the inclusion of Project design features, the Project would reduce GHG emissions by 18%, which is 12% above what is required by the CAP.

Source: City of Hesperia 2010a.

To effectively analyze operational GHG emissions associated with the Project for CAP-1.5 consistency, two scenarios were modeled. Table 4.6-7 presents the operational scenario that represents Project emissions without regulatory measures and PDFs (shown as "unmitigated" emissions in CalEEMod), which estimates Project emissions absent federal, state, and local measures and without Project features intended to reduce GHG emissions upon Project buildout. The second scenario, see Table 4.6-6, (shown as "mitigated" emissions in CalEEMod) represents Project emissions with implementation of applicable federal, state, and local GHG reduction measures and Project features. Note that the designation of the second scenario as "mitigated" is a function of how the scenario is necessarily designated in CalEEMod and should not be confused with the application of mitigation measures, as defined under CEQA.

Only certain regulatory measures can be effectively quantified or removed from the Without Regulatory Requirement Scenario. For energy source emissions, reductions associated with the Renewable Portfolio Standard regulations were revised by updating the CO_2 intensity factor for Southern California Edison to the 2009 Year and utilizing historic Title 24 energy demand values. For mobile sources, non-Pavley CO_2 emission factors were utilized in the Without Regulatory Requirements" scenario as provided in the CalEEMod User guide (CAPCOA 2020).

The estimated operational GHG emissions without regulatory requirements and PDFs from the Project are shown in Table 4.6-7. Details of the emission calculations are provided in Appendix I.

Table 4.6-7. Estimated Annual Operational GHG Emissions – Without Regulatory Requirements and PDFs

Emission Source	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Area Source	0.02	<0.01	0.00	0.02
Energy Source	988.11	0.04	0.01	991.69
Mobile Sources	5,635.20	0.05	0.51	5,789.71
On-Site Equipment Sources	143.52	0.01	<0.01	144.21
Solid Waste	88.01	5.20	0.00	218.04
Water/Wastewater	460.51	3.14	0.08	561.79
Annual construction-related emissions amortized over 30 years				21.11
Total Project Emissions				**7,726.57**

Notes: GHG = greenhouse gas; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent; PDFs = Project design features.
See Appendix C-1 for complete results.

As shown in Table 4.6-7, without accounting for applicable regulatory requirements and PDFs, the Project would result in approximately 7,727 MT CO_2e per year.

The Project's emissions without regulatory requirements and PDFs as compared to the Project's emissions with regulatory requirements and PDFs are shown on Table 4.6-8. The Project's emissions without accounting for regulatory requirements and PDFs would be 7,727 MT CO_2e per year. After implementation, Project GHG emissions would be reduced to 6,335 MT CO_2e per year. This yields a reduction of approximately 18%, which meets the City's CAP target of a 12% reduction. As such, the Project would be consistent with the City's CAP.

Table 4.6-8. Climate Action Plan Emissions Reduction Goal Consistency Analysis

Project GHG Emissions	CO_2e (Metric Tons per Year)
Total Project Emissions without Regulatory Requirements and PDFs	7,726.57
Total Project Emissions with Regulatory Requirements and PDFs	6,334.60
Percent Reduction	**18%**

Notes: GHG = greenhouse gas; CO_2e = carbon dioxide equivalent; PDFs = project design features.
See Appendix I for complete results.

The Project demonstrates consistency with the CARB's Scoping Plan and would not conflict with other regulations regarding reductions to GHG emissions including AB 32, Title 24 an SB 32. Additionally, the Project would meet the emission reduction target outlined in the City's CAP. Furthermore, mitigation measures would be required that would reduce Project-generated construction and operational GHG emissions. MM-GHG-1 through MM-GHG-4 would further reduce operation-related GHG emissions.

Potential to Conflict with SCAG's RTP/SCS

The SCAG 2020–2045 RTP/SCS is a regional growth management strategy that targets per capita GHG reduction from passenger vehicles and light trucks in the Southern California Region pursuant to SB 375. In addition to demonstrating the Region's ability to attain the GHG emission-reduction targets set forth by CARB, the 2020–2045 RTP/SCS outlines a series of actions and strategies for integrating the transportation network with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. Thus, successful implementation of the 2020–2045 RTP/SCS would result in more complete communities with a variety of transportation and housing choices, while reducing automobile use.

The following strategies are intended to be supportive of implementing the 2020–2045 RTP/SCS and reducing GHGs: focus growth near destinations and mobility options; promote diverse housing choices; leverage technology innovations; support implementation of sustainability policies; and promote a green region (SCAG 2020). The strategies that pertain to residential development and SCAG's support of local jurisdiction sustainability efforts would not apply to the Project. The Project's compliance with the remaining applicable strategies is presented below (also see Table 5.2, Regional Transportation Plan/Sustainable Communities Strategy Consistency Analysis, within Section 5, Effects Found Not to be Significant).

- Focus Growth Near Destinations and Mobility Options. The Project's compliance with this strategy of the 2020–2045 RTP/SCS is supported because the Project would introduce new jobs proximate to existing housing which would reducing vehicle miles traveled. As discussed in Section 3.3, Project Objectives, the Project would be located in area with a low job to housing ratio. The Project's proximity to existing freeways also helps to reduce vehicle miles traveled and local truck traffic congestion.

- **Leverage Technology Innovations.** One of the technology innovations identified in the 2020–2045 RTP/SCS that would apply to the Project is the promotion and support of low emission technologies for transportation, such as alternative fueled vehicles to reduce per capita GHG emissions. For this particular project, based on the maximum square footage of building space permitted by the Project, on-site modeled operational equipment includes a total of 50 electric-powered forklifts (forklifts and pallet jacks) and 2 electric-powered yard tractors.
- **Promote a Green Region.** The third applicable strategy within the 2020–2045 RTP/SCS for individual developments such as the Project, involves promoting a green region through efforts such as supporting local policies for renewable energy production and promoting more resource efficient development (e.g., reducing energy consumption) to reduce GHG emissions. A key means that the Project would use to support this strategy is by including rooftop solar and energy star appliances into the Project design as a part of MM-GHG-2.

Based on the analysis above, the Project would be consistent with the SCAG 2020–2045 RTP/SCS.

Threshold C: Would the Project result in cumulatively considerable impacts with regard to greenhouse gas emissions?

Significant and Unavoidable Impact. As previously discussed in Section 4.6.1, Existing Conditions, GHG emissions impacts are inherently cumulative in nature. As shown in Table 4.6-7, the Project would result in GHG emissions in exceedance of the SCAQMD significance threshold. Therefore, Project GHG emissions would be cumulatively considerable and significant.

4.6.5 Mitigation Measures and Level of Significance After Mitigation

Threshold A: Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The Project would result in potentially significant impacts with regard to generating GHG emissions. The following mitigation measures would reduce operation-related GHG emissions:

MM-GHG-1 The Project shall implement the following measures in order to reduce construction equipment GHG emissions to the extent feasible

- Provide infrastructure for zero-emission off-road construction equipment if the contractors selected to construct the Project plan to use zero-emission off-road construction equipment.
- Provide electrical hook ups to the power grid, rather than diesel-fueled generators, for contractors' electric construction tools, such as saws, drills, and compressors. In applicable bid documents and contracts with contractors selected to construct the Project, include language requiring all off-road equipment with a power rating below 19 kilowatts (e.g., plate compactors, pressure washers) used during Project construction to be electric.
- Require construction equipment to be turned off when not in use.
- Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1 of the California Green Building Standards Code Part 11.

MM-GHG-2 The Project shall implement the following measures in order to reduce operational mobile source GHG emissions to the extent feasible:

- Prior to tenant occupancy, provide documentation to the City of Hesperia demonstrating that occupants/tenants of the Project site have been provided documentation that:
  - For occupants with more than 250 employees, require the establishment of a transportation demand management program to reduce employee commute vehicle emissions.
- Include contractual language in tenant lease agreements requiring that any facility operator shall:
  - Ensure that site enforcement staff in charge of keeping the daily log and monitoring for excess idling will be trained/certified in diesel health effects and technologies, for example, by requiring attendance at California Air Resources Board-approved courses (such as the free, one-day Course #512);
  - Be required to train managers and employees on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks. The building manager or their designee shall be responsible for enforcing these requirements; and
  - Be in, and monitor compliance with, all current air quality regulations for on-road trucks including CARB's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation, Periodic Smoke Inspection Program (PSIP), and the Statewide Truck and Bus Regulation.
- 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 5 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 CARB to report violations. Prior to the issuance of an occupancy permit, the City of Hesperia shall conduct a site inspection to ensure that the signs are in place.
- Prior to tenant occupancy, the Project Applicant or successor in interest shall provide documentation to the City of Hesperia demonstrating that occupants/tenants of the Project site have been provided documentation on funding opportunities, such as the Carl Moyer Program, that provide incentives for using cleaner-than-required engines and equipment.
- In anticipation of a transition to zero emissions truck fleets during the lifetime of the Project, install at least four heavy-duty truck vehicle charging stations on site by 2030.
- Prior to certificate of occupancy, install conduit and infrastructure for Level 2 (or faster) electric vehicle (EV) charging stations on site for employees for the percentage of employee parking spaces commensurate with Title 24 requirements in effect at the time of building permit issuance plus additional charging stations equal to 5% of the total employee parking spaces in the building permit, whichever is greater. By 2030 install Level 2 (or faster) EV charging stations for 25% of the employee parking spaces required.
- Conduit shall be installed to tractor trailer parking areas in logical locations determined by the Project Applicant during construction document plan check, for the purpose of accommodating the future installation of EV truck charging stations at such time this technology becomes commercially available.

MM-GHG-3 The Project shall implement the following measure in order to reduce operational energy source GHG emissions to the extent feasible:

- Commit to on-site solar generation sufficient to meet at least 75% of the Project's total operational energy requirements from within the building envelope.
- Install Energy Star-rated heating, cooling, lighting, and appliances.
- Provide information on energy efficiency, energy-efficient lighting and lighting control systems, energy management, and existing energy incentive programs to future tenants of the Project.
- Structures shall be equipped with outdoor electric outlets in the front and rear of the structures to facilitate use of electrical lawn and garden equipment.
- Require no construction or operation of cold storage within the project facilities.
- Provide documentation to the City of Hesperia demonstrating that the Project could achieve Leadership in Energy and Environmental Design (LEED) certification and meet or exceed California Green Building Standards Code (CALGreen) Tier 2 standards in effect at the time of building permit application.

MM-GHG-4 The Project shall include the following language within tenant lease agreements in order to reduce operational GHG emissions to the extent feasible:

- Require tenants to use the cleanest technologies available and to provide the necessary infrastructure to support zero-emission vehicles, equipment, and appliances that would be operating on site. This requirement shall apply to equipment such as handheld landscaping equipment, office appliances, etc.
- Require future tenants to exclusively use zero-emission light and medium-duty delivery trucks and vans, when economically feasible.
- Tenants shall be in, and monitor compliance with, all current air quality regulations for on-road trucks including the California Air Resources Board's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation, Periodic Smoke Inspection Program, and the Statewide Truck and Bus Regulation.

Implementation of MM-GHG-1 through MM-GHG-4 would reduce the Project's GHG emissions impacts; however, the effectiveness of the mitigation and the associated emission reductions cannot be accurately quantified at this time. No other feasible GHG-specific mitigation is feasible. As such, impacts would remain significant and unavoidable.

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 not conflict with applicable plans, policies or regulations related to GHGs. Impacts are less than significant and no mitigation is required.

Threshold C: Would the Project result in cumulatively considerable impacts with regard to greenhouse gas emissions?

The Project would result in potentially significant impacts with regard to GHG emissions. Implementation of MM-GHG-1 through MM-GHG-4 would reduce the Project's GHG impacts; however, impacts would remain significant and unavoidable.

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4.7 Hazards, Hazardous Materials, and Wildfire

This section describes the existing hazards, hazardous materials, and wildfire conditions of the Poplar 18 Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to the implementation of the Project.

In addition to the documents incorporated by reference (see Section 2.7 of Chapter 2 of this Environmental Impact Report [EIR]), the following analysis is based, in part, on the following sources:

- Phase I Environmental Site Assessment performed on 17.87-Acre Tract (Undeveloped), prepared by Consolidated Consulting Group LLC, in October 2020 (Appendix F)

4.7.1 Existing Conditions

Project Site Conditions

The Project consists of two contiguous parcels of vacant, undeveloped land. Ground surface cover consists of moderate native brush and shrub growth, with occasional juniper and Joshua trees located throughout the site. The site is subject to disturbance as a result of illegal dumping and trespassing. These unpermitted activities have led to areas of exposed bare soils (where trails have formed) and several debris piles. The Project site's surface elevation ranges between approximately 3,600 and 3,630 feet above mean sea level (amsl). The Project site and immediate surrounding area is relatively flat with a slight slope (less than 2%) from the southwestern to northeastern corner.

The Project site is underlain by alluvial soils, consisting of loose to very dense silty fine to coarse gravel, traces of clay, and occasional cobbles. On-site exploratory drilling did not encounter groundwater within 30 feet below ground surface. In addition, the nearest groundwater monitoring well is located 4,400 feet northwest of the site. Water level readings within this monitoring well indicate a groundwater level of approximately 600 feet below ground surface (Appendix E-2).

Phase I Environmental Site Assessment Findings

A Phase I Environmental Site Assessment (ESA) was conducted to identify potential or existing environmental contamination on the site. During the preparation of the Phase I ESA, Consolidated Consulting Group LLC searched both state and federal hazardous materials as a result of existing or past uses. A regulatory database report for the Project site, prepared by Environmental Risk Information Services (ERIS), is included as Appendix 7.2 of the Phase I ESA (Appendix F). In addition to the database report, Consolidated Consulting Group contacted several local and regional agencies involved in regulating and keeping records of hazardous materials for any information connected to the Project site, including the City of Hesperia (City) and County of San Bernardino (County) Department of Health/Environmental Division, the City of Hesperia Fire Department, the City of Hesperia Planning and Zoning Department, and the City of Hesperia Building Permit/Inspection Department (Appendix F).

As the Phase I ESA was completed in 2020, and sites can be added to regulatory databases on a regular basis, an updated environmental regulatory database search was completed for this EIR. A search was completed for both Cortese List sites, pursuant to Government Code Section 65962.5, and non-Cortese List sites, such as voluntary cleanup sites or landfills. Table 4.7-1 summarizes the databases reviewed.

Table 4.7-1. Online Database Listings

Database	Details
Cortese List database https://calepa.ca.gov/sitecleanup/corteselist/	Government Code Section 65962.5 requires the California Environmental Protection Agency (CalEPA) to compile a list of hazardous waste and substances sites (Cortese List). While no longer maintained as a single list, this website provides links to multiple data resources that that meet the Cortese List requirement.
California Environmental Protection Agency (CalEPA) https://siteportal.calepa.ca.gov/nsite/	The CalEPA Regulated Site Portal is a website that combines data about environmentally regulated sites and facilities in California into a single, searchable database and interactive map. Data sources include California Environmental Reporting System (CERS), EnviroStor, GeoTracker, California Integrated Water Quality System (CIWQS), and Toxics Release Inventory (TRI).
Department of Toxic Substances Control (DTSC) EnviroStor https://www.envirostor.dtsc.ca.gov/	The DTSC's data management system for tracking cleanup, permitting, enforcement, and investigation efforts at hazardous waste facilities and sites with known contamination or sites where there may be reasons for further investigation.
Regional Water Quality Control Board (RWQCB) GeoTracker http://geotracker.waterboards.ca.gov/	The California RWQCB's data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater. GeoTracker contains records for sites that require cleanup, various unregulated projects, and permitted facilities. Sites include LUSTs, Department of Defense, Cleanup Program, Irrigated Lands, Oil and Gas Production, Permitted USTs, and Land Disposal Sites.
National Pipeline Mapping System (NPMS) https://www.npms.phmsa.dot.gov/	The NPMS Public Map Viewer is a web-based application designed to assist the general public with displaying and querying data related to gas transmission and hazardous liquid pipelines, liquefied natural gas plants, and breakout tanks under Department of Transportation Pipeline and Hazardous Material Safety Administration jurisdiction.
California Geologic Energy Management Division (CalGEM) Well Finder Database https://www.conservation.ca.gov/calgem/Pages/Wellfinder.aspx	The CalGEM online mapping application presents California's oil and gas industry information from a geographic perspective. The database provides information on oil and gas wells, related facilities, and well fields.
CalRecycle Solid Waste Information System (SWIS) https://www2.calrecycle.ca.gov/SolidWaste/Activity	The SWIS database contains information on solid waste facilities, operations, and disposal sites throughout the State.

Project Site

The Project site was not identified on government databases pertaining to the storage and/or disposal of petroleum products and/or hazardous materials/hazardous waste.

The site reconnaissance of the Project site identified numerous refuse piles/dumpsites located throughout the subject properties. Observed refuse generally consisted of municipal waste (paper, plastic, etc.) and construction debris (lumber, concrete, asphalt/gravel, etc.); however, materials of specific environmental concern, including scrap truck tires, and empty retail-sized containers of automotive fluids were also observed. No staining or other evidence of a release was observed. Consolidated Consulting Group considers the used tire/oil containers and associated staining to represent a de minimis[1] condition in connection with the Project site (Appendix F).

Surrounding Areas

The Phase I ESA did not identify off-site facilities that represented an environmental concern to the Project site. Four sites adjoining the Project site were identified in the California Environmental Protection Agency's Regulated Site Portal database in the 2022 regulatory database search (see Table 4.7-1). These sites, all adjoining to the south, have permitted chemical storage on site associated with business practices. One site is also a hazardous waste generator. Hazardous material and waste storage activities are regulated by the local Certified Unified Program Agency (CUPA), which for the Project site and surrounding area is San Bernardino County Fire Department (SBCFD). Based on available documentation, there is no evidence of release of hazardous materials which would impact the Project site. No other sites were identified in the databases listed in Table 4.7-1 that have the potential to impact the Project site.

The Phase I ESA did not identify any environmental concerns within current or past adjoining sites (Appendix F). Land uses surrounding the Project site primarily consists of vacant land, along with some scattered residential, commercial, light industrial, and utility uses. As reported in the Phase I ESA, specific land uses located in the immediate vicinity of the Project site include the following:

- **North:** Vacant undeveloped land and Sultana Street (a dirt road)
- **East:** Mesa Linda Street and undeveloped land
- **South:** Poplar Street and undeveloped land; a retail strip shopping center and flex warehouses are located to the southwest
- **West:** Three Flags Avenue/Lassen Road (a dirt road) and undeveloped land

Existing Fire Environment

Wildfire is a continuous threat in Southern California and is particularly concerning in the wildland–urban interface (WUI), the geographic area where urban development either abuts or intermingles with wildland or vegetative fuels. The City contains several miles of WUI, where established development meets or is interspersed with the open desert landscape, as well as foothills and mountains in the southern portion of the City. Fire hazard mapping, fire history, vegetation communities, topography, and climate, weather, and wind are all important factors to consider when evaluating the existing fire environment and potential risks related to wildfire. The following subsections provide details regarding the existing fire environment in the City and on the Project site.

Fire Hazard Mapping

The California Department of Forestry and Fire Protection (CAL FIRE) database also includes map data documenting areas of significant fire hazard throughout the state. These maps designate geographic areas as fire hazard severity

[1] De minimis conditions are defined by ASTM E1527-13 as environmental conditions that "generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies."

zones (FHSZs). CAL FIRE uses FHSZs to classify anticipated fire-related hazards for the entire state. FHSZs are ranked as Moderate, High, or Very High, and are also differentiated by Federal Responsibility Areas (FRAs), State Responsibility Areas (SRAs), and Local Responsibility Areas (LRAs), which delineate areas where federal, state, or local government agencies are financially responsible for fire protection and prevention. CAL FIRE data include proposed FHSZ Maps for SRA lands and separate draft Very High FHSZ Maps for LRA lands. Fire hazard severity classifications take into account vegetation, topography, weather, crown fire production, and ember production and movement.

According to CAL FIRE, the Project site is designated as being within a moderate FHSZ within the LRA (CAL FIRE 2008). The nearest Very High FHSZ in the City is located approximately 8 miles south, and the nearest Very High FHSZ in the SRA is located approximately 5 miles south. Additionally, the City has adopted these recommendations for Very High FHSZs within the City's LRA, per Exhibit SF-2 of the City's General Plan (City of Hesperia 2010). However, as shown in Figure 4.7-1, Fire Hazard Severity Zones, the Project site is located adjacent to SRA lands to the west and south. These SRA lands are designated as High FHSZ to the west and Moderate FHSZ to the south.

Fire History

Fire history data provides valuable information regarding fire spread, fire frequency, ignition sources, and vegetation/fuel mosaics across a given landscape. One important use for this information is as a tool for pre-planning. It is advantageous to know which areas may have burned recently and therefore may provide a tactical defense position, what type of fire burned on the site, and how a fire may spread. The fire history information presented below comes from CAL FIRE's Fire and Resources Assessment Program (FRAP) database. The FRAP database summarizes multi-agency fire perimeter data since the late 1800s. For CAL FIRE, timber fires 10 acres or greater, brush fires 30 acres and greater, and grass fires 300 acres or greater are included. For the U.S. Forest Service, there is a 10-acre minimum for fires since 1950 (CAL FIRE 2020).

Although this data is incomplete as it is limited to larger fires, the data provides a summary of recorded fires and can be used to show whether large fires have occurred in the Project area, which indicates whether they may be possible in the future. Fire history recorded for the Project area is presented in Figure 4.7-2, Wildfire History. In addition to these fires, dozens of small vegetation fires, typically less than 1 acre in size, are reported in the Hesperia area annually (City of Hesperia 2010). According to available data from CAL FIRE in the FRAP database, 35 fires have burned within a 5-mile radius of the Project site since the beginning of the historical fire data record. Recorded wildfires within 5 miles of the Project site range from 16 acres (1968) to 36,266 acres (2016), and the average fire size is 6,517 acres (not including smaller fires excluded from the data) (CAL FIRE 2020). The most recent large fire to occur near the Project site was the Blue Cut Fire (approximately 36,266 acres), which occurred in 2016 in the foothills and mountains and burned to approximately 4 miles southwest of the Project site (CAL FIRE 2020). The nearest fire to the Project site occurred in 1945 and burned 8,388 acres approximately 1.2 miles to the west of the site (CAL FIRE 2020).

As shown in Figure 4.7-2, Wildfire History, several historical wildland fires have occurred primarily in the southern portion of the City and the foothills and mountains to the south, and no fires have burned onto or adjacent to the Project site.

Vegetation Communities and Land Covers

Variations in vegetative cover type and species composition have a direct effect on fire behavior. Some plant communities and their associated plant species have increased flammability based on plant physiology (resin content), biological function (flowering, retention of dead plant material), physical structure (bark thickness, leaf

size, branching patterns), and overall fuel loading. For example, non-native grass-dominated plant communities become seasonally prone to ignition and produce lower intensity, higher spread rate fires. In comparison, California sagebrush scrub can produce higher heat intensity and higher flame lengths under strong, dry wind patterns, but does not typically ignite or spread as quickly as light, flashy grass fuels.

It is important to consider the dynamic nature of vegetation communities. Fire presence and absence at varying cycles or regimes affect plant community succession. The succession of plant communities, most notably the gradual conversion of shrublands to grasslands with high-frequency fires and grasslands to shrublands with fire exclusion, is highly dependent on the fire regime. Further, biomass and associated fuel loading will increase over time if disturbance or fuel reduction efforts are not diligently implemented.

The City is in the lower Mojave section of the Southeastern Deserts Bioregion. The predominant vegetation assemblages in this area include desert scrub, creosote bush scrub, and succulent scrub. Other important vegetation types include Joshua tree woodland, shad-scale scrub, blackbrush scrub, and desert scrub-steppe. About one-third of the desert floor in the Mojave section is devoid of vegetation, limiting the amount of surface fuel loads available to burn (City of Hesperia 2010).

As discussed in Section 4.3, Biological Resources, the land cover type on the Project site and the surrounding area is considered Joshua tree woodland.

Topography

Topography influences fire risk by affecting fire spread rates. Typically, steep terrain results in faster fire spread up slope and slower spread down slope. Terrain that forms a funneling effect—such as chimneys, chutes, or saddles—on the landscape can result in especially intense fire behavior, including faster spread and higher intensity. Conversely, flat terrain tends to have little effect on fire spread, resulting in fires that are driven by vegetation and wind.

The topography in the City is relatively flat, containing modest variations in elevation. The central and northern portions of the City lie upon a moderate to gentle slope with elevations ranging from 2,900 feet to 4,200 feet amsl. As previously discussed, the Project site is relatively flat, with elevations ranging from 3,600 feet amsl to 3,630 feet amsl. The Project site has a local topographic gradient of less than 2% downward toward the northeast (see Figure 3-5, Topographic Map).

Weather, Climate, and Wind

The annual average high temperature in Hesperia is 77.5°F, with daily highs in the summer months (June–September) exceeding 91°F. Precipitation typically occurs from November through March, with an average annual rainfall of 5.52 inches (WRCC 2020).

The Project site, like much of Southern California, is influenced by prevailing wind patterns. Prevailing winds are winds that blow from a single direction over a specific area of the Earth. The prevailing wind pattern in the City varies throughout the year, but occurs most often from the west from February through November, and from the north from November through February. The highest wind speeds are reached from January through July, with average wind speeds exceeding 7.5 mph and wind gusts exceeding 14 mph. For the remainder of the year, average wind speeds reach approximately 6.4 mph (Weather Spark 2020). The wind experienced at any given location is highly dependent on local topography and other factors, and instantaneous wind speed and direction vary more widely than the averages presented above.

Fire Protection

The City is served by the SBCFD (City of Hesperia 2010). Currently, there are three fire stations within the City: Stations 302, 304, and Station 305. Fire Station 305 (8331 Caliente Road) is located approximately 1.1 miles south of the Project site; Fire Station 304 (15660 Eucalyptus Street) is located approximately 4.6 miles to the northeast; and Fire Station 302 (17288 Olive Street) is located approximately 5.84 miles to the east (City of Hesperia 2020). The staffing and apparatus available at each station are shown in Table 4.7-2.

Table 4.7-2. Hesperia Fire Station Staffing and Apparatus

Station No.	Staffing	Apparatus
302	7 people daily	1 paramedic engine 1 brush engine 2 paramedic ambulances
304	5 people daily	1 paramedic engine 1 ladder truck 1 paramedic ambulance 1 water truck 1 chief vehicle 1 heavy rescue vehicle
305	4 people and 1 battalion chief daily	1 paramedic fire engine 1 paramedic ambulance 1 water tender 1 brush patrol 2 reserve engines

Source: City of Hesperia 2020.

4.7.2 Relevant Plans, Policies, and Ordinances

Federal

Hazards and Hazardous Materials

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as "Superfund," was enacted by Congress on December 11, 1980. This law provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA established requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified. CERCLA also enabled a revision of the National Contingency Plan. The National Contingency Plan provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The National Contingency Plan also established the National Priorities List, which is a list of contaminated sites warranting further investigation by the U.S. Environmental Protection Agency (EPA). The Superfund Amendments and Reauthorization Act amended CERCLA on October 17, 1986.

The Federal Toxic Substances Control Act of 1976 and Resource Conservation and Recovery Act of 1976

The Federal Toxic Substances Control Act of 1976 and Resource Conservation and Recovery Act (RCRA) established a program administered by the EPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act, which affirmed and extended the "cradle-to-grave" system of regulating hazardous wastes. The Hazardous and Solid Waste Act specifically prohibited the use of certain techniques for the disposal of some hazardous wastes.

National Pollutant Discharge Elimination System Permit Program

The National Pollutant Discharge Elimination System (NPDES) permit program was established in the Clean Water Act to regulate municipal and industrial discharges to surface waters of the United States. Discharge from any point source is unlawful unless the discharge is in compliance with an NPDES permit. Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities.

Wildland Fire

National Fire Protection Association Codes, Standards, Practices, and Guides

National Fire Protection Association codes, standards, recommended practices, and guides are developed through a consensus standards development process approved by the American National Standards Institute. This process brings together professionals representing varied viewpoints and interests to achieve consensus on fire and other safety issues. National Fire Protection Association standards are recommended guidelines and nationally accepted good practices in fire protection but are not laws or codes unless adopted as such or referenced as such by the California Fire Code (CFC) or the local fire agency.

Federal Wildland Fire Management Policy

The Federal Wildland Fire Management Policy was developed in 1995, updated in 2001, and again in 2009 by the National Wildfire Coordinating Group, a federal multi-agency group that establishes consistent and coordinated fire management policy across multiple federal jurisdictions. An important component of the Federal Wildland Fire Management Policy is the acknowledgment of the essential role of fire in maintaining natural ecosystems. The Federal Wildland Fire Management Policy and its implementation are founded on the following guiding principles, found in the Guidance for Implementation of Federal Wildland Fire Management Policy (National Wildfire Coordinating Group 2009):

- Firefighter and public safety is the priority in every fire management activity.
- The role of wildland fire as an essential ecological process and natural change agent will be incorporated into the planning process.
- Fire management plans, programs, and activities support land and resource management plans and their implementation.
- Sound risk management is a foundation for all fire management activities.

- Fire management programs and activities are economically viable, based upon values to be protected, costs, and land and resource management objectives.
- Fire Management Plans and activities are based upon the best available science.
- Fire Management Plans and activities incorporate public health and environmental quality considerations.
- Federal, state, tribal, local, interagency, and international coordination and cooperation are essential.
- Standardization of policies and procedures among federal wildland fire management agencies is an ongoing objective.

National Fire Plan

The National Fire Plan, officially titled Managing the Impacts of Wildfire on Communities and the Environment: A Report to the President in Response to the Wildfires of 2000, was a presidential directive in 2000 as a response to severe wildland fires that had burned throughout the United States. The National Fire Plan focuses on reducing fire impacts on rural communities and providing assurance for sufficient firefighting capacity in the future. The plan addresses five key points: firefighting, rehabilitation, hazardous fuels reduction, community assistance, and accountability. The plan provides technical, financial, and resource guidance and support for wildland fire management across the United States. The U.S. Forest Service and the Department of the Interior are working to successfully implement the key points outlined in the plan (USFS and DOI 2000).

International Fire Code

Created by the International Code Council, the International Fire Code (IFC) addresses a wide array of conditions hazardous to life and property, including fire, explosions, and hazardous materials handling or usage (although not a federal regulation, but rather the product of the International Code Council). The IFC emphasizes prescriptive and performance-based approaches to fire prevention and fire protection systems. Updated every 3 years, the IFC uses a hazards classification system to determine the appropriate measures to be incorporated to protect life and property (these measures often include construction standards and specialized equipment). The IFC uses a permit system (based on hazard classification) to ensure that required measures are instituted (International Code Council 2017).

State

Hazards and Hazardous Materials

Cortese List/Government Code 65962.5

California Government Code Section 65962.5 requires that information regarding environmental impacts of hazardous substances and wastes be maintained and provided at least annually to the Secretary for Environmental Protection. Commonly referred to as the Cortese List, this information must include the following: sites impacted by hazardous wastes, public drinking water wells that contain detectable levels of contamination, underground storage tanks with unauthorized releases, solid waste disposal facilities from which there is migration of hazardous wastes, and all cease and desist and cleanup and abatement orders. This information is maintained by various agencies, including the Department of Toxic Substances Control, State Department of Health Services, State Water Resources Control Board, and local CUPAs. As each of the regulatory agencies typically now maintains these records in an electronic format, those requesting a Cortese List for a particular site are directed to the individual regulatory agencies. Typically, records searches are conducted via a regulatory database search company, such as the records search from EDR included in the Phase I ESA for the Project. Database search companies usually conduct searches

in accordance with ASTM Standard of Practice E 1527-13 Standard Practice for ESAs. The list of databases that are searched during this process is more comprehensive than the Cortese List. As such, the database search conducted for the Project includes the Cortese List but is not limited to this list.

California Hazardous Waste Control Act, Title 22 of the California Code of Regulations and Hazardous Waste Control Law, Chapter 6.5

The Department of Toxic Substances Control is responsible for the enforcement of the Hazardous Waste Control Act (California Health and Safety Code, Section 25100 et seq.), which creates the framework under which hazardous wastes are managed in California. The law provides for the development of a state hazardous waste program that administers and implements the provisions of the federal RCRA cradle-to-grave waste management system in California. It also provides for the designation of California-only hazardous waste and development of standards that are equal to or in some cases more stringent than federal requirements. The Hazardous Waste Control Act lists 791 chemicals and approximately 300 common materials that may be hazardous; establishes criteria for identifying, packaging, and labeling hazardous wastes; prescribes management controls; establishes permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identifies some wastes that cannot be disposed of in landfills.

California Health and Safety Code

In California, the handling and storage of hazardous materials are regulated by Division 20, Chapter 6.95 of the California Health and Safety Code. Under Sections 25500–25543.3, facilities handling hazardous materials are required to prepare a hazardous materials business plan (HMBP), which contains basic information on the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of in the state.

Chapter 6.95 of the Health and Safety Code establishes minimum statewide standards for HMBPs. Each business shall prepare a HMBP if that business uses, handles, stores a hazardous material (including hazardous waste), or an extremely hazardous material in disclosable quantities greater than or equal to the following:

- 500 pounds of a solid substance
- 55 gallons of a liquid
- 200 cubic feet of compressed gas
- a hazardous compressed gas in any amount (highly toxic with a threshold limit value of 10 parts per million or less)
- extremely hazardous substances in threshold-planning quantities

In addition, in the event that a facility stores quantities of specific acutely hazardous materials above the thresholds set forth by the California Health and Safety Code, facilities are also required to prepare a risk management plan and an accidental release plan. These plans provide information on the potential impact zone of a worst-case release and require plans and programs designed to minimize the probability of a release and to mitigate potential impacts. Based on the Project land uses (i.e., industrial, commercial), an HMBP may be required (e.g., due to storage of pool chemicals); however, it is unlikely that a risk management plan and accidental release plan would be required, due to a probable lack of acutely hazardous materials. The SBCFD Hazardous Materials Division would make a final determination regarding the appropriate plan(s) to be completed.

Occupational Safety and Health Act

The California Occupational Safety and Health Administration (Cal/OSHA) is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. Cal/OSHA standards are generally more stringent than federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR 337–340). The regulations specify requirements for employee training, availability of safety equipment, accident prevention programs, and hazardous substance exposure warnings.

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

The Unified Hazardous Waste and Hazardous Materials Management Regulatory Program was created in 1993 by Senate Bill 1082 to consolidate, coordinate, and make consistent the administrative requirements, permits, inspections, and enforcement activities of environmental and emergency management programs. The program is implemented at the local government level by CUPAs. In the City of Hesperia, the SBCFD is the CUPA. The program consolidates, coordinates, and makes consistent the following hazardous materials and hazardous waste programs (program elements):

- Hazardous waste generation (including on-site treatment under Tiered Permitting)
- Aboveground petroleum storage tanks (only the spill prevention, control, and countermeasure plan)
- Underground storage tanks
- Hazardous material release response plans and inventories
- California Accidental Release Prevention Program
- Uniform Fire Code HMBPs and inventories

Wildland Fire

California Department of Forestry and Fire

CAL FIRE protects the people of California from fires, responds to emergencies, and protects and enhances forest, range, and watershed values providing social, economic, and environmental benefits to rural and urban citizens. CAL FIRE's firefighters, fire engines, and aircraft respond to an average of more than 5,600 wildland fires each year. The Office of the State Fire Marshal supports CAL FIRE's mission by focusing on fire prevention. It provides support through a wide variety of fire safety responsibilities including by regulating buildings in which people live, congregate, or are confined; by controlling substances and products which may, in and of themselves, or by their misuse, cause injuries, death, and destruction by fire; by providing statewide direction for fire prevention in wildland areas; by regulating hazardous liquid pipelines; by reviewing regulations and building standards; and by providing training and education in fire protection methods and responsibilities.

California Government Code

California Government Code Sections 51175 through 51189 guide the classification of lands in California as fire hazard areas and include requirements for management of property within those lands. CAL FIRE is responsible for classifying FHSZs based on statewide criteria and makes the information available for public review. Further, local agencies must designate, by ordinance, Very High FHSZs within their jurisdiction based on the recommendations of CAL FIRE.

Section 51182 sets forth requirements for maintaining property within fire hazard areas, such as defensible space, vegetative fuels management, and building materials and standards. Defensible space around structures in fire hazard areas must consist of 100 feet of fuel modification on each side of a structure, but not beyond the property line unless findings conclude that the clearing is necessary to significantly reduce the risk of structure ignition in the event of a wildfire. Clearance on adjacent property shall only be conducted following written consent by the adjacent owner. Further, trees must be trimmed from within 10 feet of the outlet of a chimney or stovepipe, vegetation near buildings must be maintained, and roofs of structures must be cleared of vegetative materials. Exemptions may apply for buildings with an exterior constructed entirely of nonflammable materials.

California Code of Regulations

Title 14 Natural Resources

Title 14, Division 1.5, Chapter 7, Subchapter 3, Fire Hazard, also sets forth requirements for defensible space if the distances specified above cannot be met. For example, options that have similar practical effects include noncombustible block walls or fences, 5 feet of noncombustible material horizontally around the structure, installing hardscape or reducing exposed windows on the side of the structure with a less-than-30-foot setback, or additional structure hardening such as those required in the California Building Code (CBC), California Code of Regulations Title 24, Part 2, Chapter 7A.

Title 24 California Building Standards Code

California Building Code

Part 2 of Title 24 contains the CBC. Chapter 7A of the CBC regulates building materials, systems, and/or assemblies used in the exterior design and construction of new buildings located within a fire hazard area. Fire hazard areas as defined by the CBC include areas identified as an FHSZ within an SRA or a WUI fire area. The purpose of Chapter 7A is to establish minimum standards for the protection of life and property by increasing the ability of structures located in a fire hazard area to resist the intrusion of flames or burning embers projected by a wildfire and to contribute to a systematic reduction in structural losses from a wildfire. New buildings located in such areas must comply with the ignition-resistant construction standards outlined in Chapter 7A.

California Fire Code

Part 9 of Title 24 contains the CFC, which incorporates by adoption the IFC with necessary California amendments. The purpose of this code is to establish the minimum requirements to safeguard public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. Chapter 49 of the CFC contains minimum standards for development in the WUI and fire hazard areas.

The CFC and Office of the State Fire Marshal provide regulations and guidance for local agencies in the development and enforcement of fire safety standards. The CFC is updated and published every 3 years by the California Building Standards Commission. The 2019 CFC took effect on January 1, 2020. The City has adopted the 2019 CFC with local amendments.

California Public Resources Code

Fire Hazard Severity Zones

California Public Resources Code (PRC) Sections 4201–4204 and Government Code Sections 51175–89 direct CAL FIRE to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as FHSZs, define the application of various mitigation strategies to reduce the risk associated with wildland fires.

PRC Section 4290 requires minimum fire safety standards related to defensible space that apply to residential, commercial, and industrial building construction in SRA lands and lands classified and designated as Very High FHSZs. These regulations include road standards for fire apparatus access, standards for signs identifying roads and buildings, fuel breaks and green belts, and minimum water supply requirements. It should be noted that these regulations do not supersede local regulations that equal or exceed minimum regulations required by the state.

PRC Section 4291 requires a reduction of fire hazards around buildings located adjacent to a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land that is covered in flammable material. It requires 100 feet of defensible space to be maintained around all sides of a structure, but not beyond the property line unless required by state law, local ordinance, rule, or regulations. Further, PRC Section 4291 requires the removal of dead or dying vegetative materials from the roof of a structure, and trees and shrubs must be trimmed from within 10 feet of the outlet of a chimney or stovepipe. Exemptions may apply for buildings with an exterior constructed entirely of nonflammable materials.

In September of 2020, Assembly Bill 3074 amended PRC Section 4291 to require stricter standards for fuel reduction. The amendment stipulates that within the 100 feet of defensible space, more intense fuel reduction is to occur between 5 to 30 feet around the structure and within 5 feet of the structure is to be the ember-resistant zone. This amendment will go into effect on or before January 1, 2023.

Senate Bill 1241

In 2012, Senate Bill 1241 added Section 66474.02 to Title 7 Division 2 of the California Government Code, commonly known as the Subdivision Map Act. The statute prohibits subdivision of parcels designated Very High Fire Hazard, or that is in an SRA unless certain findings are made before approval of the tentative map. The statute requires that a city or county planning commission make three new findings regarding fire hazard safety before approving a subdivision proposal. The three findings are, in brief: (1) the design and location of the subdivision and its lots are consistent with defensible space regulations found in PRC Section 4290-91, (2) structural fire protection services will be available for the subdivision through a publicly funded entity, and (3) ingress and egress road standards for fire equipment are met per any applicable local ordinance and PRC Section 4290.

2018 State Hazard Mitigation Plan

Approved by the Federal Emergency Management Agency in September 2018, as an Enhanced State Mitigation Plan, the 2018 SHMP update continues to build upon California's commitment to reduce or eliminate the impacts of disasters caused by natural, technological, accidental, and adversarial/human-caused hazards, and further identifies and documents progress made in hazard mitigation efforts, new or revised state and federal statutes and regulations, and emerging hazard conditions and risks that affect the State of California. Resilience depends on the whole community and is a shared responsibility for all levels of government, private and nonprofit sectors, and individuals.

Fire Hazard Severity Zones

CAL FIRE maps FHSZs based on fuel loading, slope, fire history, weather, and other relevant factors as directed by PRC Sections 4201–4204 and California Government Code Sections 51175–51189. FHSZs are ranked from moderate to very high and are categorized for fire protection within an FRA, SRA, or LRA under the jurisdiction of a federal agency, CAL FIRE, or local agency, respectively. As shown in Figure 4.7-1, Fire Hazard Severity Zones, the Project site is located in a Moderate FHSZ in the LRA (CAL FIRE 2008). The nearest Very High FHSZ in the City is located approximately 8 miles south, and the nearest Very High FHSZ in the SRA is located approximately 5 miles south. As shown in Figure 4.7-1, Fire Hazard Severity Zones, the Project site is located adjacent to SRA lands to the west and south, which are designated as High and Moderate FHSZs, respectively.

California Strategic Fire Plan

The 2018 Strategic Fire Plan for California reflects CAL FIRE's focus on fire prevention and suppression activities to protect lives, property, and ecosystem services, and natural resource management to maintain the state's forests as a resilient carbon sink to meet California's climate change goals and to serve as important habitat for adaptation and mitigation. The Strategic Fire Plan for California provides a vision for a natural environment that is more fire resilient, buildings and infrastructure that are more fire-resistant, and a society that is more aware of and responsive to the benefits and threats of wildland fire, all achieved through local, state, federal, tribal, and private partnerships (CAL FIRE 2018). Plan goals include the following:

1. Identify and evaluate wildland fire hazards and recognize life, property, and natural resource assets at risk, including watershed, habitat, social and other values of functioning ecosystems. Facilitate the collaborative development and sharing of all analyses and data collection across all ownerships for consistency in type and kind.
2. Promote and support local land use planning processes as they relate to: (a) protection of life, property, and natural resources from risks associated with wildland fire, and (b) individual landowner objectives and responsibilities.
3. Support and participate in the collaborative development and implementation of local, county, and regional plans that address fire protection and landowner objectives.
4. Increase fire prevention awareness, knowledge and actions implemented by individuals and communities to reduce human loss, property damage and impacts to natural resources from wildland fires.
5. Integrate fire and fuels management practices with landowner/land manager priorities across jurisdictions.
6. Determine the level of resources necessary to effectively identify, plan and implement fire prevention using adaptive management strategies.
7. Determine the level of fire suppression resources necessary to protect the values and assets at risk identified during planning processes.
8. Implement post-fire assessments and programs for the protection of life, property and natural resource recovery.

Mutual Aid Agreements

The California Disaster and Civil Defense Master Mutual Aid Agreement, as provided by the California Emergency Services Act, provides statewide mutual aid between and among local jurisdictions and the state. The statewide mutual aid system exists to ensure that adequate resources, facilities, and other supports are provided to jurisdictions whenever resources prove to be inadequate for a given situation. Each jurisdiction controls its personnel and facilities but can give and receive help whenever needed.

Local

City of Hesperia Municipal Code

Section 15.04.010 of the City's Municipal Code adopts the 2019 California Fire Code, which sets forth requirements for fire-safe construction, such as fire-resistive building materials, automatic fire sprinklers, fire hydrants and fire-flow.

City of Hesperia General Plan

The Safety Element of the General Plan identifies, establishes, and sets forth policies to address hazards within the municipality. Goals or policies related to hazards, hazardous materials and wildfire in the General Plan (City of Hesperia 2010) include the following:

Goal SF-3. Reduce the risk of death, injury, property damage and economic loss due to vegetation and structure fires.

Policy SF-3.1. The City shall continue to require that all new habitable structures be designed in accordance with the most recent California Fire Code with local amendments adopted by the City, including the use of fire sprinklers in residential structures.

Policy SF-3.2. The City will continue to conduct regular inspections of parcels throughout the city, and will direct property owners to bring their property into compliance with fire inspection standards. This includes enforcing the weed abatement and notification program, to reduce the potential for vegetation fires to occur in vacant or poorly maintained lots, and encouraging homeowners to follow fire-safe practices, including maintaining a fire-safe landscape and keeping combustibles (such as fire wood) a safe distance away from all structures.

Policy SF-3.7. The City, in cooperation with the San Bernardino County Fire Department, will ensure, to the maximum extent possible, that fire services, such as firefighting equipment and personnel, infrastructure, and response times, are adequate for all sections of the City. To that end, the City will continue to regularly evaluate specific fire hazard areas, and adopt reasonable safety standards, such as adequacy of nearby water supplies, fire-retardant roofing materials, fire-equipment accessible routes, clarity of addresses, street signage, and street maintenance.

Policy SF-3.10. The City will adopt the most recent version of the Wildland-Urban Interface Code and Chapter 7A of the California Building Code for use in the City where the Insurance Services Offices (ISO) number exceeds 5 (greater than 5).

Goal SF-4. Reduce the potential for hazardous materials contamination in Hesperia.

Policy SF 4.1. The City, in cooperation with the San Bernardino County Fire Department, Hazardous Materials Division, will continue to enforce disclosure laws that require all users, generators, and transporters of hazardous materials and wastes to clearly identify the materials that they store, use or transport, and to notify the appropriate City, county, state and federal agencies of a change in quantity or type of materials, and in the event of a violation.

Policy SF 4.2. The City, in cooperation with the San Bernardino County Fire Department, will ensure that they can continue to respond safely and effectively to a hazardous materials incident in the City, whether it is a spill at a permitted facility, or the result of an accident along a section of the freeway or railroads that extend across the City. To do this, the City will continue to coordinate with regional providers of emergency services, including the County's Fire and Sheriff Departments, to ensure that all residents, workers, and visitors to Hesperia are protected from exposure to hazardous materials and wastes.

Policy SF 4.3. The City will identify roadways along which hazardous materials are routinely transported. If critical facilities, such as schools, medical facilities, child care centers or other facilities with special evacuation needs are located along these routes, the City, together with these facilities, will identify emergency response plans that can be implemented in the event of a roadway accident nearby that results in the unauthorized release of hazardous materials.

Policy SF 4.4. The City will continue to reduce or eliminate the use of hazardous materials by using instead non-toxic, safer alternatives that do not pose a threat to the environment, or buying and using only the smallest amount of a hazardous substance to get the intended job done. The City will encourage residents and businesses in the City to do the same.

Policy SF 4.5. Proposed new facilities that will be involved in the production, use, storage, transport or disposal of hazardous materials will not be allowed within the 100-year floodplain, or near existing land uses that may be adversely impacted by such activities. Conversely, new sensitive facilities (like schools, child care centers, and nursing homes) will not be allowed to be located near existing sites that use, store, or generate hazardous materials.

Policy SF 4.6. The City will continue to support the operation of programs and recycling centers that accept hazardous substances, such as paint, paint thinner, used waste oil, etc., such as the City's Drop-Off facility.

Policy SF 4.7. The City will work with the Hesperia Water District to monitor the potential presence of perchlorate in well water. If perchlorate continues to be detected at measurable concentrations, programs to find and eradicate the source of this contaminant, and to clean up the perchlorate already in the water will have to be developed.

Erosion and Sediment Control Plan

For projects that would include soil disturbance during construction, project applicants must submit an erosion and sediment control plan for approval to the City of Hesperia. The City will not issue grading or building permits until the erosion and sediment control plan for the Project is approved.

The purpose of the erosion and sediment control plan is to (1) identify potential pollutant sources that may affect the quality of stormwater runoff and prevent non-stormwater discharges from the construction site; (2) document the best management practices (BMPs) that will be implemented to prevent, to the maximum extent practicable, construction site pollutants from leaving the site during all phases of construction; and (3) document erosion control, sediment control, and good housekeeping BMPs that shall be implemented year-round as appropriate based on construction activities.

4.7.3 Thresholds of Significance

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

A. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
B. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
C. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
D. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.
E. Be located within an airport land use plan, be within two miles of a public airport, and would result in a safety hazard or excessive noise for people residing or working in the Project area.
F. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
G. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.
H. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, substantially impair an adopted emergency response plan or emergency evacuation plan.
I. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.
J. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.
K. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.
L. Result in a cumulatively considerable impact with regard to hazards, hazardous materials, or wildfire.

Thresholds C, D, E, and F were analyzed in the Initial Study (Appendix A) and were not carried forward for further analysis in this EIR. See Chapter 5, Effects Found Not To Be Significant, for additional detail.

4.7.4 Impacts Analysis

Threshold A: Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than Significant with Mitigation Incorporated. During construction, a variety of hazardous substances and wastes would be stored, used, and generated on the Project site, including fuels for machinery and vehicles, new and used motor oils, cleaning solvents, paints, and storage containers. Accidental spills, leaks, fires, explosions, or

pressure releases involving hazardous materials represent a potential threat to human health and the environment if not property treated. Provisions to properly manage hazardous substances and wastes during construction are typically included in construction specifications and are under the responsibility of the construction contractors. For example, construction contractors would be required to comply with Cal/OSHA regulations concerning the use of hazardous materials, including requirements for safety training, exposure warnings, availability of safety equipment, and preparation of emergency action/prevention plans. Adherence to the construction specifications and applicable regulations regarding hazardous materials and hazardous waste, including disposal, would ensure that Project construction would not create a significant hazard to the public or the environment during the construction phase of the Project.

While soil staining was not observed during the site reconnaissance of the Phase I ESA (Appendix F), the Phase I ESA notes the following:

> CCG [the environmental consultant preparing the Phase I ESA] recommends that the observed debris/wastes be removed from the subject property, and properly disposed of in accordance with all applicable local, state, and federal guidelines. If during future development activities visually impacted soils are identified, impacted soils should be excavated, removed, and properly disposed of. Confirmatory soil samples should be collected during excavation to ensure that the extent of impacted soils has been removed.

This recommendation was made in response to multiple scrap truck tires and several empty retail-sized containers of automotive fluids observed on the Project area. While no direct staining was observed, the recommendation indicates there is a potential to encounter shallow soil contamination due to the observed dumping on the Project site, especially automotive fluid containers and tires. Mitigation Measure (MM) HAZ-1 (see Section 4.7.5) requires the removal and disposal of on-site debris, including tires and automotive fluid containers, from the Project area in accordance with all applicable local, state, and federal guidelines. In the event soil staining, odors, or other evidence of contamination is identified during excavation and grading activities, or excavation and grading is completed in areas under large debris piles, a qualified environmental professional shall screen soils in the identified area prior to excavation and grading based on the nature of the potential contamination. In the event that potential contamination is encountered, the contamination shall be evaluated by a qualified environmental professional using the appropriate collection and sampling techniques as determined by the environmental professional based on the nature of the contamination. The nature and extent of contamination shall be determined and the appropriate handling, disposal, and/or treatment shall be implemented in accordance with applicable regulatory requirements.

Furthermore, adherence to all emergency response plan requirements set forth by the SBCFD would be required throughout the duration of Project construction. Therefore, based on compliance with existing regulations and with incorporation of MM-HAZ-1, short-term construction impacts associated with the routine transport, use, or disposal of hazardous materials would be less than significant.

Upon completion of Project construction, the Project would involve the operation and maintenance of the industrial/warehouse facilities. Operation of the Project would likely involve the use of industrial-grade chemicals and commercially available cleaning products, landscaping chemicals and fertilizers, and various other commercially available products during the day-to-day operation of the facilities. While these materials could be stored on the Project site, storage would be required to comply with the guidelines established by the manufacturer's recommendations. Consistent with federal, state, and local requirements, the transport, removal, and disposal of hazardous materials from the Project site would be conducted by a permitted and licensed service

provider. Any handling, transport, use, or disposal must comply with all applicable federal, state, and local agencies and regulations, including the EPA, Department of Toxic Substances Control, Cal/OSHA, RCRA, and the SBCFD.

Although the future tenants are not known yet, in the event that a future tenant's operations require them to transport, use, or dispose of quantities of hazardous materials identified by the state, pursuant to the Health and Safety Code and in accordance with SBCFD's CUPA requirements, the owner/operator must complete and submit a HMBP to the California Environmental Reporting System. An HMBP is a document containing detailed information on the inventory of hazardous materials at a facility; emergency response plans and procedures in the event of a reportable release or threatened release of a hazardous material; training for all new employees and annual training, including refresher courses, for all employees in safety procedures in the event of a release or threatened release of a hazardous material; and a site map that contains north orientation, loading areas, internal roads, adjacent streets, storm and sewer drains, access and exit points, emergency shutoffs, evacuation staging areas, hazardous material handling and storage areas, and emergency response equipment. The HMBP provides basic information necessary for use by first responders to prevent or mitigate damage to the public health and safety and the environment from a release or threatened release of hazardous materials, and to satisfy federal and state Community Right-To-Know laws. In addition, should oil storage exceed 1,320 gallons aboveground or 42,000 gallons belowground, a spill prevention, control, and countermeasure plan (SPCC Plan) would also be prepared in accordance with Title 40 of the Code of Federal Regulations (CFR), Section 112. The SPCC Plan includes a summary of oil containing equipment, inspection requirements, spill response procedures, and employee training guidelines. While not required to be submitted, the SPCC Plan is required to remain onsite and be available for inspection by the local regulatory agency, in this case the SBCFD's CUPA. Therefore, long-term operational impacts associated with the routine transport, use, or disposal of hazardous materials would be less than significant.

In summary, the Project would result in potentially significant impacts with regard to the creation of a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. MM-HAZ-1 would be implemented, and Project impacts would be less than significant with mitigation incorporated.

Threshold B: Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less than Significant with Mitigation Incorporated. During construction, hazardous materials such as fuels and lubricants would be transported to and used on site in construction vehicles and equipment. Construction waste is a potential pollutant source of concern for the Oro Grande Wash and Mojave River, which are located hydrologically down gradient of the Project site. Concrete, paint, and other materials that are also used on construction sites are major contributors to habitat pollution, in the event that such materials exit a construction site. However, the potential for the use of these materials to result in significant hazards to the public or the environment would be low for the reasons described below.

The Project contractor and construction crews would be required to comply with all applicable regulations governing the storage, handling, and disposal of hazardous materials and waste. As discussed in Section 4.8, Hydrology and Water Quality, prior to issuance of grading permits, the City of Hesperia requires the submittal, review, and approval of an erosion and sediment control plan. Implementation of an erosion and sediment control plan would ensure that construction-related BMPs are enacted to prevent, to the maximum extent practicable, construction site pollutants from leaving the site during all phases of construction. The Project would also be required to comply with the NPDES Municipal Separate Storm Sewer System (MS4) Permit, including the regulation of surface water quality. Under the NPDES MS4 Permit, the development of 1.0 acres or more of land must file a notice of intent with the State Water Resources Control Board to comply with the state NPDES General Construction Permit. Implementation

of this Permit would require the development of a site-specific stormwater pollution prevention plan (SWPPP) for construction activities. The SWPPP is required to identify BMPs that protect stormwater runoff and ensure avoidance of substantial degradation of water quality. Typical BMPs that could be incorporated into the SWPPP to minimize the off-site runoff of pollutants would include the following:

- Diverting off-site runoff away from the construction site
- Vegetating landscaped/vegetated swale areas as soon as feasible following grading activities
- Using drop inlet protection (filters and sandbags or straw wattles), with sandbag check dams within paved areas
- Implementing specifications for construction waste handling and disposal
- Using contained equipment wash-out and vehicle maintenance areas
- Training, including for subcontractors, on general site housekeeping

Incorporation of required BMPs would help control the use of hazardous substances during construction and would minimize the potential for such substances to leave the site. As a result, there would be reduced potential for the public and environment to be exposed to hazardous chemicals and materials as a result of construction activities. The implementation of applicable construction BMPs and adherence to applicable hazardous materials and waste regulations would minimize the risk and exposure of the release of hazardous materials to the public and environmental to less than significant levels.

Based on the Phase I ESA, no on-site historical recognized environmental conditions, controlled recognized environmental conditions, recognized environmental conditions, or business recognized environmental conditions were identified.

Due to dumping on the Project site, Project grading and excavation could encounter soils impacts by petroleum hydrocarbons, resulting in potentially significant health and safety impacts to construction personnel, as well as potential off-gassing of petroleum from impacted soil excavations and associated soil stockpiles. However, MM-HAZ-1 would require the removal and disposal of on-site debris, including tires and automotive fluid containers, from the Project area in accordance with all applicable local, state, and federal guidelines. For excavation and grading activities that occur in areas with the potential for residual contamination, a qualified environmental professional shall screen soils in the identified area prior to excavation and grading activities based on the nature of the potential contamination. If potential contamination is encountered, the contamination shall be evaluated by a qualified environmental professional based on the nature of the contamination. The nature and extent of contamination shall be determined and the appropriate handling, disposal, and/or treatment shall be implemented in accordance with applicable regulatory requirements. Therefore, based on compliance with applicable regulations and with the incorporation of MM-HAZ-1, short-term construction impacts associated with creating a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions would be less than significant with mitigation incorporated.

Upon completion of Project construction, routine operation of the Project facilities would likely involve use of industrial grade chemicals and commercially available cleaning products, landscaping chemicals and fertilizers, and various other commercially available products. These materials would be used for the day-to-day operation of the facilities and may involve the use of hazardous materials.

As previously discussed in Threshold A, the future tenants are not known yet. In the event that a future tenant's operations require them to transport, use, or dispose of quantities of hazardous materials identified by the state, pursuant to the Health and Safety Code and in accordance with SBCFD's CUPA requirements, or store quantities of

oil that trigger the SPCC Plan regulations, the owner/operator must complete and submit an HMBP to the California Environmental Reporting System and/or prepare an SPCC Plan. Completion of an HMBP and SPCC Plan would ensure that an emergency spill response and containment plan is in place in the event of hazardous spills.

Furthermore, the use, storage, and transport of hazardous materials and wastes would be subject to applicable federal, state, and local health and safety regulations (e.g., RCRA and the Hazardous Waste Control Act "cradle to grave" requirements). All hazardous materials generated and/or used on the Project site would be managed in accordance with all relevant federal, state, and local laws, including the California Hazardous Waste Control Law (California Health and Safety Code Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (22 CCR 4.5). Moreover, compliance with Cal/OSHA workplace and work practices requirements would avoid the exposure of persons and the environment to hazardous materials.

In addition to the regulations and practices described above, the following requirements would apply to storage and handling of hazardous wastes at the Project site:

1. Hazardous materials are required to be stored in designated areas designed to prevent accidental release in accordance with state law, including the California Hazardous Waste Control Act and the California Health and Safety Code.
2. Cal/OSHA requirements prescribe safe work environments for workers working with materials that present a moderate explosion hazard, high fire, or physical hazard or health hazard.
3. Federal and state laws related to the storage of hazardous materials would be complied with to maximize containment and provide for prompt and effective clean-up in case of an accidental release.
4. Hazardous materials inventory and response planning reports would be filed with the City in accordance with Unified Program Permit requirements.

Compliance with applicable regulations involving hazardous materials during operation would ensure that such materials are transported, used, stored, and disposed of in a manner that minimizes the potential for upset and accidental conditions resulting in the release of hazardous materials into the environment. Due to the existing regulations that are required, it is not expected that the Project would create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions would be less than significant.

In summary, the Project would result in potentially significant impacts with regard to the creation of 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. MM-HAZ-1 would be implemented, and Project impacts would be less than significant with mitigation incorporated.

Threshold G: Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

Less-than-Significant Impact. Construction of the Project would introduce potential ignition sources to the Project site, including the use of heavy machinery and the potential for sparks during welding activities or other hot work. However, the Project would be required to comply with City and state requirements for fire safety practices, to reduce the possibility of fires during construction activities. The Project would comply with CFC Section 3304 for precautions against fire during construction activities. Access for firefighting would be maintained throughout construction per CFC Section 3310.1. Any motorized equipment within the site would comply with fire protection regulations outlined in CFC Section 3316. Further, vegetation would be removed from the site prior to the start of construction. Adherence to City and state regulatory standards during Project construction would reduce the risk of

wildfire ignition and spread during construction activities. In the case of accidental ignition, the site is required to have no less than one portable extinguisher at each level where combustible materials have accumulated, in every storage or construction shed, and where any additional hazards exist (CFC Section 3315). Therefore, short-term construction impacts associated with exposing people or structures to a significant risk of loss, injury, or death involving wildland fires would be less than significant.

During operation, the Project would adhere to the City's Municipal Code and the CFC. Additionally, the proposed structures have a low ignitability, and the Project would implement fire-resistant, irrigated landscaping. Further, during its operation, the Project would be required to have and maintain fire protection and life safety systems (CFC Chapter 9) and automatic fire sprinklers (City of Hesperia Municipal Code Chapter 15, Section 15.04.030) The Project would not facilitate wildfire spread or exacerbate wildfire risk or expose people or structures, indirectly or directly, to significant wildfire risk. Given that surrounding off-site fuels consist of moderately spaced vegetation, and as shown in Figure 4.7-2, Wildfire History, wildfires in the immediately surrounding area are not common, and it is unlikely that Project occupants would be exposed to the uncontrolled spread of a wildfire or prolonged pollutant concentrations in the event of a wildfire. It is not anticipated that the Project, due to slope, prevailing winds, and other factors, would exacerbate wildfire risks or expose Project occupants to pollutant concentrations from a wildfire, the uncontrolled spread of a wildfire, or significant risks associated with wildfires. Therefore, long-term operational impacts associated with exposing people or structures to a significant risk of loss, injury, or death involving wildland fires would be less than significant.

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

Less-than-Significant Impact. The Project site is not located in SRA lands or lands classified as Very High FHSZ. However, SRA lands classified as Moderate and High FHSZs are located immediately south and west of the Project site, respectively. As further discussed in Section 4.10, Transportation, access to the Project site would be provided by four driveways. These driveways have been designed such that adequate emergency access would be provided and in accordance with emergency apparatus access requirements. These driveways are depicted in Figure 3-13, Vehicular Circulation Access Plan, and listed below.

- Driveway A via Lassen Road north – 45-foot-wide, full-access (passenger cars/trucks) driveway with stop sign
- Driveway B via Mesa Linda Street north – 45-foot-wide, full-access (passenger cars/trucks) driveway with stop sign
- Driveway C via Lassen Road south – 30-foot-wide, full-access (passenger cars only) driveway with stop sign
- Driveway D via Mesa Linda Street south – 30-foot-wide, full-access (passenger cars only) driveway with stop sign

The City of Hesperia Emergency Preparedness Program serves as a resource for residents and businesses to plan for emergencies. Further, the City's Hazard Mitigation Plan includes resources and information to assist City residents, public and private sector organizations, and others interested in participating in planning for natural hazards (City of Hesperia 2017). The Hazard Mitigation Plan identifies wildfire as one of the natural hazards faced by the City and establishes the goal to "reduce the risk of death, injury, property damage and economic loss due to vegetation and structure fires." As they relate to the Project, the mitigation objectives and actions outlined in the Hazard Mitigation Plan would require that the Project be designed and constructed in accordance with the most recent CBC and CFC (and local amendments), and regular fire safety inspections would ensure that the Project is in compliance with fire inspection standards, and provides adequate fire protection and weed abatement to reduce the potential for vegetation fires (City of Hesperia 2017). The Project would comply with all City and state

requirements related to fire safety, and the Project would comply with all requirements outlined in the Hazard Mitigation Plan.

In the event of a wildfire, the City, in cooperation with the SBCFD, would use the City's public notification systems and provide evacuation instructions. Exhibit SF-4 of the City's General Plan identifies potential shelters and emergency evacuation routes within the City. There are two potential evacuation routes nearest to the Project site: Interstate (I) 15, Highway 395, and Phelan Road/Main Street. I-15 is located east of the Project site and serves as a major transportation corridor providing a direct connection to other major interstates and highways. Highway 395 is located west of the Project site and serves as a secondary north–south highway leading north off I-15. Phelan Road/Main Street is a major east-to-west arterial road north of the Project site (City of Hesperia 2010). The Project would not impede access to I-15, Highway 395, and Phelan Road/Main Street or otherwise impact the functionality of the road to operate as a potential evacuation route. The Project would construct four access driveways into the Project site from Mesa Linda Street, and Lassen Road, as well as frontage improvements along Mesa Linda Street, Poplar Street, and Lassen Road Street that would improve operations on surrounding roads.

Further, as shown in Figure 4.7-2, Wildfire History, wildfires in the City and surrounding area typically start in the mountains or foothills to the south. In the event that prevailing winds fan a fire so that it moves north into the WUI, evacuation of the potentially affected communities may be required. In general, evacuees would take roads leading north, toward the more developed areas of the City. Several of these roads are identified on Exhibit SF-3 in the City's General Plan, and include Summit Valley Road, Santa Fe Avenue, 11th Avenue, Maple Avenue, and the I-15 (City of Hesperia 2010). By complying with City and SBCFD requirements, the Project would not conflict with or impair implementation of the Hazard Mitigation Plan, nor would the Project impair use of potential evacuation routes in the City, and impacts would be less than significant.

Threshold I: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Less-than-Significant Impact. As discussed in Section 4.7.1, the Project site is not located in SRA lands or lands classified as Very High FHSZ. The nearest Very High FHSZ in the City is located approximately 8 miles south, and the nearest Very High FHSZ in the SRA is located approximately 5 miles south. However, SRA lands classified as Moderate and High FHSZs are located immediately south and west of the Project site, respectively (Figure 4.7-1, Fire Hazard Severity Zones). The Project could exacerbate wildfire risk and expose Project occupants to pollutant concentrations from a wildfire or the uncontrollable spread of a wildfire if the Project, combined with the climatic, topographic, vegetation, weather conditions, and other factors, would increase the risk of a wildfire occurring and increase the severity of such an occurrence.

Short-Term Construction Impacts

Construction of the Project would introduce potential ignition sources to the Project site, including the use of heavy machinery and the potential for sparks during welding activities or other hot work. However, the Project would be required to comply with City and state requirements for fire safety practices, to reduce the possibility of fires and accidental ignitions during construction activities, as discussed above under Threshold G. Further, vegetation would be removed from site prior to the start of construction, and during construction access to the Project site for emergency vehicles would be maintained. Adherence to City and state regulatory standards during Project construction would reduce the risk of wildfire ignition and spread during construction activities. Thus, short-term construction impacts associated with exacerbating wildfire risk would be less than significant.

Long-Term Operational Impacts

Slope

As previously discussed in Section 4.7.1, Existing Conditions, the Project site, and the surrounding area are relatively flat. The Project site elevation ranges from 3,600 feet amsl to 3,630 feet amsl, with a slope gradient of less than 2% downward towards the northeast. Upon Project implementation, the portions of the site that would be developed would be graded to a flat, level surface. The Project site and surrounding area do not contain slopes typical of exacerbating wildfire risk, and once developed, the Project would not result in steep slopes typical of exacerbating wildfire risk.

Prevailing Winds

Prevailing winds are winds that blow from a single direction over a specific area. As previously discussed in Section 4.7.1, the predominant average hourly wind speed and direction in the City varies throughout the year. From February through November, the wind primarily blows from the west, and from the north from November through February. Average wind speeds vary from approximately 6.4 mph to 7.5 mph, with wind gusts reaching up to 14 mph during the windiest time of the year (January through July) (Weather Spark 2020). High wind velocities that could exacerbate wildfire risk are generally associated with downslope, canyon, and Santa Ana winds. As discussed above, the Project site is predominantly flat and does not include topography that would create unusual weather conditions. Further, as shown in Figure 4.7-2, Wildfire History, wildfires in the City and surrounding area typically start in the mountains or foothills to the south. Given that the prevailing wind direction during the summer months when fire risk is highest is from the west, it is not anticipated that prevailing winds would exacerbate wildfire risks on site.

Other Factors

Other factors such as vegetation, building materials, setbacks, and proposed on-site activities can also contribute to wildfire risk.

Vegetation

The vegetation cover on site and in the surrounding area consists of Joshua tree woodland. Vegetation in the Project area is generally spaced out, and consistent with the Mojave Desert Bioregion, limiting the amount of surface fuel loads available to burn, which inhibits fire spread (City of Hesperia 2010b). Further, the Project would convert vacant land with moderate vegetation cover into development consisting of a large warehouse building, paved surface parking, and maintained landscape areas. As depicted in Figure 3-16, Landscape Plan, of EIR Chapter 3, landscaping for the Project is proposed for the parking areas, portions of the building, and the site frontages. Landscaping would consist of a mixture of trees, shrubs, and groundcover, which would be implemented according to Chapter 16.20 of the City's Municipal Code, and would consist of vegetation found in the surrounding desert environment. Highly flammable vegetation would not be used in Project landscaping.

Building Materials and Setbacks

The Project building would be required to comply with the City's Municipal Code, which adopts the 2019 CFC and includes provisions for fire safety and fire-resistive construction. Further, compliance with required setbacks would allow for space between Project building and off-site vegetation. Studies indicate that given certain assumptions (e.g., 10 meters of low-fuel landscape, no open windows), wildfire is unlikely to spread to buildings unless the fuel and heat requirements of the building are sufficient for ignition and continued combustion (Alexander et al. 1998;

Cohen 1995). Construction materials and methods can prevent or minimize ignitions. According to previous research, post-fire assessments conducted in San Diego County indicate that updated building codes have shown success in preventing structural loss (IBHS 2008). The distance between a wildfire that is consuming wildland fuel and a building is the primary factor for structure ignition (not including burning embers) (Cohen 2000). Low-ignitability buildings provide the option of reducing the wildland fire threat to structures without extensive wildland fuel reduction. The Project would be required to comply with construction methods outlined in the City's Municipal Code, the CFC, and the CBC, which specify requirements for materials and construction methods for fire safety. The proposed building materials for Project structures include concrete, metal, aluminum entrance front framing, glass, and other fire-resistant materials. If structures have sufficiently low ignitability, such as the Project's structure, buildings can survive exposure to wildfire without major fire destruction.

Proposed Activities

Project activities would introduce new potential sources of ignition to the Project site. Tenants for the Project have not been identified; however, operations would likely include storage of materials within the warehouse building, ingressing and egressing of trucks within designated truck courts/loading areas, loading and unloading of trucks/trailers, internal and external movement of materials around the Project site via forklifts, pallet jacks, and similar equipment and passenger vehicles accessing the site. Given that the proposed use would not exacerbate fire risk, and given that vegetation on site would consist of fire-resistant and irrigated landscaping, the likelihood of a fire starting on site and spreading to off-site areas would be minimal.

Summary

With adherence to the City's Municipal Code, the low ignitability of the proposed structures, and implementation of fire-resistant, irrigated landscaping, the Project would not facilitate wildfire spread or exacerbate wildfire risk or expose people or structures, indirectly or directly, to significant wildfire risk. Further, given that surrounding off-site fuels consist of moderately spaced vegetation, and as shown in Figure 4.7-2, Wildfire History, wildfires in the immediately surrounding area are not common, it is unlikely that Project occupants would be exposed to the uncontrolled spread of a wildfire or prolonged pollutant concentrations in the event of a wildfire. It is not anticipated that the Project, due to slope, prevailing winds, and other factors, would exacerbate wildfire risks or expose Project occupants to pollutant concentrations from a wildfire, the uncontrolled spread of a wildfire, or significant risks associated with wildfires, and impacts would be less than significant.

Threshold J: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Less-than-Significant Impact. The Project involves the development of an undeveloped site with an industrial/warehouse building, surface parking, and loading areas. The Project would include installation and maintenance of associated infrastructure including driveways and surface parking, and connections to service utilities (e.g., water, wastewater, sanitary sewer, stormwater drainage, electric power, natural gas, and telecommunications services). The majority of the associated infrastructure and utility connections would occur on site or adjacent to the site and would not result in off-site environmental impacts or exacerbate wildfire risk. However, the Project would also include limited off-site improvements and utility connections. In particular, the Project would include installation of new and upsizing of existing domestic water lines and sewer lines in the Project vicinity (collectively, the Off-Site Sewer Alignment and the Off-Site Water Alignment are referred to as the Off-Site

Utilities Alignments). The Project would also include off-site frontage and pedestrian improvements along Mesa Linda Street, Poplar Street, and Lassen Road.

Given that the Project includes connecting utilities from their current locations to the Project site and the new off-site improvements that would require ground disturbance and the use of heavy machinery associated with trenching, the installation of these utility service lines could potentially result in temporary or ongoing impacts to the environment and could exacerbate wildfire risk by introducing new potential sources of ignition, such as the use of heavy machinery, welding, or other hot work. However, as previously discussed, vegetation would be removed from the site before the start of construction, and the site would be graded to a flat, level surface, which would reduce the likelihood of fire ignition during installation and connection of utilities.

The installation and maintenance of roads, service utilities, drainage and water quality improvements, and vegetation removal are part of the Project analyzed herein. As such, any potential temporary or ongoing environmental impacts related to these components of the Project have been accounted for and analyzed in this EIR as part of the impact assessment conducted for the entirety of the Project. Additionally, the Project would be required to comply with all regulatory requirements and mitigation measures outlined within this EIR for the purposes of mitigating impacts associated with trenching, grading, site work, and the use of heavy machinery. No adverse physical effects specifically related to wildfire or beyond those already disclosed throughout this EIR would occur as a result of implementation of the Project's associated infrastructure. Therefore, the installation and maintenance of associated infrastructure would not exacerbate wildfire risk or result in impacts to the environment beyond those already disclosed in this EIR, and impacts would be less than significant.

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

Less-than-Significant Impact. The Project site is located within the Mojave River Watershed. The Mojave River is the primary geologic or hydrologic feature in the watershed and is primarily fed by precipitation and snowmelt in the San Bernardino Mountains. The Mojave River is located approximately 9 miles east of the Project site. The Project site is not within areas mapped as susceptible to subsidence, landslides, or liquefaction as shown in Exhibit SF-2 of the City's General Plan (City of Hesperia 2010). As further discussed in Section 4.8, the Project site is located in Zone X, an area of minimal flood hazard (FEMA n.d.). This area is higher in elevation than the 0.2% annual chance of flood (i.e., 500-year flood). Further, the Project site and surrounding area consist of relatively flat land that is not typically susceptible to landslides or downslope or downstream flooding. Although internal drainage patterns would be somewhat altered as a result of Project development, the Project would maintain adequate stormwater conveyance and would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off-site. Further, according to available wildfire history (see Figure 4.7-2, Wildfire History), wildfires have not burned onto or adjacent to the Project site, precluding the risk of post-fire slope instability. Therefore, due to the proposed grading of the site, the relatively flat surrounding lands, and the fact that the site would be developed and paved, the likelihood for downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes would be minimal, and impacts would be less than significant.

Threshold L: Would the Project result in cumulatively considerable impacts with regard to hazards, hazardous materials, or wildfire?

Hazards and Hazardous Materials

Less than Significant with Mitigation Incorporated. The geographic scope of the cumulative hazards and hazardous material analysis is the immediate Project area, including surrounding land uses and other nearby properties. Adverse effects of hazards and hazardous materials tend to be localized; therefore, impacts from nearby projects would be limited, if any, and the Project site would be primarily affected by Project activities.

During construction, hazardous materials such as fuels and lubricants would be transported to and used on site in construction vehicles and equipment. In addition, Project excavations could encounter shallow soil contaminants as a result of on-site used automotive fluid containers and tires. These contaminants, if improperly handled, could expose the public environment to pollutants. However, water quality enhancement components of the Project, including the implementation of an erosion and sediment control plan, a SWPPP, stormwater BMPs, and MM-HAZ-1, would minimize the potential release of construction-related pollutants on and off site.

Post-development, routine operation of the Project would include the use of various hazardous materials, including chemical reagents, solvents, fuels, paints, and cleaners. These materials would be used for day-to-day operations as well as building and landscaping maintenance. However, compliance with applicable regulations involving hazardous materials during operation would ensure that such materials are transported, used, stored, and disposed of in a manner that minimizes the potential for upset and accident conditions resulting in the release of hazardous materials into the environment. In addition, the owner/operator must complete and submit an HMBP to the California Environmental Reporting System and complete an SPCC Plan in the event oil storage is above thresholds outlined in 40 CFR 112. This would ensure that in the event that an emergency spill response and containment plan is in place in the event of hazardous spills or releases. As such, it is not expected that the Project would create a significant hazard to the public or the environment through routine operations or reasonably foreseeable upset and accident conditions or result in the release or exposure of hazardous materials into the environment. Therefore, cumulative hazards and hazardous materials impacts would be less than significant with mitigation incorporated.

Wildland Fire

Less-than-Significant Impact. The cumulative context considered for wildfire impacts is San Bernardino County, and more specifically, the Mojave River watershed, which encompasses 4,500 square miles. As discussed in Section 4.7.1, CAL FIRE has mapped areas of fire hazards in the state based on fuels, terrain, weather, and other relevant factors. As described above, the Project site is located in a moderate FHSZ but is adjacent to SRA lands designated as Moderate and High FHSZs. The Project, combined with other projects in the region, would increase the population and/or activities and potential ignition sources in the area, which may increase the potential of a wildfire and increase the number of people and structures exposed to the risk of loss, injury, or death from wildfires. Individual projects located within the County would be required to comply with applicable fire and building codes, which have been increasingly strengthened as a result of severe wildfires that have occurred in the last two decades. The fire and building codes include fire prevention and protection features that reduce the likelihood of a fire igniting in a specific project and spreading to off-site vegetated areas. Further, any related projects located in fire hazard areas would be required to comply with vegetation clearance requirements, as outlined in the applicable fire and building codes. These codes also protect projects from wildfires that may occur in the area through the implementation of brush management and fuel management zones, ensuring adequate water supply, preparation of fire protection plans, and other measures.

The Project area is relatively flat, and it is not anticipated that related projects would combine to result in significant wildfire impacts related to slope, prevailing winds, downstream flooding or landslide, slope instability, or drainage changes. Further, all related projects would be required to avoid conflict with the City's Emergency Preparedness Plan and potential emergency evacuation routes in the area. The applicable CFC and CBC, along with Project-specific needs assessments and fire prevention plan requirements, ensure that every project approved for construction includes adequate emergency access. Roads for all proposed projects are required to meet minimum widths, have all-weather surfaces, and be capable of supporting the imposed loads of responding emergency apparatus. The Project and all other future development projects in the service area would be subject to review by the SBCFD and would be required to comply with the County Fire Code and other relevant County Code requirements and other applicable local codes (e.g., City of Hesperia Municipal Code) and regulations related to fire safety, building construction, access, fire flow, and fuel modification. Therefore, because all projects are required to comply with these requirements, cumulative impacts related to increased wildfire hazards and emergency response and access would be less than significant.

4.7.5 Mitigation Measures and Level of Significance After Mitigation

Threshold A: Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

The Project would result in potentially significant impacts with regard to the creation of a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. MM-HAZ-1 would be implemented, and Project impacts would be less than significant with mitigation incorporated.

MM-HAZ-1 Prior to the issuance of a grading permit, the Project Applicant shall retain a qualified environmental specialist that has documented experience in the identification, characterization, and removal of hazardous materials, such as a California licensed professional engineer, geologist, or hydrogeologist, to remove and dispose of all refuse located on the Project site, including but not limited to, the illegally dumped tires and oil containers currently found on site. The removal, transport, and disposal of refuse shall be done in accordance with all applicable local, state, and federal guidelines related to hazardous materials handling. Prior to the removal of refuse deposits from the site, the environmental specialist shall inspect each refuse pile for indications that the refuse may contain, or may have once contained, hazardous materials, including, but not limited to, motor oil, solvents, paints, and/or other petroleum products. In addition, the environmental specialist shall inspect the soils surrounding each refuse deposit for evidence of any contamination (staining) or volatilization of contaminants (odors).

If contamination indicators are identified, work shall stop in the immediate proximity of the potential contamination. The Project Applicant and/or their construction contractor shall be responsible for engaging a qualified environmental specialist to design and perform an investigation to verify the presence and extent of contamination on the Project site. Subsurface investigation shall determine appropriate worker protection and hazardous material and disposal procedures appropriate for the Project site. Contaminated soil or groundwater determined to be hazardous shall be removed by personnel who have been trained through the Occupational Safety and Health Administration–recommended 40-hour safety program with an approved plan for

groundwater extractions, soil excavation, control of contaminant releases to the air, and off-site transport or on-site treatment.

Threshold B: Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

The Project would result in potentially significant impacts with regard to the creation of 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. MM-HAZ-1 would be implemented, and Project impacts would be less than significant with mitigation incorporated**.**

Threshold G: Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

The Project would result in less-than-significant impacts associated with exposing people or structures to a significant risk of loss, injury, or death involving wildland fires. No mitigation is required.

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

The Project would not conflict with or impair implementation of the Hazard Mitigation Plan, nor would the Project impair use of potential evacuation routes in the City, and impacts would be less than significant. No mitigation is required.

Threshold I: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project, due to slope, prevailing winds, and other factors, would the Project exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

The Project would not, due to slope, prevailing winds, and other factors, exacerbate wildfire risks or expose Project occupants to pollutant concentrations from a wildfire, the uncontrolled spread of a wildfire, or significant risks associated with wildfires, and impacts would be less than significant. No mitigation is required.

Threshold J: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

The Project would result in less-than-significant impacts associated with the installation and maintenance of Project-associated infrastructure that may exacerbate wildfire risk or result in temporary or ongoing impacts to the environment. No mitigation is required.

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

The Project would result in less-than-significant impacts associated with the exposure of people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. No mitigation is required.

Threshold L: Would the Project result in cumulatively considerable impacts with regard to hazards, hazardous materials, or wildfire?

Hazards and Hazardous Materials

The Project would result in potentially significant cumulative impacts with regard to hazards and hazardous materials. MM-HAZ-1 would be implemented, and cumulative Project impacts would be less than significant with mitigation incorporated.

Wildland Fire

The Project would result in less-than-significant cumulative impacts associated with wildfire. No mitigation is required.

4.7.6 References Cited

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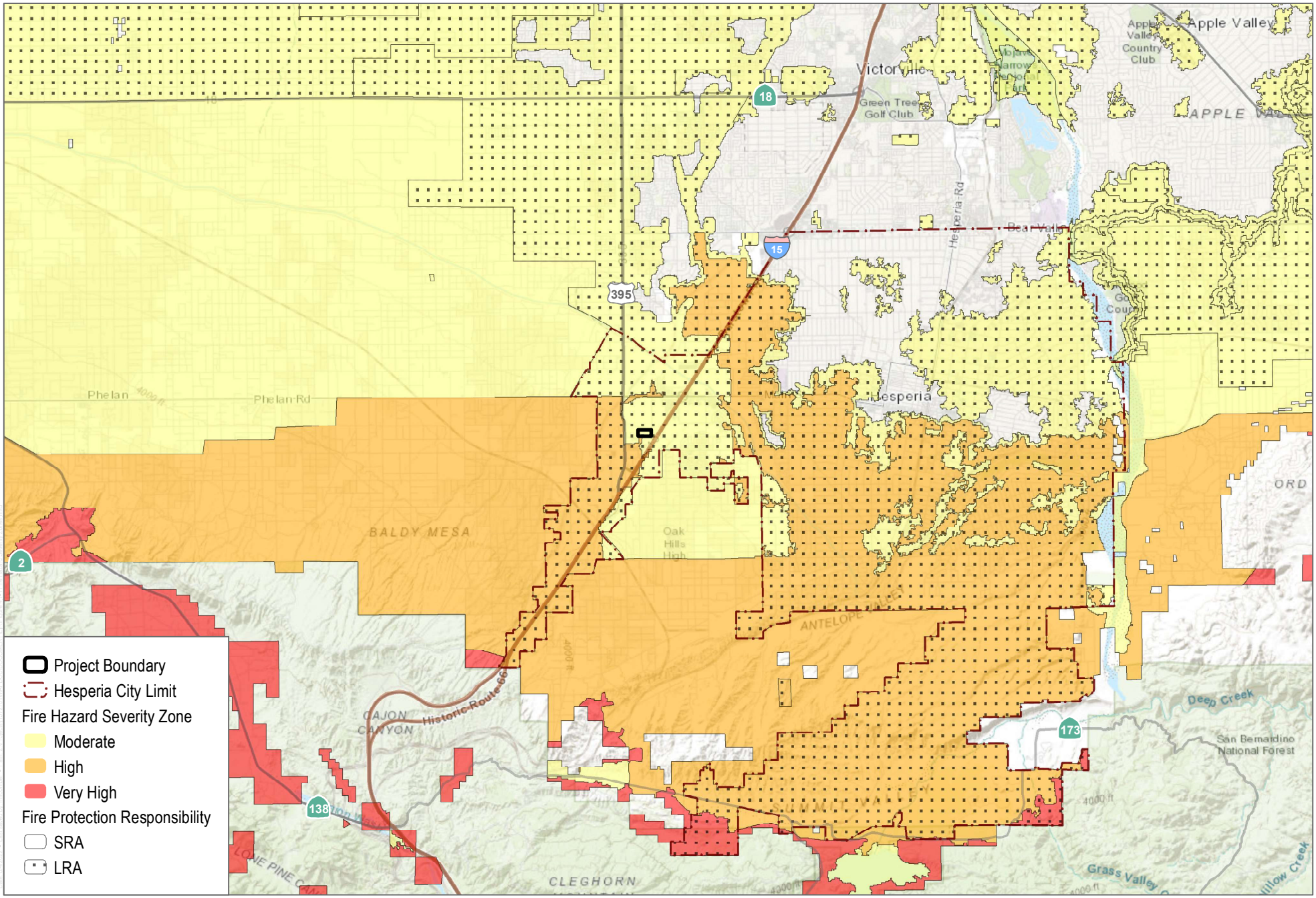

SOURCE: Esri; HERE; Garmin; CAL FIRE 2007

DUDEK

FIGURE 4.7-1

Fire Hazard Severity Zones

Poplar 18 Project

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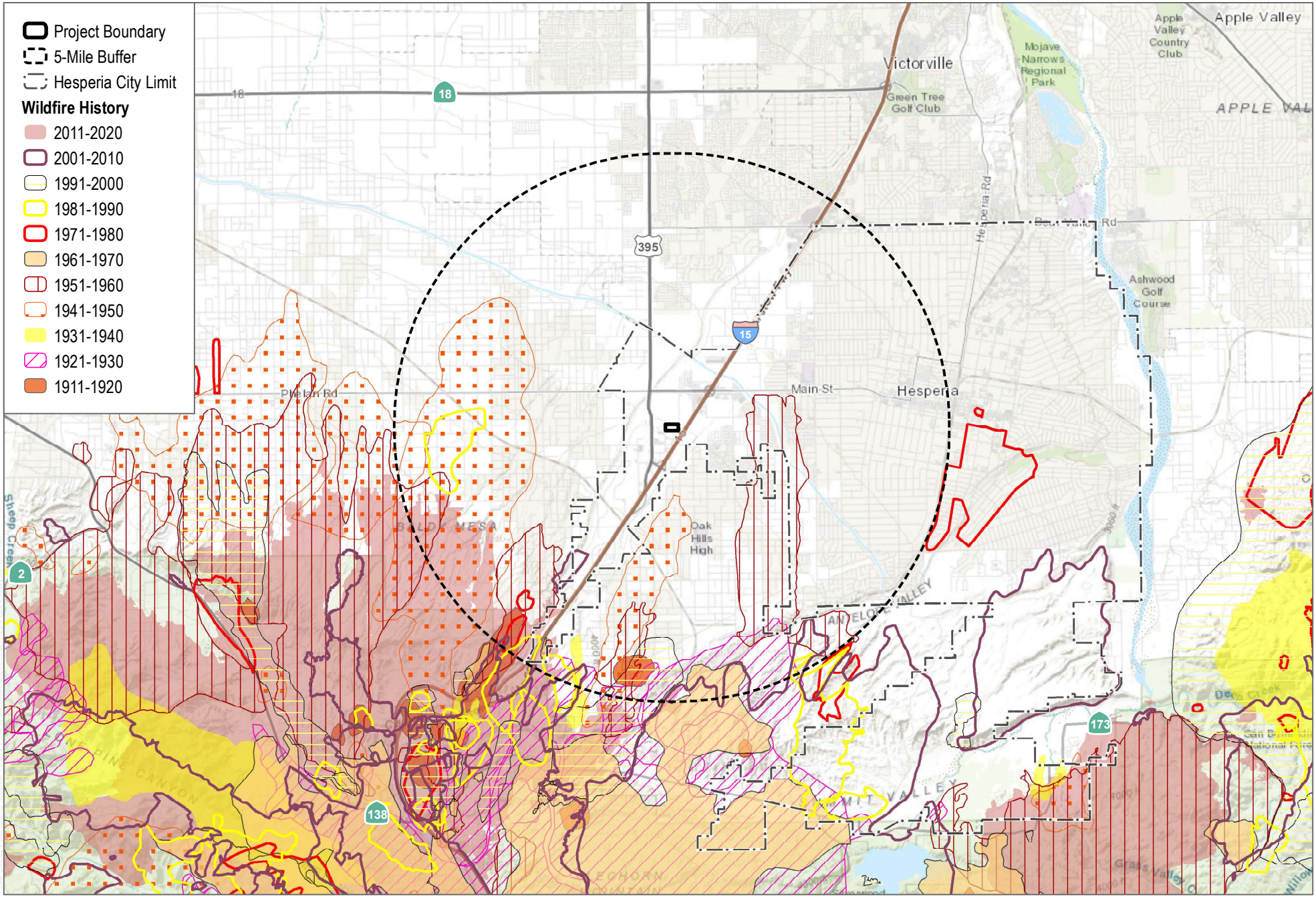

SOURCE: Esri; HERE; Garmin; CAL FIRE 2020

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0 1 2 Miles

FIGURE 4.7-2

Wildfire History

Poplar 18 Project

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4.8 Hydrology and Water Quality

This section describes the existing hydrology and water quality conditions of the Poplar 18 Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project.

In addition to the documents incorporated by reference (see Section 2.7, Documents Incorporated by Reference, of Chapter 2, Introduction, of this Environmental Impact Report [EIR]), the following analysis is based, in part, on the following sources:

- Preliminary Drainage Report, prepared by WestLAND Group Inc. in September 2022 (Appendix G-1)
- Preliminary Water Quality Management Plan, prepared by WestLAND Group in May 2022 (Appendix G-2)
- Water Supply Assessment Report, prepared by KEC Engineers, Inc. in August 2022 Appendix G-3)

4.8.1 Existing Conditions

Regional Watershed

The Project site lies within the Mojave River Watershed, an approximately 4,500-square-mile watershed located entirely within San Bernardino County. Elevations within the watershed range from 1,400 feet at Afton Canyon to 8,500 feet above mean sea level (amsl) at Butler Peak in the San Bernardino Mountains (County of San Bernardino 2003). The primary geographic and surface hydrologic feature of the watershed is the Mojave River, the headwaters of which are located in the San Bernardino Mountains, and which annually receive greater than 40 inches of precipitation at the highest elevations. Much of the winter precipitation in the San Bernardino Mountains falls in the form of snow, which subsequently provides spring recharge to the Mojave River system due to snowmelt. The Mojave River channel transects the watershed for approximately 120 miles until it reaches Silver Dry Lake near the community of Baker. Some reaches of the Mojave River flow underground in the confined riverbed channel. The Mojave River channel is typically dry downstream of the Mojave Forks Dam except in select locations where groundwater is forced to the surface by geologic structures (County of San Bernardino 2003). The Mojave River is located approximately 8.4 miles to the east of the Project site.

The Mojave River Watershed has been subdivided into a number of subwatersheds by the San Bernardino Flood Control District, that include the Upper Mojave, Middle Mojave, Lower Mojave, and Mojave–Baker watersheds. The Project site is located within the Upper Mojave River Watershed (County of San Bernardino 2003). The U.S. Geological Survey Watershed Boundary Dataset delineates watersheds according to hydrologic units, which are nested within one another according to the scale of interest. In a regional context, the U.S. Geological Survey has established that the City of Hesperia is located within the Mojave Watershed Hydrologic Unit, which includes 4,580 square miles. Within this greater watershed, the City of Hesperia is located within the Upper Mojave Hydrologic Area (Hydrologic Sub-Area 628.20), encompassing 870 square miles (Figure 4.8-1, Hydrologic Sub-Areas) (City of Hesperia 2010a).

At its closest point, the Oro Grande Wash is located approximately 0.5 miles to the northwest of the Project site (Figure 4.8-2, Major Surface Waters). The Oro Grande Wash is a major tributary of the Mojave River and drains from the bluffs in Cajon Pass. The wash starts in Oak Hills, between Interstate 15 and Phelan, and flows approximately 40 miles north and northeast before emptying into the Mojave River. The Oro Grande Wash generally forms a natural

buffer to the light industrial, commercial, and residential uses along U.S. Highway 395 and Interstate 15. In addition, the Oro Grande Wash serves as a natural habitat, a channel for storm runoff, and a potential place for recreation.

Topography and Drainage

The Project consists of a 17.87-acre, rectangular site that consists of vacant, undeveloped land with poor vegetative cover. Surface elevation within the Project site is relatively flat, ranging between 3,615 feet amsl at the southwestern corner of the site to a low point of approximately 3,590 feet amsl in the northeast corner of the site. Stormwater runoff occurs as sheet flow in a mostly southwest to northeast direction across the Project site. There are no current stormwater collection facilities on the Project site.

The San Bernardino County Hydrology Manual requires that a storm drain conveyance system be designed for the 2-year, 10-year, and 100-year storm for a 24-hour storm event (Appendix G-1). The existing peak flows and volumes of the 10-, 25-, and 100-year, 24-hour storm event for the two Drainage Areas delineated on the Project site (essentially the eastern half and western half; see Figure 4.8-1) is shown in Table 4.8-1, Existing Hydrology Summary.

Table 4.8-1. Existing Hydrology Summary

Drainage Area No.	Q10	Q25	Q100	Volume of 100-Year, 24-Hour Storm Event (Cubic Feet)
Area A – Western half (9.61 acres)	9.60	13.61	22.51	163.224
Area B – Eastern half (8.25 acres)	10.28	14.28	22.79	140.350
Total	**19.88**	**27.89**	**45.30**	**303.574**

Notes: Q – peak storm flow in cubic feet per second (cfs); Q10 = 10-year storm; Q25 = 25-year storm; 100-year storm.
Source: Appendix G-1.

Surface Water Quality

Beneficial Uses and Total Maximum Daily Loads

Stormwater runoff is a significant contributor to local and regional pollution. Urban stormwater runoff is the largest source of unregulated pollution in the waterways of the United States. Federal, state, and regional regulations require the City of Hesperia to control the discharge of pollutants to the storm drain system, including the discharge of pollutants from construction sites and areas of new development.

In accordance with state policy for water quality control, the Lahontan Regional Water Quality Control Board (Lahontan RWQCB) regulates water quality, among various other agencies, within the Mojave River Region. Water quality objectives, plans, and policies for the surface waters within this region are established in the Mojave River Basin Plan Amendment of the Lahontan Basin Plan. The Basin Plan for the Mojave River Region has identified existing and potential beneficial uses supported by the key surface water drainages throughout its jurisdiction. The existing and proposed beneficial uses of the Upper Mojave Hydrologic Area includes the following (Lahontan RWQCB 2019):

- Municipal and Domestic Supply
- Agricultural Supply
- Groundwater Recharge
- Fresh Water Replenishment
- Hydropower Generation
- Water Contact Recreation

- Noncontact Water Recreation
- Commercial and Sport Fishing
- Warm Freshwater Habitat
- Cold Freshwater Habitat
- Wildlife Habitat
- Preservation of Biological Habitats of Special Significance
- Migration of Aquatic Organisms
- Spawning, Reproduction, and/or Early Development
- Water Quality Enhancement
- Flood Water Storage

Under the Clean Water Act (CWA) Section 303(d), the State of California is required to develop a list of impaired water bodies that do not meet water quality standards and objectives. The U.S. Environmental Protection Agency (EPA) has approved a 303(d) list of water quality impairments for water bodies located downstream of the Project site, which includes the Mojave Forks Reservoir Outlets to the Upper Narrows segment of the Mojave River (SWRCB 2018). This segment of the Mojave River has been identified as impaired with fluoride, sodium, and sulfates.

Once a water body has been listed as impaired on the 303(d) list, a total maximum daily load (TMDL) for the constituent of concern (pollutant) must be developed for that water body. A TMDL is an estimate of the daily load of pollutants that a water body may receive from point sources, non-point sources, and natural background conditions (including an appropriate margin of safety), without exceeding its water quality standards. Those facilities and activities that are discharging into the water body, collectively, must not exceed the TMDL. In general, dischargers within each watershed are collectively responsible for meeting the required reductions and other TMDL requirements by the assigned deadline. A TMDL for the Mojave Forks Reservoir Outlet to the Upper Narrows segment of the Mojave River is required but has not yet been completed for fluoride, sodium, and sulfates but a scheduled completion date of 2031 has been established (SWRCB 2018).

General Watershed Water Quality

The Mojave River was selected as a priority or “focus” watershed by the State Water Resources Control Board (SWRCB) because of numerous water quality and quantity issues. Historically known for its agriculture, industrial, and military uses, Victor Valley has significantly changed during the last several decades into a satellite of Southern California’s urbanization. Urban growth has substantially modified the areas of waste discharges that could potentially affect water quality, including stormwater and wastewater treatment. There are also numerous water quality issues associated with past and current agricultural, industrial, and military land uses throughout the watershed.

Water quality problems in the Mojave River Watershed are primarily related to non-point sources, including erosion (from construction, timber harvesting, and livestock grazing), stormwater, acid drainage from inactive mines, and individual wastewater disposal systems. There are relatively few point-source discharges. Some types of discharges may be considered either point source or non-point source, depending on site-specific circumstances. For example, stormwater that enters one lake through a pipe may be regulated as a point source, while stormwater that enters a lake via sheet flow is considered a non-point-source discharge (RWQCB 2019).

In the early 1970s, the Lahontan RWQCB evaluated existing surface water quality data for the Mojave River Watershed. Based on these data, the RWQCB adopted numerical water quality objectives for inorganic constituents in surface waters of the Mojave River and several of its tributaries in the San Bernardino Mountains. These numerical standards generally represented native or background water quality. For the purpose of evaluating the

water quality objectives, the RWQCB has assembled two groups of stakeholders. The first group is focused on surface water upstream of the Mojave Forks Dam, which is located near the City of Hesperia. The second group is focused on groundwater of the Mojave River floodplain aquifer downstream of the Mojave Forks Dam, and the few downstream locations where groundwater is forced to the surface of the Mojave River floodplain by geologic structures. The overall goal of the sampling effort is to compare existing surface water quality to the water quality objectives that were developed in the 1970s (Lahontan RWQCB 2002).

The RWQCB assembled a stakeholder group (the Mojave River Watershed Group), including the communities of Town of Apple Valley, the Cities of Hesperia and Victorville, and the County of San Bernardino, to address water quality concerns associated with stormwater. The Mojave River Watershed Group was responsible for developing and implementing a regional stormwater management plan as required by the Phase II Small Municipal Separate Storm Sewer System (MS4) Permit. Identification of critical areas of stormwater flow and the full list of constituents of concern are the primary goals of the Lahontan RWQCB (Lahontan RWQCB 2002).

The Mojave River Watershed Group publishes an annual report summarizing the results of their Phase II Small MS4 General Permit program, which is intended to minimize or eliminate adverse surface water quality impacts by instituting controls on those MS4 discharges that have the greatest potential to cause environmental degradation. Discharges to, or from, the MS4 are of concern because they may contain pollutants, including trash, debris, sediments, fertilizers, oil, grease, metals, and pesticides. These discharges can result in the loss of surface water beneficial uses and contaminate local drinking water supplies. Among other annual tasks, the stakeholder group has developed a Construction Site Storm Water Runoff Control Program and a Post-Construction Site Storm Water Control Program, which are intended to develop, implement, and enforce programs to prevent the discharge of construction site and post-construction pollutants as well as minimize or eliminate negative impacts on the beneficial uses of receiving waters (Mojave River Watershed Group 2014).

Water Supply

The City's water system is managed by the Hesperia Water District, which is a subsidiary special district of the City. The Hesperia Water District provides utility service for the water and sewer system within the City and operates as a self-sustaining utility business enterprise. With minor exceptions, the Hesperia Water District's service area matches the City's boundaries and covers approximately 74 square miles.

In the 2015 Urban Water Management Plan (UWMP), Hesperia Water District estimated that it receives approximately 88.0% of its water from groundwater, 5.5% from purchased water, and 6.5% from recycled water (Hesperia Water District 2016). Regarding the portion of the District's water supply that originates as groundwater, the District receives water from fifteen active wells within the City, the entirety of which is located within Alto Subarea sub basin of the Mojave River Groundwater Basin. The Mojave Water Agency serves as the entity responsible for managing the use, replenishment, and protection of the groundwater basin. The Mojave River Ground Water Basin is an adjudicated basin and thus has a managed groundwater extraction rate, reducing the potential for over-extraction to occur (Hesperia Water District 2016). The Adjudication Judgment allocated a Base Annual Production (BAP) amount to each producer in the Mojave River Groundwater Basin using more than 10 acre-feet per year, based on historical production. A Production Safe Yield (PSY) was also determined for each subarea within the Mojave River Groundwater Basin for each year. The PSY in each subarea is assumed to equal the average net natural water supply plus the expected return flow from the previous year's water production. Users are assigned a variable Free Production Allowance (FPA), which is a uniform percentage of BAP set for each subarea, as an annual maximum amount of water a producer can withdraw without incurring a fine. This percentage is reduced over time until total FPA comes into balance with PSY (Hesperia Water District 2021).

Historically, Hesperia Water District has been able to reliably serve customers' water supply needs from year-to-year. To maintain this reliability in water supply, the Hesperia Water District 2020 UWMP contains a Water Shortage Contingency Plan, which includes the stages of response to a water shortage, such as drought, that occur over a period of time, as well as catastrophic supply interruptions that occur suddenly. The primary objective of the Water Shortage Contingency Plan is to ensure that the Hesperia Water District has in place the necessary resources and management responses needed to protect health and human safety, minimize economic disruption, and preserve environmental and community assets during water supply shortages and interruptions. This plan involves implementing mandatory water reduction from its customers as well as implementing fines and penalties for those who exceed their allocated water usage (Hesperia Water District 2021).

Pursuant to the requirements of Senate Bill (SB) 610, a Water Supply Assessment (WSA) was not required for the proposed Project as an industrial project that is less than 650,000 square feet. However, one was prepared and is included as Appendix G-3. The WSA concluded that the total projected water supplies available to the Hesperia Water District during normal, single-dry, and multiple-dry water years over the next 20 years will be sufficient to meet the projected water demands of the proposed project.

Groundwater

The Mojave River Groundwater Basin overlies a broad hydrologic region throughout San Bernardino County. The Mojave River Groundwater Basin is essentially a closed basin, as very little groundwater enters or exits the basin. However, within the basin, groundwater movement occurs between the different subareas, as well as between groundwater and surface water. Groundwater is recharged into the basin predominantly by the infiltration of water from the Mojave River, which accounts for approximately 80 of the total basin natural recharge. Other sources of recharge include infiltration of storm runoff from the mountains, and recharge from human activities such as irrigation return flows, wastewater discharge, and enhanced recharge with imported water. Over 90% of the basin groundwater recharge originates in the San Gabriel and San Bernardino Mountains. Groundwater is discharged from the basin primarily by well pumping, evaporation through the soil, transpiration by plants, seepage into dry lakes where accumulated water evaporates, and seepage into the Mojave River (Hesperia Water District 2016).

The California Department of Water Resources (DWR) has subdivided the Mojave River Groundwater Basin into three groundwater subbasins based on local hydrologic and geologic characteristics. The three basins consist of the Upper Mojave River Groundwater Basin, the Middle Mojave River Groundwater Basin, and the Lower Mojave River Groundwater Basin (DWR 2013). Based on DWR's Bulletin 118, the Project site is underlain by the Upper Mojave River Valley Groundwater Basin (Hesperia Water District 2016). This Basin is bounded on the north by a roughly east-west line from basement rock outcrops near the Shadow Mountains. The southern boundary is the contact between Quaternary sedimentary deposits and unconsolidated basement rocks of the San Bernardino Mountains. The basin is bounded on the southeast by the Helendale Fault, and on the east by basement exposures of the mountains surrounding Apple Valley. In the west, the boundary is marked by a surface drainage divide between this basin and El Mirage Valley Basin, and contact between alluvium and basement rocks that form the Shadow Mountains (DWR 2004).

As discussed in further detail in Section 4.8.2, Relevant Plans, Policies, and Ordinances, the Sustainable Groundwater Management Act (SGMA) requires governments and water agencies of high- and medium-priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. In accordance with the SGMA, DWR has classified the Upper Mojave River Valley Groundwater Basin as having a very low priority in regard to prioritizing completion of a Groundwater Sustainability Plan (DWR 2019). In addition, the groundwater basin is adjudicated and thus has a managed groundwater extraction rate, reducing the potential for over-extraction to occur (Hesperia Water District 2016).

Groundwater Quality

A Phase I Environmental Site Assessment for the Project site was performed in 2020 by Consolidated Consulting Group LLC (CCG) (Appendix F). During the site reconnaissance of the Project site, CCG identified numerous debris piles/dumpsites and scattered windblown debris on the site which it considered de minimis conditions. Otherwise, no recognized environmental conditions were discovered that could adversely affect groundwater quality.

Flood Hazards

Flooding is a significant problem in Hesperia. Historically, the City has been subject to flooding during periods of heavy rainfall, falling primarily between the months of October through April, which causes streams and drainage canals to become overwhelmed and overflow their banks and/or inundate storm drainage systems. Occasionally, overbank flows in Hesperia have resulted in the flooding of residential properties, road blockages, and traffic disruptions. In urbanizing areas, the increase in paved areas associated with new development decreases the amount of open land available to absorb rainfall and runoff, thus increasing the volume of water that must be carried away from by waterways. Flooding has damaged or destroyed commercial and residential structures, flooded bridges and streets and caused stream channels and flood control works to erode (City of Hesperia 2017).

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panel 06071C6475H, effective August 28, 2008, indicates that the Project site is located in an area designated as Zone X, an area of minimal flood hazard (FEMA 2022). This area is higher in elevation than the 0.2% annual chance flood (i.e., 500-year flood). As such, the potential for flooding within the Project boundaries is low.

4.8.2 Relevant Plans, Policies, and Ordinances

Federal

Clean Water Act

Increasing public awareness and concern for controlling water pollution led to the enactment of the federal Water Pollution Control Act Amendments of 1972. As amended in 1977, this law became commonly known as the Clean Water Act (CWA; 33 USC 1251 et seq.). The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. The CWA established basic guidelines for regulating discharges of pollutants into the waters of the United States. The CWA requires that states adopt water quality standards to protect public health, enhance the quality of water resources, and ensure implementation of the CWA.

National Flood Insurance Program

The National Flood Insurance Act of 1968 established the National Flood Insurance Program to provide flood insurance within communities that were willing to adopt floodplain management programs to mitigate future flood losses. The National Flood Insurance Act also requires the identification of all floodplain areas within the United States and the establishment of flood-risk zones within those areas. FEMA is the primary agency responsible for administering programs and coordinating with communities to establish effective floodplain management standards. FEMA is responsible for preparing FIRMs that delineate the areas of known special flood hazards and their risk applicable to the community. The National Flood Insurance Program encourages the adoption and enforcement by local communities' floodplain management ordinances that reduce flood risks. In support of the National Flood Insurance Program, FEMA identifies flood hazard areas throughout the United States on FEMA flood hazard boundary maps.

Federal Antidegradation Policy

The Federal Antidegradation Policy (40 CFR 131.12) requires states to develop and implement statewide antidegradation policies. Pursuant to the Code of Federal Regulations, state antidegradation policies and implementation methods must, at a minimum, (1) protect and maintain existing in-stream water uses; (2) protect and maintain existing water quality, where the quality of the waters exceeds levels necessary to support existing beneficial uses (unless the state finds that allowing lower water quality is necessary to accommodate economic and social development in the area); and (3) protect and maintain water quality in waters considered an outstanding national resource.

State

National Pollutant Discharge Elimination System

Direct discharges of pollutants into waters of the United States are not allowed, except in accordance with the National Pollutant Discharge Elimination System (NPDES) program, established in Section 402 of the CWA. A stormwater pollution prevention plan (SWPPP) prepared in compliance with an NPDES permit describes erosion and sediment controls, runoff water quality monitoring, means of waste disposal, implementation of approved local plans, control of post-construction sediment and erosion control measures and maintenance responsibilities, and non-stormwater management controls. Dischargers are also required to inspect construction sites before and after storms to identify stormwater discharge from construction activity and to identify and implement controls, where necessary.

California Porter–Cologne Water Quality Control Act

Since 1973, the California SWRCB and its nine RWQCBs have been delegated the responsibility for administering permitted discharge into the waters of California. The Project falls within the jurisdiction of the Lahontan RWCQB. The Porter–Cologne Water Quality Control Act (California Water Code Section 13000 et seq.; 23 CCR, Chapters 3 and 15) provides a comprehensive water quality management system for the protection of California waters. Under this act, "any person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state" must file a report of the discharge with the appropriate RWQCB. Pursuant to the act, the RWQCB may then prescribe "waste discharge requirements" that add conditions related to control of the discharge. The Porter–Cologne Water Quality Control Act defines "waste" broadly, and the term has been applied to a diverse array of materials, including non-point-source pollution. When regulating discharges that are included in the federal CWA, the state essentially treats Waste Discharge Requirements and NPDES regulations as a single permitting vehicle. In April 1991, the SWRCB and other state environmental agencies were incorporated into the California Environmental Protection Agency.

The RWQCB regulates urban runoff discharges under the NPDES permit regulations. NPDES permitting requirements cover runoff discharged from point (e.g., industrial outfall discharges) and non-point (e.g., stormwater runoff) sources. The RWQCB implements the NPDES program by issuing construction and industrial discharge permits.

Under the NPDES permit regulations, best management practices (BMPs) are required. EPA defines BMPs as "schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States." BMPs include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage (40 CFR 122.2).

California Antidegradation Policy

The California Antidegradation Policy, otherwise known as the Statement of Policy with Respect to Maintaining High-Quality Water in California, was adopted by the SWRCB (State Board Resolution No. 68-16) in 1968. Unlike the federal Antidegradation Policy, the California Antidegradation Policy applies to all waters of the state (e.g., includes isolated wetlands and groundwater), not just surface waters. The policy states that whenever the existing quality of a water body is better than the quality established in individual Basin Plans, such high quality must be maintained, and discharges to that water body must not unreasonably affect present or anticipated beneficial uses of such water resources.

CALGreen Code

Formerly known as the California Green Building Standards Code, Title 24, Part 11, of the California Code of Regulations, the CALGreen Code is designed to improve public health, safety, and general welfare by utilizing design and construction methods that reduce the negative environmental impact of development and to encourage sustainable construction practices. CALGreen provides mandatory direction to developers of all new construction and renovations of residential and non-residential structures with regard to all aspects of design and construction, including, but not limited to, site drainage design, stormwater management, and water use efficiency. Required measures are accompanied by a set of voluntary standards designed to encourage developers and cities to aim for a higher standard of development.

Section 303 of the Clean Water Act (Beneficial Uses and Total Maximum Daily Loads)

The Lahontan RWQCB is responsible for the protection of the beneficial uses of waters within the Project area in San Bernardino County. The Lahontan RWQCB uses its planning, permitting, and enforcement authority to meet its responsibilities adopted in the Lahontan Basin Plan to implement plans, policies, and provisions for water quality management.

In accordance with state policy for water quality control, the RWQCB employs a range of beneficial use definitions for surface waters, groundwater basins, marshes, and mudflats that serve as the basis for establishing water quality objectives and discharge conditions and prohibitions. The Lahontan Basin Plan has identified existing and potential beneficial uses supported by the key surface water drainages throughout its jurisdiction. Beneficial uses of waters within the Mojave River Watershed are addressed in the Mojave River Basin Plan Amendment of the Lahontan Basin Plan.

Under CWA Section 303(d), California is required to develop a list of impaired water bodies that do not meet water quality standards and objectives. A TMDL defines how much of a specific pollutant/stressor a given water body can tolerate and still meet relevant water quality standards. The Lahontan RWQCB has developed TMDLs for select reaches of water bodies.

California Toxics Rule

EPA has established water quality criteria for certain toxic substances via the California Toxics Rule. The California Toxics Rule established acute (i.e., short-term) and chronic (i.e., long-term) standards for bodies of water, such as inland surface waters and enclosed bays and estuaries, that are designated by each RWQCB as having beneficial uses protective of aquatic life or human health.

California Water Code

The California Water Code includes 22 kinds of districts or local agencies with specific statutory provisions to manage surface water. Many of these agencies have statutory authority to exercise some forms of groundwater management. For example, a Water Replenishment District (Water Code Section 60000 et seq.) is authorized to establish groundwater replenishment programs and collect fees for that service, and a Water Conservation District (Water Code Section 75500 et seq.) can levy groundwater extraction fees. Through special acts of the Legislature, 13 local agencies have been granted greater authority to manage groundwater. Most of these agencies, formed since 1980, have the authority to limit export and control some in-basin extraction upon evidence of overdraft or the threat of an overdraft condition. These agencies can also generally levy fees for groundwater management activities and for water supply replenishment.

Assembly Bill 3030 – Groundwater Management Act

In 1992, Assembly Bill 3030 was passed, which increased the number of local agencies authorized to develop a groundwater management plan and set forth a common framework for management by local agencies throughout California. These agencies could possess the same authority as a water replenishment district to "fix and collect fees and assessments for groundwater management" (Water Code Section 10754), provided they receive a majority of votes in favor of the proposal in a local election (Water Code Section 10754.3).

Sustainable Groundwater Management Act

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package—Assembly Bill 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley)—collectively known as SGMA. SGMA requires governments and water agencies of high- and medium-priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over-drafted basins, sustainability should be achieved by 2040. For the remaining high- and medium-priority basins, 2042 is the deadline. Through SGMA, the DWR provides ongoing support to local agencies through guidance, financial assistance, and technical assistance. SGMA empowers local agencies to form Groundwater Sustainability Agencies (GSAs) to manage basins sustainably and requires those GSAs to adopt Groundwater Sustainability Plans for crucial groundwater basins in California.

Urban Water Management Plans

Pursuant to the California Urban Water Management Act (California Water Code Sections 10610–10656), urban water purveyors are required to prepare and update a UWMP every 5 years. UWMPs are prepared by California's urban water suppliers to support long-term resource planning and ensure adequate water supplies. Every urban water supplier that either delivers more than 3,000 acre-feet per year of water annually or serves more than 3,000 connections are required to assess the reliability of its water sources over a 20-year period under normal-year, dry-year, and multiple-dry-year scenarios in a UWMP. UWMPs must be updated and submitted to the DWR every 5 years for review and approval. The Project site is within the area addressed by the 2020 Hesperia Water District UWMP.

Senate Bill 610 and Senate Bill 221: Water Supply Assessments

SB 610 and SB 221, amended into state law effective January 1, 2002, improve the linkage between certain land-use decisions made by cities and counties and water supply availability. The statutes require detailed information regarding water availability and reliability with respect to certain developments to be included in the administrative

record, to serve as the evidentiary basis for an approval action by the City or County on such projects. Under Water Code Section 10912(a), projects subject to the California Environmental Quality Act (CEQA) that require a WSA include (1) residential development of more than 500 dwelling units; (2) shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space; (3) commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space; (4) hotel, motel or both, having more than 500 rooms; (5) industrial, manufacturing, or processing plants, or industrial parks planned to house more than 1,000 persons, occupying more than 40 acres of land or having more than 650,000 square feet of floor area; (6) mixed-use projects that include one or more of the projects specified; or (7) a project that would demand an amount of water equivalent to or greater than the amount required by a 500 dwelling unit project. A fundamental source document for compliance with SB 610 is the UWMP, which can be used by the water supplier to meet the standard for SB 610. SB 221 applies to the Subdivision Map Act, conditioning a tentative map on the applicant to verify that the public water supplier has sufficient water available to serve the proposed development. Otherwise, as the Project is under 650,000 square feet, a project specific WSA is not required.

Regional

Mojave River Watershed Water Quality Management Plan

The 2013 Phase II Small MS4 Permit, adopted by the SWRCB, and issued statewide, requires all new development projects covered by this Order to incorporate low-impact development (LID) BMPs to the maximum extent practicable. In San Bernardino County, the Phase II MS4 Permit is applicable within the Mojave River Watershed. In addition, the Order also requires the development of a standard design and post-development BMP guidance for incorporation of site design/LID, source control, treatment control BMP (where feasible and applicable), and hydromodification mitigation measures to the maximum extent practicable to reduce the discharge of pollutants to receiving waters. The purpose of this technical guidance document for the Water Quality Management Plan (WQMP) is to provide direction to project proponents on the regulatory requirements applicable to a private or public development activity, from project conception to completion. This technical guidance document is intended to serve as a living document, which will be updated as needed to remain applicable beyond the current Phase II MS4 Permit term. Any non-substantive updates to the technical guiding document and WQMP template will be provided in the annual report. Future substantive updates shall be submitted to the Lahontan RWQCB for review and approval, prior to implementation.

Mojave Storm Water Management Program

The NPDES General Permit NO. CAS000004, Waste Discharge Requirements for stormwater discharges from Small MS4s requires that Permittees develop a stormwater management program (SWMP). The purpose of this SWMP is to keep the Mojave River clean to the maximum extent practicable using BMPs. These practices would reduce stormwater runoff and non-storm water runoff flowing to the river. BMPS would also serve to keep contaminations, including sediment, non-sediment solids, nutrients, pathogens, oxygen-demanding substances, petroleum hydrocarbons, heavy metals, floatables, polycyclic aromatic hydrocarbons, pesticides, herbicides, and trash from entering the storm drain system.

Local

City of Hesperia General Plan

The Conservation Element of the City of Hesperia General Plan identifies, establishes, and sets forth policies to promote the sustainability and environmental integrity of natural resources throughout the City. In addition, the Safety Element of the General Plan identifies, establishes, and sets forth policies to address hydrological hazards within the municipality, including flooding hazards. Goals or policies related to hydrology and water quality in the General Plan include the following (City of Hesperia 2010b):

Conservation Element

Goal CN-1. Conserve water resources within the Upper Mojave River Groundwater Basin.

Policy CN 1.1. Promote the use of desert vegetation with low water usage and drought-tolerant materials in landscaped areas.

Policy CN 1.2. Educate residents on water conservation methods with best practices and tips.

Policy CN 1.3. Promote reduced use of high nitrate fertilizers, herbicides, pesticides and other chemicals in landscaping areas that can contaminate the quality of the groundwater.

Policy CN 1.4. Limit the disturbance of natural water hydrology by minimizing the creation of impervious surface area and continued utilization of underground retention/detention facilities to recharge groundwater.

Policy CN 1.5. Work with local agencies and jurisdictions to provide a coordinated effort to ensure a safe and constant water supply for the region.

Policy CN 1.6. Encourage the use of low-water consumption fixtures in homes and businesses.

Policy CN 1.7. Require new development to use new technology, features, equipment, and other methods to reduce water consumption.

Goal CN-2. Establish building and development standards to maximize the reclamation of water resources.

Policy CN 2.1. Minimize impacts to washes that convey drainage by prohibiting development within drainage corridors that are not consistent with the Master Plan of Drainage.

Policy CN 2.2. Encourage the use of reclaimed water for irrigation and other non-potable uses.

Policy CN 2.3. Protect open space areas used for recharging groundwater basins.

Policy CN 2.4. Continue to implement the use of reclaimed water through the City's "purple pipe" ordinances and regulations to further the use of reclaimed and treated water.

Policy CN 2.5. Implement the state and City laws and policies to develop retention basins for the replenishment of the underground water supply.

Policy CN 2.6. Coordinate City policies and activities with the Victor Valley Wastewater Reclamation Authority.

Goal CN-3. Minimize development and set aside necessary open space near and along the surface waters as well as those washes and other water passageways located in the City, to preserve and protect plant and animal species and their natural habitat dependent on such surface waters and waterways.

Policy CN 3.1. Monitor the development impacts on these surface water resources within the City.

Policy CN 3.2. Preserve areas within the Oro Grande Wash and un-named wash #1 that exhibit ideal native habitat in a natural state.

Safety Element

Goal SF-2. Minimize injury, loss of life, property damage and economic and social disruption caused by flooding and inundation hazards.

Policy SF 2.1. The City shall continue enforcing the City's Municipal Code provisions for flood hazard reduction (Title 8: Safety, Chapter 8.28: Flood Hazard Protection and Regulations). This code, which applies to new construction and existing projects undergoing substantial improvements, provides construction standards that address the major causes of flood damage and includes provisions for anchoring, placement of utilities, raising floor elevations, using flood-resistant construction materials, and other methods to reduce flood damage.

Policy SF 2.2. The City will require that new discretionary development proposals include, as a condition of approval, hydrological studies prepared by a state-certified engineer with expertise in this area, that assess the impact that the new development will have on the flooding potential of existing development down-gradient. The studies shall provide mitigation measures to reduce this impact to an acceptable level. Single-family residences on existing lots shall be exempt.

Policy SF 2.3. The City shall continue participation in the National Flood Insurance Program and require that all owners of properties located within the 100-year floodplain (Zones A and AE), and repeat-flood properties in Zone X purchase and keep flood insurance for those properties.

Policy SF 2.4. The City will continue to participate in the Storm Ready Program with the National Weather Service, including the monitoring of precipitation and snow levels on the mountains to the south, providing storm watches and warnings in real-time, and issuing evacuation notices for affected neighborhoods in a timely manner, such as with a citizen notification or similar system.

Policy SF 2.5. The City will not permit any new facilities that use or store hazardous materials in quantities that would place them in the State's TRI or SQG databases to be located in the flood zone (Zones A, AE, and X), unless all standards of elevation, anchoring, and flood-proofing have been implemented to the satisfaction of the City's Building Department and the San Bernardino County Fire Department. The hazardous materials shall be stored in watertight containers that are not capable of floating or similar flood-proof receptacles or tanks.

Policy SF 2.6**.** The City will require all essential and critical facilities (including but not limited to essential City offices and buildings, medical facilities, schools, child care centers, and nursing homes) in or within 200 feet of Flood Zones A, AE and X, or the dam inundation pathways, to develop disaster response and evacuation plans that address the actions that will be taken in the event of flooding or inundation due to catastrophic failure of a dam.

Policy SF 2.7. The City will regulate development in drainages, especially in Flood Zones A and AE, pursuant to FEMA regulations.

Policy SF 2.8**.** The City will continue to maintain, and improve where needed, the storm drain systems, with an emphasis on those areas of the City that flood repeatedly. This entails maintaining and regularly cleaning the storm drains and other flood-control structures in low-lying areas, as necessary, such that floodwaters can be effectively conveyed away from structures.

Policy SF 2.9**.** The City will identify repetitive flood properties in the City and develop feasible mitigation options for these sites. Funding to implement the mitigation measures may be available through FEMA Hazard Mitigation Grant and Flood Mitigation Assistance Programs and their Pre-disaster Mitigation Program.

Policy SF 2.10**.** The City will encourage the development of areas in the floodplains as parks, nature trails, equestrian parks, golf courses, or other types of recreational facilities that can withstand periodic inundation, and will offer incentives to developers to retain these areas as open space.

Goal: SF-5. Plan for emergency response and recovery from natural disasters, especially from flooding, fire, and earthquakes, and from civil unrest that may occur following a natural disaster.

Policy SF 5.1. The City will maintain, update and adopt on a regular basis, as mandated by FEMA, a Local Hazard Mitigation Plan.

Erosion and Sediment Control Plan

For projects that would include soil disturbance during construction, project applicants must submit an erosion and sediment control plan (ESCP) for approval to the City of Hesperia. The City will not issue a grading or building permits until the ESCP for the project is approved. The goals of the ESCP are as follows:

1. Identify potential pollutant sources that may affect the quality of stormwater runoff and prevent non-stormwater discharges from the construction site.
2. Document the BMPs that will be implemented to prevent, to the maximum extent practicable, construction site pollutants from leaving the site during all phases of construction.
3. Document erosion control, sediment control, and good housekeeping BMPs that shall be implemented year-round as appropriate based on construction activities.

4.8.3 Thresholds of Significance

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

A. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.
B. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin.
C. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
    i. result in substantial erosion or siltation on or off-site.
    ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off-site.
    iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
    iv. impede or redirect flood flows.
D. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.
E. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.
F. Result in cumulatively considerable hydrological or water quality impacts.

Based on Project site location and characteristics, Threshold D was analyzed in the Initial Study (Appendix A) and was not carried forward for further analysis in this EIR. See Chapter 5, Effects Found Not to Be Significant, for additional detail.

4.8.4 Impacts Analysis

Threshold A: Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Short-Term Construction Impacts

Less-than-Significant Impact. Construction activities associated with the Project site would involve ground disturbing activities and the use of various hazardous construction materials (e.g., fuels, oils, paint, and solvents), that are commonly used in building construction or for the purpose of heavy equipment maintenance. Earthwork activities can expose soils to the effects of wind and water erosion resulting off-site transport of sediments that could potentially adversely affect water quality of receiving waters. Inadvertent release of hazardous materials or wastes could also adversely affect water quality if not handled appropriately.

Construction of the Project would disturb more than 1-acre and therefore would be subject to NPDES permit requirements. The City of Hesperia is a co-permittee under the San Bernardino County Municipal NPDES MS4 permit. The NPDES MS4 Permit requires the City to implement a Construction Site Stormwater Runoff Control

Program in accordance with the regional SWMP for the Mojave River Watershed (County of San Bernardino 2003). The SWMP requires permittees to implement and enforce measures to reduce pollutants from construction activities that result in a land disturbance of greater than or equal to 1-acre (City of Hesperia 2010a). To comply with the regulatory requirements of the SWMP, the City requires the implementation of an ESCP for projects that include soil disturbance during construction within the City. Implementation of an ESCP would ensure that construction-related BMPs are enacted to prevent, to the maximum extent practicable, construction site pollutants from leaving the site during all phases of construction. In addition to an ESCP, implementation of a WQMP in accordance with the Mojave River Watershed Technical Guidance Document for Water Quality Management Plans (Mojave River WQMP Guidance; County of San Bernardino 2016), would ensure that stormwater treatment and conveyance would be sufficient prior to Project build-out (Appendix G-2). Submittal, review, and approval of both the WQMP and ESCP by the City are necessary prior to the issuance of grading permits for Project development.

Under the NPDES MS4 Permit, the development of 1-acre or more of land must file a notice of intent with the SWRCB to comply with the State NPDES General Construction Permit. Implementation of this Permit would require the development of a site-specific SWPPP for construction activities. The SWPPP is required to identify BMPs that protect stormwater runoff and ensure avoidance of substantial degradation of water quality. Typical BMPs that could be incorporated into the SWPPP to protect water quality include the following:

- Diverting off-site runoff away from the construction site
- Vegetating landscaped/vegetated swale areas as soon as feasible following grading activities
- Placing perimeter straw wattles to prevent off-site transport of sediment
- Using drop inlet protection (filters and sandbags or straw wattles), with sandbag check dams within paved areas
- Regular watering of exposed soils to control dust during construction
- Implementing specifications for construction waste handling and disposal
- Using contained equipment wash-out and vehicle maintenance areas
- Maintaining erosion and sedimentation control measures throughout the construction period
- Stabilizing construction entrances to avoid trucks from imprinting soil and debris onto adjoining roadways
- Training, including for subcontractors, on general site housekeeping

Incorporation of required BMPs for materials and waste storage and handling, and equipment and vehicle maintenance and fueling would reduce the potential discharge of polluted runoff from construction sites, consistent with the State NPDES General Construction Permit, the Hesperia Municipal Code, and CALGreen requirements. Compliance with existing regulations would prevent violation of water quality standards and minimize the potential for contributing sources of polluted runoff. Compliance with existing regulations would ensure that the Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface quality from construction activities. Therefore, short-term construction impacts associated with water quality standards and waste discharge requirements would be less than significant.

Long-Term Operational Impacts

Less-than-Significant Impact. As previously discussed, the Project site currently consists of undeveloped land. Implementation of the Project would result in the construction of two industrial/warehouse buildings (totaling 414,700 square feet) and associated improvements. Construction of the Project would introduce new impervious surfaces that could contribute pollutants to stormwater runoff in the long term from vehicle use in uncovered parking areas (through small fuel and/or fluid leaks), uncovered refuse storage/management areas, landscape/

open space areas (if pesticides/herbicides and fertilizers are improperly applied), and general litter/debris (e.g., generated during facility loading/unloading activities). During storm events, the first few hours of moderate to heavy rainfall could wash a majority of pollutants from the paved areas where, without proper stormwater controls and BMPs, those pollutants could enter the municipal storm drain system before eventually being discharged into the Oro Grande Wash and eventually the Mojave River. Between periods of rainfall, surface pollutants tend to accumulate, and runoff from the first significant storm of the year ("first flush") would likely have the largest concentration of pollutants.

The NPDES MS4 Permit requires the City to implement a post-construction SWMP in accordance with the regional SWMP. This Program sets limits of pollutants being discharged into waterways and requires all new development to incorporate structural and non-structural BMPs to improve water quality. To meet the requirements of the SWMP, the City requires the incorporation of LID features into new development and redevelopment projects as specified in the Mojave River WQMP Guidance. In accordance with the NPDES permit, the City is responsible for monitoring WQMPs, which address stormwater pollution from new private development. Site-specific WQMPs for individual projects must incorporate the SWRCB required minimum runoff capture BMPs. In addition, the WQMP specifies the minimum required LID features, as well as the BMPs that must be used for a designated project.

Project design, construction, and operation would be completed in accordance with the NPDES MS4 permit and the Mojave River WQMP Guidance, with the goal of reducing the number of pollutants in stormwater and urban runoff. A Project-specific Preliminary WQMP for the proposed Project (Appendix G-2) determined that the infiltration/ detention basins would be sufficient to address on-site stormwater water quality-related issues consistent with permit requirements.

Post-construction, the Project area would be designed to collect stormwater runoff by nearby catch basins and convey it to the two proposed above ground and one underground detention basins via a storm drain system. Prior to entering the detention basins, runoff would be pretreated via filter inserts placed in the catch basins and then again further downstream by a baffle box. Runoff will then be released into the above ground basin where it will collect and infiltrate into the soil. Further downstream within the storm drain system, the runoff will be further pretreated via a CDS hydrodynamic separator unit prior to entering the underground CMP system. After pretreatment, runoff will be routed to the designated infiltration/detention BMP. Runoff in Drainage Area A will be routed to the above ground basin to the northwest where it will collect and infiltrate into the soil. Runoff from Drainage Areas B and C will be routed to underground corrugated metal pipe (CMP) infiltration/detention system, which will also connect to an aboveground basin to outlet excess flows (Figure 4.8-2). The basins are sized and designed to prevent flooding from a 100-year storm while also accommodating the required retention volume for water quality purposes.

In accordance with the San Bernardino County Hydrology Manual, the detention basin system would be designed to treat water quality for a 2-year, 24-hour storm event, and sized to accommodate the volumes and flow rates of a 100-year, 24-hour storm event. Two aboveground stormwater detention basins would be located northwest and northeast corners of the Project site, with the underground corrugated metal pipe retention/infiltration system located just west of the aboveground basin on the northeast corner of the site. The stormwater drainage system basins would be sized and designed to prevent flooding from a 100-year storm while also accommodating the required retention volume for water quality purposes. The basins would be designed to capture the entire volume generated from a 100-year storm, meaning no runoff would be discharged off site (Appendix G-1).

Non-structural BMPs would include the regular sweeping and cleaning of existing trash enclosures, docking areas, and paved areas throughout the Project site, the training of all maintenance contractors in stormwater BMP implementation, and the monthly inspection of all catch basins during the rainy season (October through May) as well as before and after each storm to ensure efficient operation. The on-site catch basin inspections would be done by a qualified landscape contractor, who would inspect and clean out any accumulation of trash, litter, and sediment from the basins as well as would check for evidence of illegal dumping of waste materials into on-site drains (Appendix G-2).

Implementation of these LID features and BMPs would, to the maximum extent practicable, reduce the discharge of pollutants into receiving waters, including inadvertent release of pollutants (e.g., hydraulic fluids and petroleum); improper management of hazardous materials; trash and debris; and improper management of portable restroom facilities (e.g., regular service), in accordance with all relevant local and state development standards.

With respect to groundwater quality, stormwater to be collected and treated in retention basins would be able to meet retention time requirements for water quality purposes in accordance with San Bernardino County requirements. All pervious areas that would remain at the Project site would be below adjacent impervious areas to maximize natural infiltration as well as allowing for infiltration with the proposed underground retention basins. Therefore, with adherence to NPDES MS4 permit and San Bernardino County Hydrology Manual standards, long-term operational impacts associated with water quality standards and waste discharge requirements would be less than significant

Threshold B: Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?

Groundwater Recharge

Less-than-Significant Impact. The Project site is underlain by the Upper Mojave River Valley Groundwater Basin. Currently, the Project site is undeveloped and pervious which allows for groundwater recharge. The development of the Project site would result in a substantial increase in impermeable surfaces, which could impede groundwater recharge. However, the Project would incorporate LID features, including infiltration/retention systems designed to retain at least 95% of the difference of volume produced between post- and pre-developed conditions of on-site stormwater runoff during a 10-year, 24-hour storm event (Table 4.8-2, Proposed Hydrology Summary). Detained stormwater would infiltrate through the bottom of the infiltration basins and into the underlying soils. In addition, the infiltration basins would be sized to exceed 95% of the difference in stormwater of the existing and proposed conditions such that there would be no substantial change in on-site infiltration rates. As shown in Table 4.8-2, the total system storage volume well exceeds the 10-year 24-hour storm event. Because the Project would meet and exceed infiltration requirements, stormwater would continue to be able to infiltrate soils and recharge the underlying Upper Mojave River Valley Groundwater Basin. Therefore, impacts associated with groundwater recharge would be less than significant.

Table 4.8-2. Proposed Hydrology Summary

Drainage Area (acreage)	Q10	Volume of 10-year 24-hour Storm Event (Cubic Feet)	Q100	Volume of 100-Year, 24-Hour Storm Event (Cubic Feet)
Area A (9.61 acres)	8.95	24,616	15.55	46,143
Area B (11.64 acres)	31.95	119,280	55.90	223,550

Table 4.8-2. Proposed Hydrology Summary

Drainage Area (acreage)	Q10	Volume of 10-year 24-hour Storm Event (Cubic Feet)	Q100	Volume of 100-Year, 24-Hour Storm Event (Cubic Feet)
Area B (3.82)	5.86	38,964	10.68	72,946
Total	**46.76**	**182,860**	**82.13**	**342,639**
Storage Volume of Above Ground Basins Combined	—	*50,160*	—	—
Storage Volume of Underground	—	*182,860*	—	—
Total System Storage Volume	**—**	**233,020**	**—**	**—**

Source: Appendix G-1 and G-2

Groundwater Supply

Less-than-Significant Impact. In the 2015 UWMP, Hesperia Water District estimated that it would source approximately 88.0% of its water supply from groundwater, 5.5% from purchased water, and 6.5% from recycled water (Hesperia Water District 2016). Regarding the portion of the District's water supply that originates as groundwater, the District receives water from sixteen active wells within the City, the entirety of which is located within Alto Subarea sub basin of the Mojave River Groundwater Basin. The Mojave River Ground Water Basin is an adjudicated basin and thus has a managed groundwater extraction rate (Hesperia Water District 20). The Mojave Water Agency serves as the entity responsible for managing the use, replenishment, and protection of the groundwater basin. The Mojave Water Agency and other retail water purveyors, including Hesperia Water District, use imported State Water Project water to replenish the Upper Mojave Water Basin as part of the Regional Recharge and Recovery Project (also referred to as the "R3" project). This practice further assists regional water providers in sustainable management of the Mojave Groundwater Basin.

According to the 2020 UWMP for the Hesperia Water District, the total projected water supplies available to the District during normal, single-dry, and multiple-dry water years until 2045 (Hesperia Water District 2021). This assessment includes projections for growth within the District's service area consistent with the General Plan projections. In addition, as long-term water supply is a significant concern in California, Hesperia Water District has planned projects to meet future water demands for its service area. For example, to improve water efficiency and conserve vital potable water resources, such as groundwater, Hesperia Water District, in cooperation with Victor Valley Water Reclamation Agency plans to expand the local water recycling facility's treatment capacity as well as plans to build an additional water recycling facility. The City of Hesperia also plans to construct multiple recharge basins in cooperation with Mojave Water Agency to deliver and recharge State Water Project water into underlying groundwater basins within the Hesperia Water District's service area (Hesperia Water District 2021). These activities would act to further ensure continued sustainable management of the basin within Hesperia Water District's service area. These projects, when coupled with regional groundwater management plans and the regulatory bindings of the groundwater basin, would ensure that the service area as a whole attains sustainable groundwater management. In addition, as also concluded in the WSA that was prepared for the proposed Project, the City of Hesperia has reliable water supplies to meet its retail customer demands in normal, single dry year, and multiple (5) consecutive dry years and is projected to continue to enhance reliability through the numerous current and planned projects in the Mojave Basin (Appendix G-3). As a result, the Project would not substantially decrease

groundwater supplies and would not impede sustainable groundwater management of the basin. Therefore, impacts associated with groundwater supplies 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 or through the addition of impervious surfaces, in a manner which would:

Threshold C(I): result in substantial erosion or siltation on or off-site;

Less-than-Significant Impact. As previously discussed, the Project site currently consists of undeveloped land. The Project would result in the construction of new paved surfaces, warehouse buildings, and landscape areas. Once developed, the Project site would include buildings, paved surfaces, and other on-site improvements that would stabilize and help retain on-site soils. The remaining portions of the Project site containing pervious surfaces would primarily consist of landscape areas. These landscape areas would include a mix of trees, shrubs, plants, and groundcover that would help retain on-site soils while preventing wind and water erosion from occurring. Moreover, the Project's new engineered stormwater drainage system would feature structural BMPs such as retention facilities to treat and manage on-site storm water flows. The stormwater drainage system basins would be sized and designed to prevent flooding from a 100-year storm while also accommodating the required retention volume for water quality purposes. The basins would be designed to capture the entire volume generated from a 100-year storm, meaning no runoff would be discharged off site (Appendix G-1).

Threshold C(II): substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;

Less-than-Significant Impact. Construction of the proposed Project would alter the existing drainage patterns through the introduction of new impervious surfaces. However, as discussed above, the Project would maintain adequate stormwater conveyance through compliance with existing drainage control standards. As previously discussed, the Project site would be designed to convey runoff as sheet flows away from buildings, and allow on-site infiltration through the remaining landscaped pervious areas as well as the subsurface infiltration retention basins. The proposed drainage system would be designed in accordance with the 2013 Phase II Small MS4 Permit, which requires all new development projects covered by this Order to incorporate LID BMPs to the maximum extent practicable and includes limitations on peak storm flows that can be discharged from the site.

The Project-specific Preliminary Drainage Reports (Appendix G-1) include analysis of existing hydraulic conditions during peak storm events and proposed condition hydrologic analysis to determine whether the post-construction runoff would have any impact on receiving waterways (i.e., Oro Grande Wash, Mojave River). In accordance with the San Bernardino County Hydrology Manual, the rational method and unit hydrograph were used to calculate the 2-year, 10-year, 25-year, and 100-year, 24-hour storm peak discharges for the existing and Project conditions.[1]

The stormwater drainage system basins would be sized and designed to prevent flooding from a 100-year storm. The basins would be designed to capture the entire volume generated from a 10-year storm, meaning no runoff would be discharged off site (Appendix G-1). In addition, for the 100-year peak runoff flow rates, the pre-development condition has a rate of 27.89 cubic feet per second and in the post-

[1] Note that the peak storm flows for the 25-year event are not calculated for the post-development condition as it does not factor into meeting the drainage control requirements.

development condition that rate would be reduced to 17.87. Therefore, the proposed drainage system has been sized and designed in accordance with the San Bernardino County Hydrology Manual, which requires the Project site to meet volume retention and flow attenuation rates in the post-developed condition to prevent adverse effects downstream of the project site. Once the required volume is retained, the flow rates from excess stormwater runoff would be attenuated by the weir structures within the above ground basins and discharged into the public right of way. Basin 1 would discharge onto Mesa Linda Street and Basin 2 would discharge onto Lassen Road. To comply with hydromodification requirements, the flow rates being discharged would not exceed more than five percent of the pre-development conditions for a 10-year storm as required in the San Bernardino County Hydrology Manual. In addition, for flood protection purposes, the flow rates for a 100-year storm would exceed no more than the predevelopment conditions for a 25-year storm. The results demonstrate that the proposed above ground retention basins for this project would comply with the flood protection requirements of the City of Hesperia and County of San Bernardino.

Therefore, because the Project improvements would be designed to meet and exceed the stormwater requirements set forth in the San Bernardino County Hydrology Manual, the Project would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site. Therefore, impacts associated with flooding on or off site would be less than significant.

Threshold C(III): create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

Less-than-Significant Impact. As previously discussed under Threshold A, the proposed drainage system would be designed to convey runoff in compliance with the City of Hesperia and the County of San Bernardino WQMP and SWMP requirements. In addition, the Project would incorporate LID features, including on-site infiltration/retention basins and ongoing maintenance requirements to ensure continued successful operation. Collectively, these LID features would lower the potential of the incidental releases of contaminants to the environment such as oil, grease, nutrients, heavy metals, and certain pesticides, including legacy pesticides. As a result, the Project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Therefore, impacts associated with stormwater drainage systems capacity and polluted runoff sources would be less than significant.

Threshold C(IV): impede or redirect flood flows?

Less-than-Significant Impact. The Project site is located in Zone X, an area of minimal flood hazard per the FEMA FIRM panel 06071C6490H effective August 28, 2008. This area is higher in elevation than the 0.2% annual chance flood (i.e., 500-year flood). In addition, as previously discussed, although internal drainage patterns would be somewhat altered as a result of Project development, the Project would maintain adequate stormwater conveyance as to not result in an increase of surface runoff that would result in flooding on- or off-site associated with the 100-year, 24-hour storm event. Therefore, impacts associated with impeding or redirecting flood flows would be less than significant.

Threshold E: Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less-than-Significant Impact. As previously discussed, the Project would comply with applicable water quality regulatory requirements, including implementation of a SWPPP, stormwater BMPs, and LID design, which would

minimize potential off-site surface water quality impacts and contribute to a reduction in water quality impacts within the overall Mojave River Watershed. In addition, through compliance with these regulatory requirements, the Project would reduce potential water quality impairment of surface waters such that existing and potential beneficial uses of key surface water drainages throughout the jurisdiction of the Mojave River Basin Plan Amendment of the Lahontan Basin Plan would not be adversely impacted. As a result, the Project would not conflict with or obstruct the Lahontan Basin Plan.

With respect to groundwater management, SGMA empowers local agencies to form GSAs to manage basins sustainably, and requires those GSAs to adopt Groundwater Sustainability Plans for crucial groundwater basins in California. No GSA has been established for the Upper Mojave River Valley Groundwater Basin, because it is not considered a medium or high priority basin. However, the basin is adjudicated, regulating the amount of groundwater extracted, reducing the potential for over-extraction. Further, the Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge and would not conflict with or obstruct a water quality control plan or sustainable groundwater management plan. Therefore, impacts associated with water quality control plans and sustainable groundwater management plans would be less than significant.

Threshold F: Would the Project result in cumulatively considerable hydrological or water quality impacts?

Water Quality

Less-than-Significant Impact. The geographic context for the analysis of cumulative impacts associated with water quality is the encompassing Mojave River Watershed. Cumulative development in the watershed could add new sources of stormwater runoff. Construction activities associated with the Project could temporarily increase the number of exposed surfaces that could contribute to sediments in stormwater runoff. Additionally, materials associated with construction activities could be deposited on surfaces and carried to receiving waters in stormwater runoff. However, all cumulative development in the watersheds would be subject to the existing regulatory requirements to protect water quality and minimize increases in stormwater runoff. For example, Part 1, Section I of the Municipal NPDES Permit requires the City of Hesperia to effectively prohibit non-stormwater discharges from within its boundaries, into that portion of the MS4 that it owns or operates. Part 2, Section 1.E of the Municipal NPDES Permit requires the City to control discharges to and from municipal sewer systems, so as to comply with the Municipal NPDES permit and to specifically prohibit certain discharges identified in the Municipal NPDES Permit.

Every two years, the Lahontan RWQCB must re-evaluate water quality within its geographic region and identify those water bodies not meeting water quality standards. For those impaired water bodies, a TMDL must be prepared and implemented to reduce pollutant loads to levels that would not contribute to a violation of water quality standards. All developments within the Mojave River Watershed are subject to the water quality standards outlined in the Mojave River Basin Plan and must comply with any established TMDLs. The continuing review process would ensure that cumulative development within the watershed would not substantially degrade water quality.

The County and cities located within San Bernardino County are co-permittees under the San Bernardino County Municipal NPDES stormwater permit. The NPDES permit sets limits on pollutants being discharged into waterways and requires that the project designer and/or contractor of all new development projects that fall under specific project categories develop a WQMP that includes LID design requirements related to water quality. The LID design requirements would address long-term effects on water quality within the San Bernardino County watersheds and ensure that BMPs and LID designs minimize potential water quality concerns to the maximum extent practicable. Therefore, impacts associated with water quality standards and polluted runoff in the watersheds would be minimized, and the Project's contribution to cumulative impacts would be less than significant.

Water Supply

Less-than-Significant Impact. The development of the Project would increase water demand compared to existing conditions. The Project would be served by Hesperia Water District for which the 2020 UWMP estimated an annual water demand in 2025 of 15,250 acre-feet and 16,290 acre-feet by 2030. The UWMP states that Hesperia Water District and other water agencies in Southern California have planned provisions for regional water for the growing population, including drought scenarios for its service area. This plan includes a new water demand forecast prepared for the major categories of demand and uses regional population, demographic projections, the dry climate, historical water use to develop these forecasts. As such, the Project would not be expected to result in increased water usage causing the need for new entitlements, resources, and/or treatment facilities that are not already being planned to accommodate regional growth forecasts.

In addition, the 2020 UWMP and the WSA that was prepared for the proposed Project concluded that the total projected water supplies available to Hesperia Water District during normal, single-dry, and multiple-dry water years until 2045 will be sufficient to meet the projected water demands of the projected growth in the service area. These projections consider land use, water development programs and projects, and water conservation. For example, Hesperia Water District, in coordination with the VVWRA, plans on expanding the Hesperia Subregional Water Recycling Facility water treatment capacity from 1.0 million gallons per day (mgd) to 2.0 mgd by 2030 as well as build a second water recycling facility within the City that would be able to treat 2.6 mgd of wastewater by 2040. Additionally, the City plans to construct multiple recharge basins in cooperation with Mojave Water Agency to deliver and recharge State Water Project water into underlying groundwater basins within the Hesperia Water District's service area. Collectively, these additional programs would enable water supply to exceed water demand now and into the future. Therefore, due to water planning efforts and water conservation standards, impacts would be less than significant, and the Project's contribution to cumulative impacts would not be cumulatively considerable.

Stormwater Drainage

Less-than-Significant Impact. The geographic context for the analysis of cumulative impacts related to storm drainage is the Mojave River Watershed, which is moderately urbanized with impervious surfaces. Cumulative development within the County could potentially increase the number of impervious surfaces that could cause or contribute to storm drain system capacity exceedance or alter the existing stormwater flow rates that result in adverse effects downstream on a water quality or quantity basis. New development within the watershed would be subject to the environmental review process that would analyze potential impacts associated with stormwater runoff to the storm drain system. New development would be subject to the completion of drainage analyses to ensure that excessive on- or off-site flooding and runoff would not occur as was done for the proposed Project. The post-development condition of the Project would reduce peak storm flow rates and therefore could not contribute to a significant cumulative effect. Therefore, since all cumulative projects are required to adhere to these same existing regulatory drainage control measures, the potential cumulative impact would be less than significant.

4.8.5 Mitigation Measures and Level of Significance After Mitigation

Threshold A: Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

The Project would result in less-than-significant impacts associated with water quality standards and waste discharge requirements. No mitigation is required.

Threshold B: Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?

The Project would result in less-than-significant impacts with regard to decreasing groundwater supplies or impeding sustainable groundwater management of the basin. No mitigation is required.

Threshold C: Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

> ***Threshold C(I): result in substantial erosion or siltation on or off-site;***
>
> The Project would result in less-than-significant impacts related to erosion and siltation off-site.
>
> ***Threshold C(II): substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;***
>
> The Project would result in less-than-significant impacts with regard to increasing the rate or amount of surface runoff in a manner which would result in flooding on or off site. No mitigation is required.
>
> ***Threshold C(III): create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or***
>
> The Project would result in less-than-significant impacts with regard to creating or contributing runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. No mitigation is required.
>
> ***Threshold C(IV): impede or redirect flood flows?***
>
> The Project would result in less-than-significant impacts with regard to impeding or redirecting flood flows. No mitigation is required.

Threshold E: Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The Project would result in less-than-significant impacts with regard to conflicting or obstructing implementation of a water quality control plan or sustainable groundwater management plan. No mitigation is required.

Threshold F: Would the Project result in cumulatively considerable hydrological or water quality impacts?

The Project would result in less-than-significant cumulative impacts with regard to resulting in a cumulative considerable hydrology and water quality. No mitigation is required.

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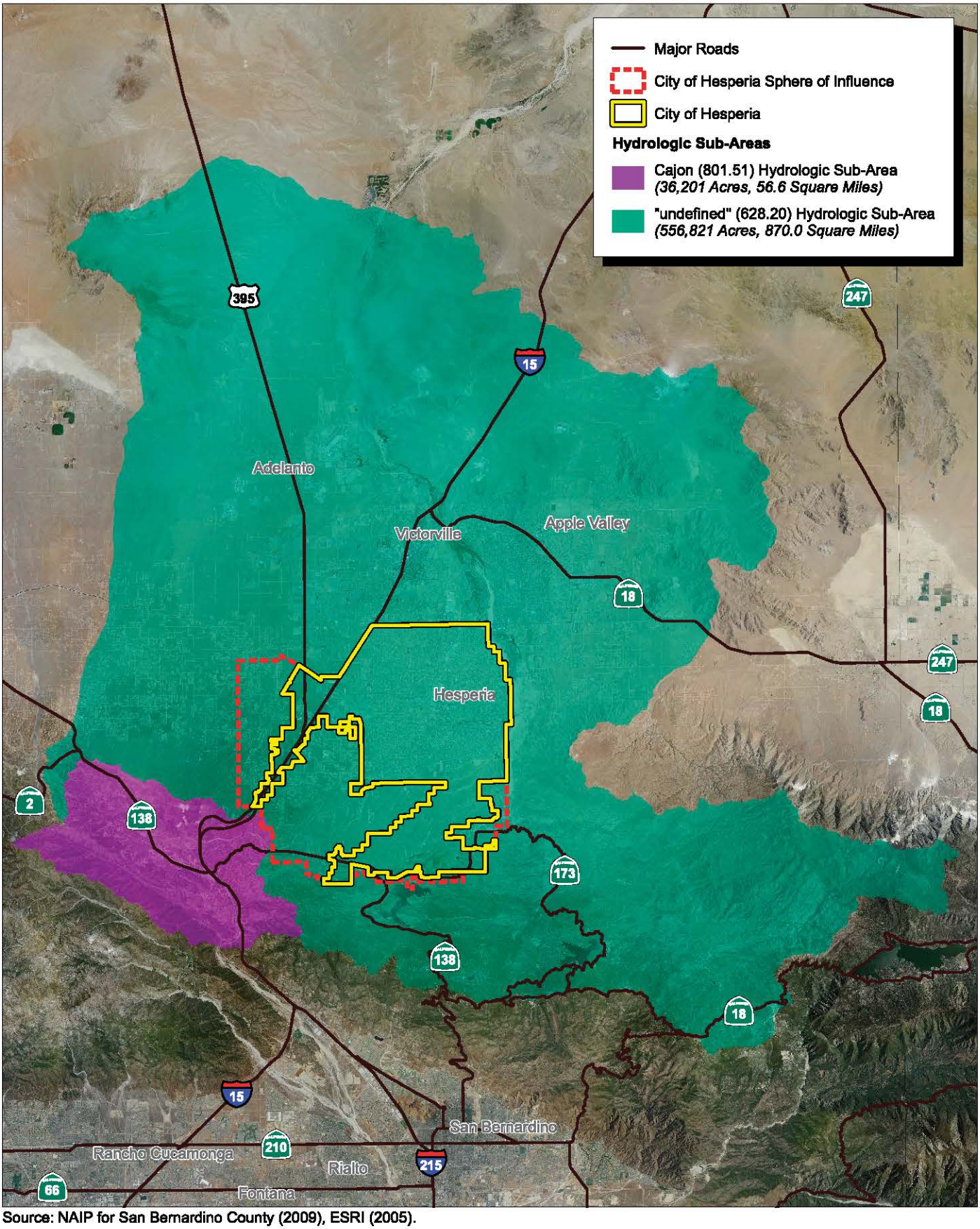

Source: NAIP for San Bernardino County (2009), ESRI (2005).

SOURCE: Michael Brandman Associates 2010

FIGURE 4.8-1

Hydrologic Sub-Areas

Poplar 18 Project

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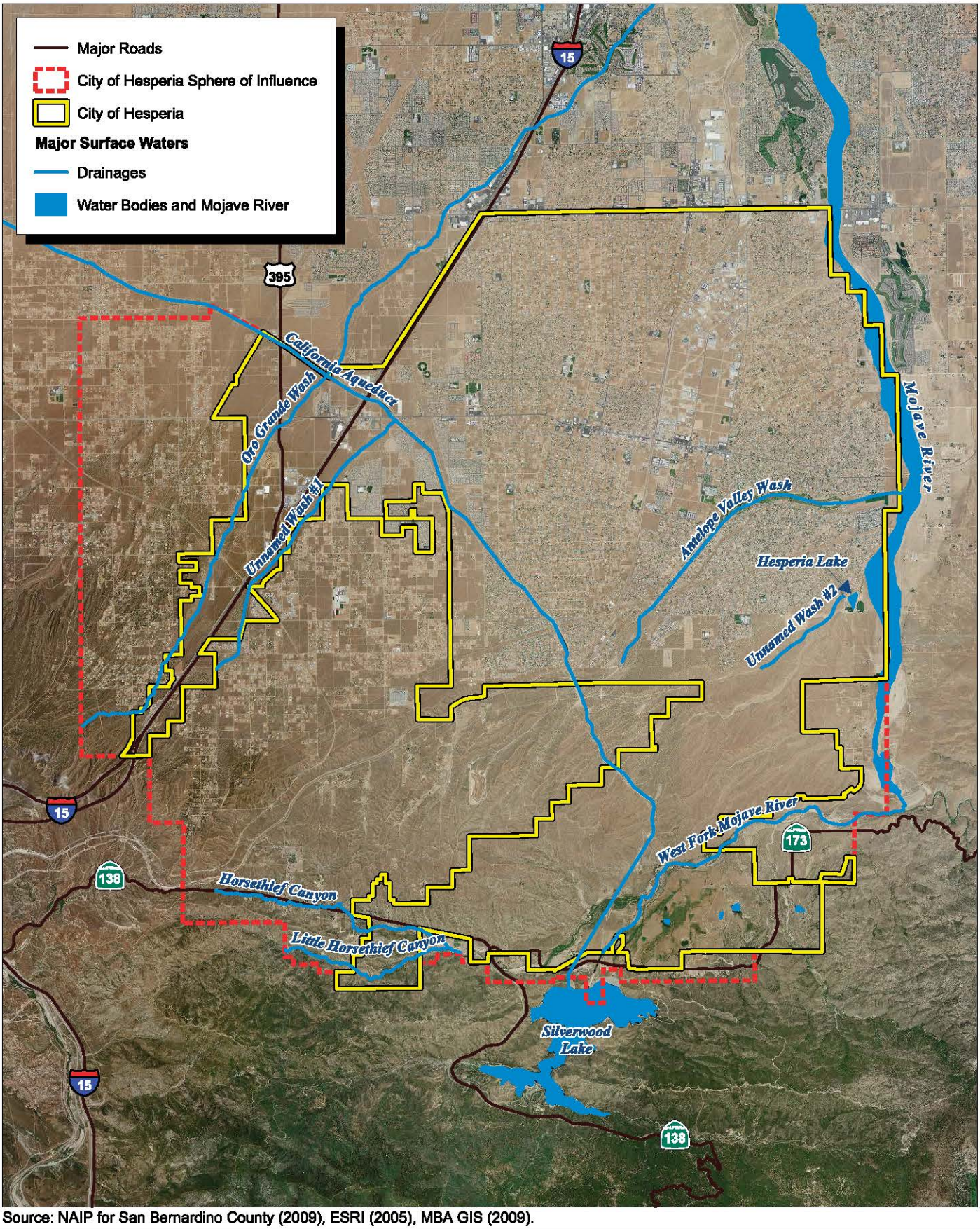

Source: NAIP for San Bernardino County (2009), ESRI (2005), MBA GIS (2009).

SOURCE: Michael Brandman Associates 2010

FIGURE 4.8-2

Major Surface Waters

Poplar 18 Project

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4.9 Noise

This section describes the existing noise conditions of the Poplar 18 Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Project.

In addition to the documents incorporated by reference (see Section 2.7 of Chapter 2 of this Environmental Impact Report [EIR]), the following analysis is based, in part, on the following source:

the following analysis is based, in part, on the following sources:

- Field Noise Data, prepared by Dudek in October 2022 (Appendix H-1)
- Construction Noise Modeling Data, prepared by Dudek in October 2022 (Appendix H-2)
- Traffic Noise Modeling Data, prepared by Dudek in October 2022 (Appendix H-3)
- On-Site Noise Modeling Data, prepared by Dudek in October 2022 (Appendix H-4)
- Transportation Attachments, prepared by Dudek in May 2022 (Appendix I)

4.9.1 Existing Conditions

Noise and Vibration Characteristics

Noise

Sound may be described in terms of level or amplitude (measured in decibels [dB]), frequency or pitch (measured in hertz [Hz] or cycles per second), and duration (measured in seconds or minutes). The standard unit of measurement of the amplitude of sound is the decibel. Because the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale is used to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against low and very high frequencies in a manner approximating the sensitivity of the human ear. Several descriptors of noise (noise metrics) exist to help predict average community reactions to the adverse effects of environmental noise, including traffic-generated noise, on a community. These descriptors include the equivalent noise level over a given period (L_{eq}), the statistical sound level (L_n), the day–night average noise level (L_{dn}), and the community noise equivalent level (CNEL). Each of these descriptors uses units of dBA. Table 4.9-1 provides examples of A-weighted noise levels from common sounds. In general, human sound perception is such that a change in sound level of 3 dB is barely noticeable; a change of 5 dB is clearly noticeable; and a change of 10 dB is perceived as doubling or halving of the sound level.

Table 4.9-1. Typical Sound Levels in the Environment and Industry

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
—	110	Rock band
Jet flyover at 300 meters (1,000 feet)	100	—
Gas lawn mower at 1 meter (3 feet)	90	—
Diesel truck at 15 meters (50 feet), at 80 kph (50 mph)	80	Food blender at 1 meter (3 feet) Garbage disposal at 1 meter (3 feet)

Table 4.9-1. Typical Sound Levels in the Environment and Industry

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Noisy urban area, daytime gas lawn mower at 30 meters (100 feet)	70	Vacuum cleaner at 3 meters (10 feet)
Commercial area Heavy traffic at 90 meters (300 feet)	60	Normal speech at 1 meter (3 feet)
Quiet urban daytime	50	Large business office Dishwasher, next room
Quiet urban nighttime	40	Theater, large conference room (background)
Quiet suburban nighttime	30	Library
Quiet rural night time	20	Bedroom at night, concert hall (background)
—	10	Broadcast/recording studio
Lowest threshold of human hearing	0	Lowest threshold of human hearing

Source: Caltrans 2013.
Notes: dBA = A-weighted decibels; kph = kilometers per hour; mph = miles per hour.

L_{eq} is a sound energy level averaged over a specified period (typically no less than 15 minutes for environmental studies). L_{eq} is a single numerical value that represents the amount of variable sound energy received by a receptor during a time interval. For example, a 1-hour L_{eq} measurement would represent the average amount of energy contained in all the noise that occurred in that hour. L_{eq} is an effective noise descriptor because of its ability to assess the total time-varying effects of noise on sensitive receptors (see below for definition of sensitive receptors). L_{max} is the greatest sound level measured during a designated time interval or event.

Unlike the L_{eq} metrics, L_{dn} and CNEL metrics always represent 24-hour periods, usually on an annualized basis. L_{dn} and CNEL also differ from L_{eq} because they apply a time-weighted factor designed to emphasize noise events that occur during the evening and nighttime hours (when speech and sleep disturbance is of more concern). "Time weighted" refers to the fact that L_{dn} and CNEL penalize noise that occurs during certain sensitive periods. In the case of CNEL, noise occurring during the daytime (7:00 a.m.–7:00 p.m.) receives no penalty. Noise during the evening (7:00 p.m.–10:00 p.m.) is penalized by adding 5 dB, while nighttime (10:00 p.m.–7:00 a.m.) noise is penalized by adding 10 dB. L_{dn} differs from CNEL in that the daytime period is defined as 7:00 a.m.–10:00 p.m., thus eliminating the evening period. L_{dn} and CNEL are the predominant criteria used to measure roadway noise affecting residential receptors. These two metrics generally differ from one another by no more than 0.5 dB to 1 dB, and as such are often treated as equivalent to one another.

Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Vibration can be a serious concern, causing buildings to shake and rumbling sounds to be heard. In contrast to noise, vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of vibration are trains, buses on rough roads, and construction activities, such as blasting, pile driving, and heavy earthmoving equipment.

Several different methods are used to quantify vibration. Peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. PPV is most frequently used to describe vibration impacts to buildings and is usually measured in inches per second. The root mean square amplitude is most frequently used to describe the effect of vibration on the human body and is defined as the average of the squared amplitude of the signal. Vibration decibel notation (VdB) is commonly used to measure root mean square. VdB acts to compress the range of numbers required to describe vibration.

High levels of vibration may cause physical personal injury or damage to buildings. However, vibration levels rarely affect human health. Instead, most people consider vibration to be an annoyance that can affect concentration or disturb sleep. In addition, high levels of vibration can damage fragile buildings or interfere with equipment that is highly sensitive to vibration (e.g., electron microscopes). Most perceptible indoor vibration is caused by sources within buildings, such as operation of mechanical equipment, movement of people, or slamming of doors. Typical outdoor sources of perceptible vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If the roadway is smooth, the vibration from traffic is rarely perceptible.

Sensitive Receptors

Noise- and vibration-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would be considered noise and vibration sensitive and may warrant unique measures for protection from intruding noise.

Sensitive receptors in the vicinity of the Project site include several tracts of single-family residential uses to the north (along the north side of Main Street), and two motels (i.e., transient residential uses) located to the north-northwest (also along the north side of Main Street). These sensitive receptors represent the nearest residential land uses with the potential to be impacted by construction and operation of the Project.

Existing Noise Conditions

Currently, the Project site is vacant and undeveloped, bound to the west by Lassen Road, to the east by Mesa Linda Street, and to the south by Poplar Street. It should be noted that Lassen Road has not yet been constructed but is a planned arterial road in the City's Circulation Element (City of Hesperia 2010). Thus, little to no noise is currently generated on site. However, the surrounding area is subject to traffic noise associated with adjacent roadways, including Main Street, Poplar Street, Cataba Road, Mesa Linda Road, U.S. Highway 395, and Interstate (I) 15, as well as noise from the adjacent industrial/commercial uses.

Noise measurements were conducted on and near the Project Site on January 5 and 6, 2021, to characterize the existing noise levels. The measurements were made using calibrated SoftdB Piccolo integrating sound level meters. The sound level meters meet the current American National Standards Institute standard for a Type 2 (general purpose) sound level meter. The accuracy of the sound level meters was verified using a field calibrator before and after the measurements, and the measurements were conducted with the microphone positioned approximately 5 feet above the ground.

Three short-term noise measurement locations (ST) that represent existing sensitive receivers were selected near the Project site. These locations are depicted as receivers ST1–ST3 on Figure 4.9-1, Noise Measurement and Modeling Locations. The measured energy-averaged (L_{eq}) and maximum (L_{max}) noise levels are provided in Table 4.9-2. The primary noise sources at the measurement sites consisted of traffic along adjacent roadways;

distant conversation and nearby mechanical noise (air conditioning equipment) represented secondary noise sources. As shown in Table 4.9-2, the measured sound levels ranged from approximately 59 dBA L_{eq} at ST2 to 69 dBA L_{eq} at ST1. The field noise data sheets are provided in Appendix H.

Table 4.9-2. Measured Noise Levels

Receptors[1]	Location	Date	Time	L_{eq} (dBA)	L_{max} (dBA)
ST1[2]	North of Project site, adjacent to Main Street; south of Willow Creeks Estates Mobile Home Park (12550 Main Street)	1/5/2021	1:46 p.m.–2:01 p.m.	68.5	83.8
ST2	North of Project site, adjacent to Main Street and West Main Villas housing tract (9800 Mesa Linda Street)	1/5/2021	2:19 p.m.–2:34 p.m.	59.3	69.3
ST3	North-northwest of Project site, adjacent to Main Street and Motel 6 (9757 Cataba Road)	1/5/2021	3:13 p.m.–3:29 p.m.	63.7	77.6

Source: Appendix H-1.
Notes: L_{eq} = equivalent continuous sound level (time-averaged sound level); L_{max} = maximum sound level during the measurement interval; dBA = A-weighted decibels.
1 Corresponds with Figure 4.9-1, Noise Measurement and Modeling Locations.
2 ST1 was conducted on the Main Street side of the existing residential boundary wall surrounding the mobile home park, because access to the property could not be obtained. Noise levels on the other side of the approximately 6-foot high wall would be lower.

In addition, one long-term, unattended 24-hour noise measurement was taken from January 5–6, 2021. This measurement was intended to determine the existing noise levels in the Project vicinity near noise-sensitive land uses throughout a typical daytime/evening/nighttime cycle, resulting from traffic or from other sources. As shown in Table 4.9-3, the long-term hourly average noise levels ranged from approximately 54 dBA L_{eq} (from 2:00 a.m. to 3:00 a.m.) to approximately 63 dBA L_{eq} (from 7:00 a.m. to 8:00 a.m.). The 24-hour weighted average noise level at LT1 was approximately 65 dBA CNEL. The primary noise source was traffic on the local roadways.

Table 4.9-3. Measured Long-Term (LT1) Noise Levels January 5, 2021, to January 6, 2021

Time Interval	dBA L_{eq}
3:00 p.m.–4:00 p.m.	58.5
4:00 p.m.–5:00 p.m.	59.0
5:00 p.m.–6:00 p.m.	58.1
6:00 p.m.–7:00 p.m.	59.2
7:00 p.m.–8:00 p.m.	59.7
8:00 p.m.–9:00 p.m.	59.8
9:00 p.m.–10:00 p.m.	59.5
10:00 p.m.–11:00 p.m.	57.9
11:00 p.m.–12:00 a.m.	56.9
12:00 a.m.–1:00 a.m.	58.0
1:00 a.m.–2:00 a.m.	55.7
2:00 a.m.–3:00 a.m.	54.0
3:00 a.m.–4:00 a.m.	57.8
4:00 a.m.–5:00 a.m.	62.0
5:00 a.m.–6:00 a.m.	59.3

Table 4.9-3. Measured Long-Term (LT1) Noise Levels January 5, 2021, to January 6, 2021

Time Interval	dBA L_{eq}
6:00 a.m.–7:00 a.m.	58.5
7:00 a.m.–8:00 a.m.	62.9
8:00 a.m.–9:00 a.m.	56.8
9:00 a.m.–10:00 a.m.	56.9
10:00 a.m.–11:00 a.m.	56.8
11:00 a.m.–12:00 p.m.	54.9
12:00 p.m.–1:00 p.m.	57.4
1:00 p.m.–2:00 p.m.	55.7
2:00 p.m.–3:00 p.m.	61.3
Lowest Hourly Average Noise Level: 54 dBA L_{eq} at 2:00 a.m.	
Highest Hourly Average Noise Level: 63 dBA L_{eq} at 7:00 a.m.	
24-Hour Average Noise Level: 59 dBA $L_{eq\ 24\text{-}Hr}$)	
24-Hour Weighted-Average Noise Level: 65 dBA CNEL	

Source: Appendix H-1.
Notes: dBA = A-weighted decibel; L_{eq} = equivalent continuous sound level; CNEL = community equivalent noise level.
The location of LT1 is depicted on Figure 4.9-1, Noise Measurement and Modeling Locations.

4.9.2 Relevant Plans, Policies, and Ordinances

Federal

There are no federal noise standards that would directly regulate noise during construction and operation of the Project. The following is provided because guidance summarized herein is used or pertains to the analyses for construction noise, as well as for analysis of what constitutes a substantial increase from transportation noise.

Federal Transit Administration

In its Transit Noise and Vibration Impact Assessment Manual, the Federal Transit Administration (FTA) recommends a daytime construction noise level threshold of 80 dBA L_{eq} over an 8-hour period (FTA 2018) when detailed construction noise assessments are performed to evaluate potential impacts to community residences surrounding a project. Although this FTA guidance is not a binding regulation, it is provided here for comparison purposes and to establish a quantitative threshold of significance for construction noise, in the absence of such limits at the state and local jurisdictional levels.

Federal Interagency Committee on Noise

In 1992 the Federal Interagency Committee on Noise (FICON) assessed the annoyance effects of changes in ambient noise levels resulting from aircraft operations. Although the FICON recommendations were developed to address aircraft noise impacts, they are used in this analysis to define a substantial increase in community noise levels related to roadway traffic, as detailed in Section 4.9.3, Thresholds of Significance.

State

Government Code Section 65302(g)

California Government Code Section 65302(g) requires the preparation of a Noise Element in a General Plan, which shall identify and appraise the noise problems in the community. The Noise Element shall also recognize the guidelines adopted by the Office of Noise Control in the State Department of Health Services and shall quantify, to the extent practicable, current and projected noise levels for the following sources:

- Highways and freeways
- Primary arterials and major local streets
- Passenger and freight on-line railroad operations and ground rapid transit systems
- Aviation and airport-related operations
- Local industrial plants
- Other ground stationary noise sources contributing to the community noise environment

California General Plan Guidelines

The California General Plan Guidelines, published by the Governor's Office of Planning and Research, provides guidance for the acceptability of specific land use types within areas of specific noise exposure. The guidelines also present adjustment factors that may be used to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution. The guidelines are advisory in nature. Local jurisdictions, including the City of Hesperia, have the responsibility to set specific noise standards based on local conditions.

California Department of Transportation

In its Transportation and Construction Vibration Guidance Manual, the California Department of Transportation (Caltrans) recommends a vibration velocity threshold of 0.2 inches per second (ips) PPV (Caltrans 2020) for assessing "annoying" vibration impacts to occupants of residential structures. Although this Caltrans guidance is not a regulation, it can serve as a quantified standard in the absence of such limits at the local jurisdictional level. Similarly, thresholds to assess building damage risk due to construction vibration vary with the type of structure and its fragility but tend to range between 0.3 ips and 0.4 ips PPV for typical residential structures (Caltrans 2020).

Local

City of Hesperia General Plan

Applicable policies and standards governing environmental noise in the City are contained in the City of Hesperia General Plan Noise Element (City of Hesperia 2010). The City's Noise Element specifies the maximum allowable unmitigated exterior noise levels for new developments impacted by transportation noise sources such as arterial roads, freeways, airports, and railroads. In addition, the Noise Element identifies goals and policies to minimize the impacts of excessive noise levels throughout the community and establishes noise level requirements for all land uses. To limit the exposure of City residents to excessive noise, the City of Hesperia General Plan Noise Element contains the following two goals:

NS-1. To achieve and maintain an environment which is free from excessive or harmful noise through identification, control, and abatement.

NS-2. To achieve and maintain an environment which is free from excessive vibration.

To satisfy goals NS-1 and NS-2, the City's Noise Element identifies the following implementation policies:

NS-1.2. Control and abate undesirable sounds through the use of the land use compatibility criteria shown in Exhibit NS-1, Table NS-3, and the Municipal Code Section 16.20.125(B).

NS-1.5. Require the design and construction of commercial, industrial, office and mixed-use structures developments with noise attenuation methods to minimize excessive noise upon noise-sensitive land uses.

NS-1.9. Encourage commercial, industrial, office and mixed-use developments to locate loading areas, parking lots, driveways, trash enclosures, mechanical equipment, and other noisier components away from noise-sensitive land uses.

NS-1.10. Limit the hours of construction activity in, and around, residential areas in order to reduce the intrusion of noise in the early morning and late evening hours and on weekends and holidays.

NS-1.11. Limit delivery hours for businesses with loading areas or docks fronting, siding, or bordering or gaining access on driveways adjacent to noise-sensitive areas.

NS-1.12. Implement nighttime and daytime on-site noise level limits to address noise generated by commercial and industrial uses where it affects abutting residential and other noise-sensitive land uses.

The State of California's Land Use Compatibility Plan (Exhibit NS-1 in the City's General Plan Noise Element, provided here as Table 4.9-4) lists land use categories and the acceptable and unacceptable levels of community noise exposure. The compatibility criteria shown in Table 4.9-4 provides the City with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels. According to these categories of transportation-related noise compatibility, industrial land uses such as the Project are considered normally acceptable with unmitigated exterior noise levels below 75 dBA CNEL and conditionally acceptable with noise levels between 70 dBA CNEL and 80 dBA CNEL. For conditionally acceptable land use, "new construction or development should be undertaken only after a detailed analysis of noise reduction requirements are made."

Table 4.9-4. City of Hesperia/State of California Land Use Compatibility Plan

Land Use Category	Community Noise Exposure (dBA CNEL)			
	Normally Acceptable[1]	Conditionally Acceptable[2]	Normally Unacceptable[3]	Clearly Unacceptable[4]
Residential–Low Density Single Family, Duplex, Mobile Home	50–60	55–70	70–75	75–85
Residential–Multiple Family	50–65	60–70	70–75	75–85
Transient Lodging–Motels, Hotels	50–65	60–70	70–80	80–85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50–65	60–70	70–80	80–85
Amphitheater, Concert Hall, Auditorium, Meeting Hall	N/A	50–70	N/A	65–85

Table 4.9-4. City of Hesperia/State of California Land Use Compatibility Plan

Land Use Category	Community Noise Exposure (dBA CNEL)			
	Normally Acceptable[1]	Conditionally Acceptable[2]	Normally Unacceptable[3]	Clearly Unacceptable[4]
Sports Arenas, Outdoor Spectator Sports	NA	50–75	N/A	70–85
Playgrounds, Neighborhood Parks	50–70	N/A	67.5–75	72.5–85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50–75	N/A	70–80	80–85
Office Buildings, Business Commercial and Professional	50–70	67.5–77.5	75–85	N/A
Industrial, Manufacturing, Utilities, Agriculture	50–75	70–80	75–85	N/A

Source: City of Hesperia 2010.
Notes: dBA = A-weighted decibel; CNEL = community noise equivalent level; N/A = not applicable.

1 Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

2 Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

3 Normally Unacceptable: New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

4 Clearly Unacceptable: New construction or development should generally not be undertaken.

City of Hesperia Municipal Code

To analyze noise impacts originating from a designated fixed location or private property such as the Project, stationary-source (operational) noise such as the expected mechanical equipment, loading dock activity, and parking lot noise are typically evaluated against standards established under a jurisdiction's Municipal Code.

Section 16.20.125 of the City of Hesperia Municipal Code establishes the noise level standards for stationary noise sources and establishes noise level limits for affected land uses. Since the Project land use will potentially impact a combination of non-noise-sensitive and noise sensitive uses in the Project study area, this noise study relies on the exterior noise level standards for all land uses identified by the City of Hesperia Municipal Code.

For non-noise sensitive industrial uses, the maximum exterior noise level shall not exceed 70 dBA L_{eq} at any time, while the maximum exterior noise level at non-noise sensitive commercial uses shall not exceed 65 dBA L_{eq} at any time. For noise sensitive residential properties, the maximum exterior noise level shall not exceed 60 dBA L_{eq} during the daytime hours (7:00 a.m. to 10:00 p.m.) and 55 dBA L_{eq} during the nighttime hours (10:00 p.m. to 7:00 a.m.). In addition, except for the nighttime hours from 10:00 p.m. to 7:00 a.m.) the maximum permissible noise levels due to wind noise may be adjusted so that it is no greater than 5 dBA above the ambient noise level.

Based upon Section 16.20.125 subsection E(3), construction activities are exempt from the noise standards provided they take place between the hours of 7:00 a.m. and 7:00 p.m. on weekdays and Saturdays, and not on Sundays or federal holidays.

Section 16.20.130 of the City's Municipal Code identifies an operational vibration level threshold of 0.2 ips PPV, which is used in this report to evaluate potential impacts due to on-site Project-related operational vibration level activities at nearby receiver locations. According to Section 16.20.130.C.2, temporary construction, maintenance, or demolition activities are considered exempt provided that construction vibration activity is limited to the hours between 7:00 a.m. and 7:00 p.m. on weekdays and Saturdays, and not on Sundays or federal holidays.

4.9.3 Thresholds of Significance

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

A. Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
B. Result in generation of excessive groundborne vibration or groundborne noise levels.
C. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the Project area to excessive noise levels.
D. Result in cumulatively considerable noise impacts.

Quantitative thresholds of significance have been established for the purposes of this analysis based on the local polices and regulations described in Section 4.9-2 as well as those of federal agencies and are listed below.

- **Construction Noise:** In the absence of quantifiable local regulations for construction noise, this analysis is based on the FTA's guidance for maximum noise during construction. During construction activities, an exceedance of the FTA's 80 dBA $L_{eq\ 8\text{-}hour}$ threshold is considered a significant noise impact.
- **Traffic Noise:** Guidance regarding the determination of a substantial permanent increase in transportation noise levels in the Project vicinity above existing levels is provided by the 1992 findings of FICON, which assessed the annoyance effects of changes in ambient noise levels resulting from aircraft operations. The FICON recommendations are based upon studies that relate aircraft noise levels to the percentage of persons highly annoyed by the noise. Annoyance is a qualitative measure of the adverse reaction of people to noise that generates speech interference, sleep disturbance, or interference with the desire for a tranquil environment.

The rationale for the FICON recommendations is that it is possible to consistently describe the annoyance of people exposed to transportation noise in terms of L_{dn} (and, by extension, CNEL[1]). The changes in noise exposure that are shown in Table 4.9-5 are expected to result in equal changes in annoyance at sensitive land uses. Although the FICON recommendations were specifically developed to address aircraft noise impacts, they are used in this analysis to define a substantial increase in community noise levels related to all transportation noise sources.[2]

1 As discussed in Section 4.9-1, the L_{dn} and CNEL noise metrics are very similar and often used interchangeably.
2 Traffic noise and other transportation noise sources are similar to aircraft/airport noise in that all of these noise sources can and do operate throughout the daytime and nighttime hours. The FICON recommendations use a weighted 24-hour noise metric, in which noise occurring during nighttime hours has a penalty applied to account for the increased sensitivity of persons to noise at night. Additionally, the graduated levels of the FICON guidance for substantial increase account for the diminishing tolerance of

Table 4.9-5. Measures of Substantial Increase for Transportation Noise Sources

Ambient Noise Level Without Project (L_{dn}/CNEL)	Significant Impact Assumed to Occur if the Project Increases Ambient Noise Levels by:
<60 dBA	+ 5 dB or more
60–65 dBA	+ 3 dB or more
>65 dBA	+ 2 dB or more

Source: FICON 1992.
Notes: Ldn = day–night average noise level; CNEL = community noise equivalent level; dBA = A-weighted decibel; dB = decibel.

- **On-Site Project-Attributed Stationary Noise:** A noise impact would be considered significant if noise from typical operation of heating, ventilation, and air conditioning (HVAC) and other electromechanical systems or other on-site operational noise associated with the Project (such as parking lot and loading dock activities noise) if the applicable City Municipal Code standards are exceeded as detailed in Section 4.9.2.
- **Construction Vibration:** Groundborne vibration from construction and operation of the Project would be considered significant if the Project resulted in vibration levels exceeding the Caltrans recommendations (for construction) or the City's Municipal Code (for operation), as detailed in Section 4.9.2.

4.9.4 Impacts Analysis

Threshold A: Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Short-Term Construction Impacts

Less-than-Significant Impact. Construction activities would take place during permitted hours (between 7:00 a.m. and 7:00 p.m. on weekdays and Saturdays), and would not occur on Sundays or federal holidays as specified in the City of Hesperia Municipal Code. Construction of the Project would generate noise that could expose nearby receptors to elevated noise levels that may disrupt communication and routine activities. The magnitude of the impact would depend on the type of construction activity, equipment, duration of the construction, distance between the noise source and receiver, and intervening structures. The following discussion addresses the noise levels estimated to result from construction of the Project at nearby sensitive receptors (i.e., residences).

Construction – Equipment Inventory

Consistent with the Project's air quality/greenhouse gas analyses, the California Emissions Estimator Model (CalEEMod) was used to identify the construction equipment anticipated for development of the Project. Based on this information, CalEEMod identified the anticipated equipment for each phase of Project construction, listed in Table 4.9-6.

the typical person to noise increases as ambient noise levels are increased. Such is the case whether the dominant noise source is aircraft, or some other transportation source.

Table 4.9-6. Construction Equipment by Phase

Construction Phase	Equipment	
	Equipment Type	Quantity
Site Preparation	Rubber-tired dozers	1
	Tractors/loaders/backhoes	1
Grading	Excavators	2
	Graders	1
	Rubber-tired dozers	1
	Scrapers	2
	Tractors/loaders/backhoes	2
Building Construction	Cranes	1
	Forklifts	3
	Generator sets	1
	Tractors/loaders/backhoes	3
	Welders	1
Paving	Pavers	2
	Paving equipment	2
	Rollers	2
Architectural Coating	Air compressors	1

Source: Table 4.2-5 (Section 4.2, Air Quality).

Construction Noise – Project Site Assessment

With the construction equipment noise sources identified in Table 4.9-6, a noise analysis was performed using the Federal Highway Administration's Roadway Construction Noise Model (RCNM) (FHWA 2008). Input variables for RCNM consist of the receiver/land use types, the equipment type (e.g., backhoe, grader, scraper), the number of equipment pieces, the duty cycle for each piece of equipment (i.e., percentage of time the equipment typically works in a given time period), and the distance from the noise-sensitive receiver to the construction zone. The RCNM has default duty cycle values for the various pieces of equipment, which were derived from an extensive study of typical construction activity patterns. Those default duty cycle values were utilized for this analysis. Refer to Appendix H-2 for the inputs used in the RCNM model and the detailed results.

Sensitive receptors in the vicinity of the Project site include residential uses to the north, and two motels (i.e., transient residential uses) located to the north-northwest. These sensitive receptors represent the nearest residential land uses with the potential to be impacted by construction and operation of the Project. Non-sensitive land uses (commercial and industrial) exist in proximity to the Project site, and construction noise levels at these receptors were also estimated for informational purposes. Project construction would take place both near and far from existing land uses. For example, construction would take place as near as approximately 3,500 feet from residential land uses north of the Project boundary, but (because of the Project's size) construction work for Building 1 would also take place as far as 4,000 feet from the same residential uses. Most construction activities associated with the Project would occur at an average distance of approximately 3,700 feet from the residential uses to the north, which represents activities both near and far, as is typical for construction projects. Similarly, the construction noise estimates for the other modeled receptors in the Project vicinity were calculated for both the nearest construction activity/receiver distances and for typical construction activity/receiver distances.

The results of the Project site construction noise analysis using the RCNM are summarized in Table 4.9-7. As shown, the noise levels from construction are predicted to range from approximately 37 dBA $L_{eq\ 8\text{-}hr}$ (during the architectural coating phase) to 51 dBA $L_{eq\ 8\text{-}hr}$ (during the grading phase) at the nearest noise-sensitive receivers (single family residences approximately 3, 500 feet from the nearest construction work). Typical construction noise levels would be lower. Construction noise levels at the other noise-sensitive receivers would be slightly lower as well. These noise levels would be less than measured ambient noise levels in the area and would be lower than the 80 dBA $L_{eq\ 8\text{-}hr}$ FTA construction noise standard. Therefore, noise from Project site construction would be less than significant. No noise mitigation is necessary.

Estimated construction noise levels for the non-noise sensitive receivers are also provided in Table 4.9-7 for informational purposes. As shown, at the nearest existing land use (commercial uses to the southwest of the Project site), noise levels would range from approximately 58 dBA $L_{eq\ 8\text{-}hr}$ (during the architectural coating phase) to 71 dBA $L_{eq\ 8\text{-}hr}$ (during the grading phase) when construction occurs at and near the Project boundary. More typically, construction noise levels would be lower, ranging from approximately 49 dBA $L_{eq\ 8\text{-}hr}$ (during the architectural coating phase) to 63 dBA $L_{eq\ 8\text{-}hr}$ (during the grading phase) at the nearest existing land use.

Table 4.9-7. On-Site Construction Noise Analysis Summary

Land Use	Off-Site Receptor Location	Distance from Construction Activity to Noise Receptor (feet)	Estimated Construction Noise Levels (dBA $L_{eq\ 8\text{-}hr}$)					Applicable Noise Standard[1]	Applicable Noise Standard Exceeded?
			Site Preparation	Grading	Building Construction	Paving	Architectural Coating		
Residential	North of the Project	Nearest Construction Activity/Receiver Distance (3,550)	42	51	46	44	37	80	No
		Typical Construction Activity/Receiver Distance (3,850)	42	50	46	44	36	80	No
Residential	North of the Project	Nearest Construction Activity/Receiver Distance (3,500)	43	51	46	45	37	80	No
		Typical Construction Activity/Receiver Distance (3,700)	42	51	46	44	37	80	No
Transient Residential (Motel)	North of the Project	Nearest Construction Activity/ Receiver Distance (4,000)	41	50	45	43	36	80	No
		Typical Construction Activity/ Receiver Distance (4,500)	40	49	44	43	35	80	No
Commercial	Northeast of the Project	Nearest Construction Activity/Receiver Distance (2,050)	47	55	50	49	42	n/a	n/a

Table 4.9-7. On-Site Construction Noise Analysis Summary

Land Use	Off-Site Receptor Location	Distance from Construction Activity to Noise Receptor (feet)	Estimated Construction Noise Levels (dBA $L_{eq\ 8\text{-}hr}$)					Applicable Noise Standard[1]	Applicable Noise Standard Exceeded?
			Site Preparation	Grading	Building Construction	Paving	Architectural Coating		
		Typical Construction Activity/Receiver Distance (2,700)	45	53	49	47	39	n/a	n/a
Commercial	Southwest of the Project	Nearest Construction Activity/Receiver Distance (250)	65	71	66	65	58	n/a	n/a
		Typical Construction Activity/Receiver Distance (900)	54	63	58	57	49	n/a	n/a
Industrial	Southwest of the Project	Nearest Construction Activity/Receiver Distance (1,150)	52	60	55	54	46	n/a	n/a
		Typical Construction Activity/Receiver Distance (1,800)	48	57	52	51	43	n/a	n/a
Commercial	North of the Project	Nearest Construction Activity/Receiver Distance (3,000)	44	52	47	46	38	n/a	n/a
		Typical Construction Activity/Receiver Distance (3,350)	43	51	47	45	37	n/a	n/a

Source: Appendix H-2.
Note: dBA = A-weighted decibel; L_{eq} = equivalent continuous sound level (time-averaged sound level).
[1] Applicable noise standard per Federal Transit Administration guidance, as discussed in Section 4.9.2.

Construction Noise – Off-Site Street and Utilities Assessment

As shown in Figure 3-12 (Detailed Site Plan), provided in EIR Chapter 3, the Project would include off-site street and utilities construction activities. Similar to the noise assessment for on-site construction work as summarized above, the resulting noise from off-site construction activities was assessed using the RCNM. The nearest noise-sensitive receivers to the off-site construction activities (and thus the receivers the most affected) would be the residences north of Main Street, during utilities installation within the Main Street alignment, specifically the residences adjacent to measurement location ST1. Noise levels at other locations would be lower because they would be further from the construction work. Utilities installation would occur during the building construction phase. The building construction scenario includes several pieces of equipment, but only a few pieces would be necessary for the utilities installation. Equipment that is anticipated to be used for utility installation includes a backhoe, a forklift, a generator, a crane, and a welder. Because of the linear nature of the work, the amount of time that construction work would occur adjacent to any one noise-sensitive receiver would generally be relatively short (typically, one to two days for open-trench pipeline installation). The resulting noise levels are summarized in Table 4.9-8. As shown, the worst-case noise level from utilities installation is estimated to be approximately 68 dBA $L_{eq\ 8\text{-}hr}$ at the nearest noise-sensitive receivers (single-family residences approximately 130 feet from the nearest construction work). The levels shown in Table 4.9-8 do not include the additional noise reduction that would be provided by the existing property boundary wall at the residences represented by ST1. The wall would reduce the noise level from construction noise by a minimum of 5 decibels[3]; thus, received construction noise at the nearest residences would be approximately 63 dBA $L_{eq\ 8\text{-}hr}$ or less.

Typically, utilities installation would take place further away (an average distance of approximately 2,000 feet from the residences to the north) and thus construction noise levels would be substantially lower at approximately 46 dBA $L_{eq\ 8\text{-}hr}$. These noise levels would be lower than the 80 dBA $L_{eq\ 8\text{-}hr}$ FTA construction noise standard. Also, other off-site Project components (such as roadway construction) would be considerably further from noise-sensitive receivers and thus the associated noise levels would be lower than shown in Table 4.9-8.

Therefore, noise impacts from off-site construction activities would be less than significant. No noise mitigation is necessary.

Table 4.9-8. Off-Site Construction Noise Analysis Summary

Off-site Receptor Location	Distance from Construction Activity to Noise Receptor (feet)	Estimated Construction Noise Levels (dBA $L_{eq\ 8\text{-}hr}$)	Applicable Noise Standard[1]	Applicable Noise Standard Exceeded?
		Utilities Installation		
North of the Project	Nearest Construction Activity/ Receiver Distance (130)	68	80	No
	Typical Construction Activity/ Receiver Distance (2,000)	46	80	No

Source: Appendix H-2.

Note: dBA = A-weighted decibel; $L_{eq\ 8\text{-}hr}$ = equivalent continuous sound level (time-averaged sound level).

1 Applicable noise standard per Federal Transit Administration guidance, as discussed in Section 4.9.2.

3 Based upon the fundamentals of sound and noise barrier mechanics, a solid barrier that just barely breaks the direct path between source and receiver will achieve a noise reduction of approximately 5 decibels (Caltrans 2013). The existing 6-foot high residential property line barriers at the residential uses to the north are anticipated to break the line of sight between the residences and the off-site construction work.

Construction Noise – Project-Related Construction Vehicles (On-Road)

Based upon the construction scenario assumptions from Table 4.2-5 (in the Air Quality section), during construction the highest average daily number of one-way worker trips would be 328 (i.e., 164 round trips), occurring during the building construction phase. The highest average daily number of vendor one-way trips would be 128 (64 round trips), also occurring during building construction; and there would be no haul truck trips. Project-related trucks would be restricted to the City-authorized truck routes, and (like the project sites) would be relatively far from residential or other noise-sensitive areas. It is anticipated that most of the construction-related trips in the Project vicinity would occur on U.S. Highway 395. Based upon Table 3.15-4 of the Hesperia General Plan Update's Draft EIR transportation section (City of Hesperia 2010), U.S. Highway 395 has an average daily traffic volume of 19,446. The incremental increase in local traffic from the project would be approximately 2%. Based upon the fundamentals of acoustics, a doubling (a 100% increase) would be needed to result in a 3 dB increase in noise levels, which is the level corresponding to an audible change to the typical human listener (Caltrans 2013a). The resultant traffic noise increase would be much less than 1 dB, and thus would not result in an audible change on an hourly or daily basis.

Therefore, noise related to project-related construction vehicles on local roadways would not result in new significant impacts. No additional mitigation measures are required.

Long-Term Operational Impacts

Traffic Noise

Less-than-Significant Impact. The Project has the potential to result in significant noise impacts from Project-related traffic at nearby noise-sensitive land uses. Based on information consistent with the assumptions in the EIR's transportation analysis (Appendix I), the Project would generate 1,281 daily trips. During the AM peak-hour, implementation of the Project would result in a total of 84 passenger vehicles and 24 trucks. During the PM peak-hour, implementation of the Project would result in a total of 74 passenger vehicles and 21 trucks. All truck trips would access and exit the Project site to the west, via Poplar Street to U.S. Highway 395, where the majority of the truck trips would enter and leave the Project area from and to the south via U.S. Highway 395 and the I-15 on- and off-ramps. No trucks would utilize Main Street, north of the Project site, or other local streets not designated as truck routes.

Potential noise effects from vehicular traffic were assessed using the Federal Highway Administration's Traffic Noise Model Version 2.5 (FHWA 2004). Information used in the model included the Existing, Existing plus Project, Year 2040, and Year 2040 plus Project traffic volumes. Noise levels were modeled at representative noise-sensitive receivers (i.e., the nearest residences and transient residences (i.e., motels) located to the north of the Project site) as well as at adjacent commercial and industrial uses for informational purposes. The receivers were modeled to be 5 feet above the local ground elevation. The measured and modeled receiver locations are shown in Figure 4.9-1.

The information provided from this modeling, along with the results from ambient noise survey measurements, was compared to the noise impact significance criteria to assess whether Project-related traffic noise would cause a significant impact and, if so, where these impacts would occur. The results of the comparisons for the off-site noise-sensitive land uses are presented in Table 4.9-9. The input and output files for the Traffic Noise Model are provided in Appendix H-3.

Table 4.9-9. Summary of Off-Site Existing and Future (Year 2040) Traffic Noise Levels (dBA CNEL)

Modeled Receptor	Existing	Existing plus Project	Future (Year 2040)	Future (Year 2040) plus Project	Maximum Project-Related Noise Level Increase (dB)	Applicable Noise Standard[1]	Applicable Noise Standard Exceeded?
ST1[2] North of Project site, adjacent to Main Street, south of Willow Creeks Estates Mobile Home Park (outside of existing property boundary wall)	71	71	73	73	0	N/A	N/A
ST2 North of Project site, adjacent to Main Street and West Main Villas housing tract	62	62	64	64	0	70	No
ST3 North–northwest of Project site, adjacent to Main Street and Motel 6	66	66	68	68	0	70	No
M1 East of Project site, adjacent to Cataba Road and nearest adjacent commercial use	73	73	73	73	0	77.5	No
M2 South of Project site, adjacent to Poplar Street and nearest adjacent commercial use	60	62	69	69	2	77.5	No
M3 South of Project site, adjacent to U.S. Highway 395 and nearest industrial use along U.S. Highway 395	72	73	76	76	1	80	No

Table 4.9-9. Summary of Off-Site Existing and Future (Year 2040) Traffic Noise Levels (dBA CNEL)

Modeled Receptor	Existing	Existing plus Project	Future (Year 2040)	Future (Year 2040) plus Project	Maximum Project-Related Noise Level Increase (dB)	Applicable Noise Standard[1]	Applicable Noise Standard Exceeded?
M4 North of Project site, at Willow Creeks Estates Mobile Home Park (north of existing property boundary wall)	63	63	65	65	0	70	No

Source: Appendix H-3.
Note: dBA = A-weighted decibel; CNEL = Community Noise Equivalent Level; dB = decibel; N/A = not applicable.
Traffic noise levels are rounded to the nearest whole numbers.
Modeled CNEL traffic noise levels shown represent the provided peak-traffic hour volumes plus 2 dB, consistent with the results of the long-term noise measurement data LT-1, shown in Table 4.9-3.

1 Applicable noise standard per City of Hesperia General Plan Noise Element compatibility standards, shown in Table 4.9-4.

2 Measurement location ST1 was conducted on the south side (i.e., the side with a direct exposure to Main Street) of the existing residential boundary wall surrounding the mobile home park, because access to the property could not be obtained. Noise levels on the north side of the approximately 6-foot-high wall would be lower. Modeled receiver M4 represents the mobile home park residents located on the north side of the wall.

As Table 4.9-9 shows, the Project would increase the traffic noise levels along the nearby arterial roadways by 0 to 2 dB (when rounded to whole numbers). A change (either an increase or a decrease) of 2 dB or less is not a readily audible change in the context of community noise (i.e., outside of a controlled test environment). Furthermore, as shown in Table 4.9-9, the Project would not cause noise levels to exceed applicable City noise standards. The Project is not anticipated to result in significant traffic noise increases or cause an exceedance of applicable traffic noise standards. Therefore, impacts associated with off-site traffic noise would be less than significant.

On-Site Operational Noise

Less-than-Significant Impact. The implementation of the Project would result in changes to existing noise levels on the Project site by developing new stationary sources of noise, including introduction of outdoor HVAC equipment, and vehicle parking lot and truck loading dock activities. These sources may affect noise-sensitive vicinity land uses off the Project site. The following analysis evaluates noise from exterior mechanical equipment and activities associated with vehicle parking lots and truck loading docks. The analysis is based on in-house spreadsheets, which incorporate standard industry calculations for the sum of noise from multiple sources, outdoor attenuation with distance from the noise source(s), and attenuation from barrier placement between source(s) and receiver(s), as provided in Appendix H-4.

Outdoor Mechanical Equipment

The proposed warehouse space overall would not be served by heating or air conditioning equipment. However, the floor plan includes an office space at each corner of the building. Office space within the building would total approximately 20,000 square feet. Based on information provided by the Project Applicant, it is anticipated that the office space would be equipped with single-packaged rooftop HVAC units with air-handling capacity of 20 to 60 nominal tons. For the analysis of noise from HVAC equipment operation, a Carrier WeatherMaker A HVAC unit was used as a reference.

Noise level data provided by the manufacturer was used to determine the noise levels which would be generated by the HVAC equipment. The Carrier WeatherMaker A package HVAC unit has a sound level rating of 77 dBA at 10 feet (Carrier Corporation 2019). Based on the warehouse/office roof design provided, there would be a 6-foot-high parapet extending along the perimeter of the office roof.

The combined noise levels from the HVAC equipment at the Project property lines, the nearest adjacent land uses, and the nearest residential uses were calculated and are presented in Table 4.9-10. As shown, the maximum hourly noise level (assuming the equipment would run continuously) for the HVAC equipment operating at each examined location would range from approximately 26 dBA L_{eq} at the residential uses to the north to 43 dBA L_{eq} at the Project's western, and eastern property boundaries. These levels are less than the City's Municipal Code noise standards and are well below the measured ambient noise levels in the Project area. The results of the mechanical equipment operations noise analysis indicate that the Project would comply with the City of Hesperia Municipal Code noise ordinance. Mechanical equipment operation would result in noise at the Project site property boundaries/nearest noise-sensitive receiver boundaries that are less than the applicable noise standards and are thus less than significant.

Table 4.9-10. Mechanical Equipment (HVAC) Noise

Equipment	Noise Level at Specified Location		Applicable Noise Standard[1] (dBA L_{eq})	Applicable Noise Standard Exceeded?
	Location	Average Noise Level (dBA L_{eq})		
HVAC	Northern Property Line	40	70	No
HVAC	Eastern Property Line	43	70	No
HVAC	Western Property Line	43	70	No
HVAC	Southern Property Line	41	70	No
HVAC	Commercial Use to the East	30	65	No
HVAC	Commercial Use to the South	37	65	No
HVAC	Industrial use to the South	32	70	No
HVAC	Commercial Use to North	27	65	No
HVAC	Residential Uses to the North	26	55	No

Source: Appendix H-4.
Notes: HVAC = heating, ventilation, and air conditioning; dBA = A-weighted decibel; L_{eq} = equivalent continuous sound level (time-averaged sound level).
[1] Applicable noise standard per City of Hesperia Municipal Code Section 16.20.125, as described in Section 4.9.2.

Parking Lot Activity

A comprehensive study of noise levels associated with surface parking lots was published in the Journal of Environmental Engineering and Landscape Management (Baltrėnas et al. 2004). The study found that average noise levels during the peak period of use of the parking lot (generally in the morning with arrival of commuters, and in the evening with the departure of commuters), was 47 dBA at 1 meter (3.28 feet) from the outside

boundary of the parking lot. The parking area would function as a point source for noise, which means that noise would attenuate at a rate of 6 dB with each doubling of distance. The nearest employee parking lot to the noise-sensitive receivers (residences to the north) is proposed to be situated on the east and west sides of the building, approximately 3,650 feet from the residential property boundary. At a distance of 3,650 feet, parking lot noise levels would be approximately zero (0) dBA and would not be audible.

Truck Loading Dock / Truck Yard Activity

The parking lot study (Baltrënas et al. 2004) also examined noise levels associated with cargo truck delivery activity. The study concluded that average noise levels from truck loading/unloading areas was 96 dBA at 1 meter (3.28 feet) from the boundary of the truck activity area. Truck loading docks would be located not closer than 3,600 feet from the nearest noise-sensitive receivers (residences to the north). Using the outdoor attenuation rate of 6 dBA with each doubling of distance, truck loading activity at residences to the north would produce noise levels of approximately 35 dBA L_{eq}. Thus, the loading dock noise at the nearest residences would be well below the City of Hesperia's residential exposure limits of 60 dBA L_{eq} daytime (7:00 a.m. to 10:00 p.m.) and 55 dBA L_{eq} nighttime (10:00 p.m. to 7:00 a.m.).

In summary, the Project would have operational noise levels less than the applicable noise standards. Consequently, operational noise impacts would be less than significant.

Threshold B: Would the Project result in generation of excessive groundborne vibration or groundborne noise levels?

Less-than-Significant Impact. During operation, no major sources of groundborne vibration are anticipated. Construction activities that might expose persons to excessive groundborne vibration or groundborne noise could cause a potentially significant impact. Groundborne vibration information related to construction activities (including demolition) has been collected by Caltrans (Caltrans 2020). Information from Caltrans indicates that continuous vibrations with a PPV of approximately 0.1 ips begin to annoy people. The heavier pieces of construction equipment, such as bulldozers, would have PPVs of approximately 0.089 ips or less at a distance of 25 feet (FTA 2018). Groundborne vibration is typically attenuated over short distances. At the distance from the nearest vibration-sensitive receivers (residences located to the north) to where construction activity would be occurring on the Project site (approximately 3,500 feet), and with the anticipated construction equipment, the PPV vibration level would be approximately 0.0001 ips. At the closest sensitive receptors, vibration levels would be well below the vibration threshold of potential annoyance of 0.1 ips; therefore, impacts associated with vibration-generated annoyance would be less than significant.

The major concern with regards to construction vibration is related to building damage, which typically occurs at vibration levels of 0.5 ips or greater for buildings of reinforced-concrete, steel, or timber construction. As discussed above, the highest anticipated vibration levels at vibration-sensitive uses from with on-site Project construction would be approximately 0.0001 ips, which would be well below the threshold of 0.5 ips for building damage. Therefore, impacts associated with vibration-produced damage would be less than significant.

Threshold C: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels.

No Impact. The Project site is not located within the vicinity of a private airstrip. Additionally, the closest public airport to the Project site is the Hesperia Airport, which is located approximately 5 miles southeast of the Project

site. According to the San Bernardino County Airport Land Use Commission, the Project is not located within the airport land use plan for this or other nearby airports (San Bernardino ALUC 1991). Therefore, no impacts associated with airport and aircraft noise would occur.

Threshold D: Would the Project result in cumulatively considerable noise impacts?

Less-than-Significant Impact. The cumulative context for traffic noise is the traffic volume increases on roadways within Hesperia as a result of buildout of the City's 2010 General Plan and the anticipated increase in traffic volumes along these roadways. The Project transportation analysis considered the addition of traffic trips from cumulative projects as identified by the City.

Non-transportation noise sources (e.g., Project operation) and construction noise impacts are typically project-specific and highly localized (i.e., these do not generally affect the community noise level at distances beyond several hundred feet). Construction activities associated with proposed or future development within the area would contribute to cumulative noise levels, but in a geographically limited and temporary manner. As other development occurs in the area, noise from different types of uses (e.g., traffic, aircraft, and fixed noise sources) would continue to combine, albeit on a localized basis, to cause increases in overall background noise conditions within the area. As a result, such sources do not significantly contribute to cumulative noise impacts at distant locations and are not evaluated on a cumulative level.

The analysis of off-site Project-related traffic noise levels included an evaluation of traffic volumes and resulting roadway traffic noise levels from cumulative (i.e., Year 2040) projects. Table 4.9-9 shows that the maximum noise level increase for the Year 2040 versus Year 2040 plus Project scenario would be 2 dB or less at every studied road segment. A change (either an increase or a decrease) of 2 dB or less is not a readily audible change in the context of community noise (i.e., outside of a controlled test environment). Furthermore, as shown in Table 4.9-9, the Project would not cause noise levels to exceed applicable City noise standards. Because the existing and planned future land uses along this roadway are commercial and industrial and thus not noise-sensitive, noise impacts would be less than significant. Traffic noise would not be cumulatively considerable.

4.9.5 Mitigation Measures and Level of Significance After Mitigation

Threshold A: Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Short-Term Construction Impacts

The Project would result in less-than-significant impacts with regard to short-term construction noise. No mitigation is required.

Long-Term Operational Impacts

The Project would result in less-than-significant on-site operational impacts as well as less-than-significant off-site operational traffic noise impacts. As such, no mitigation is required.

Threshold B: Would the Project result in generation of excessive groundborne vibration or groundborne noise levels?

The Project would result in less-than-significant impacts with regard to groundborne vibration and groundborne noise levels. No mitigation is required.

Threshold C: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels.

The Project would result in no impact with regard to excessive airport noise levels. No mitigation is required.

Threshold D: Would the Project result in cumulatively considerable noise impacts?

The Project would not result in cumulatively considerable noise or vibration impacts. As such, no mitigation is required.

4.9.6 References Cited

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4.10 Transportation

This section describes the existing transportation conditions of the Project site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, cumulative impacts, and identifies mitigation measures related to implementation of the proposed Project. This section analyzes the potential impacts of the Project based on the California Environmental Quality Act (CEQA) Guidelines Section 15064.3(b), which focuses on newly adopted criteria (vehicle miles traveled [VMT]) for determining the significance of transportation impacts. Pursuant to Senate Bill (SB) 743, the focus of transportation analysis changed from level of service (LOS) or vehicle delay to VMT. The related updates to the CEQA Guidelines required under SB 743 were approved on December 28, 2018. This new methodology was required to be used statewide beginning July 1, 2020.

In addition to the documents incorporated by reference (see Section 2.7 of Chapter 2, Introduction, of this Environmental Impact Report [EIR]), the following analysis is based, in part, on the following source, which is found in Appendix I of this Draft EIR:

- Poplar 18 Transportation Impact Analysis prepared by Dudek in October 2022 (Appendix I)

4.10.1 Relevant Plans, Policies, and Ordinances

The following section describes state and local regulations, plans, policies, and ordinances relevant to the study area. There are no transportation-specific federal regulations applicable to the Project.

State

Senate Bill 743

On September 27, 2013, Governor Brown signed SB 743, which became effective on January 1, 2014. SB 743 streamlines the review under the CEQA process for several categories of development projects, including the development of infill projects in transit priority areas to balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas (GHG) emissions. SB 743 adds Chapter 2.7: Modernization of Transportation Analysis for Transit Oriented Infill Projects to the CEQA Statute (California Public Resources Code Section 21099). Section 21099(d)(1) provides that aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment. In addition, SB 743 mandates that alternative metric(s) for determining impacts relative to transportation shall be developed to replace the use of LOS in CEQA documents.

In the past, environmental review of transportation impacts focused on the delay that vehicles experience at intersections and on roadway segments, often measured using LOS. Mitigation for impacts on vehicular delay often involves increasing capacity such as widening a roadway or the size of an intersection, which in turn encourages more vehicular travel and greater pollutant emissions. Additionally, improvements to increase vehicular capacity can often discourage alternative forms of transportation such as biking and walking. SB 743 directed the California Governor's Office of Planning and Research (OPR) to develop an alternative metric(s) for analyzing transportation impacts in CEQA documents. The alternative shall promote the state's goals of reducing GHG emissions and traffic-related air pollution, promote the development of multimodal transportation system, and provide clean, efficient access to destinations.

Pursuant to SB 743, OPR released the draft revised CEQA Guidelines in November 2017, recommending the use of VMT for analyzing transportation impacts. Additionally, OPR released Updates to Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory) to provide guidance on VMT analysis. In this Technical Advisory, OPR provides its recommendations to assist lead agencies in screening out projects from VMT analysis and selecting a significance threshold that may be appropriate for their jurisdictions. While OPR's Technical Advisory is not binding on public agencies, CEQA allows lead agencies to "consider thresholds of significance … recommended by other public agencies, provided the decision to adopt those thresholds is supported by substantial evidence" (14 CCR 15064.7[c]).

In December 2018, the CEQA Guidelines were updated to add the new Section 15064.3, Determining the Significance of Transportation Impacts, that describes specific considerations for evaluating a project's transportation impacts using the VMT methodology.

CEQA Guidelines Section 15064.3(b) is divided into four subdivisions as follows:

1. **Land Use Projects.** Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.
2. **Transportation Projects.** Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a Regional Transportation Plan (RTP) EIR, a lead agency may tier from that analysis as provided in Section 15152.
3. **Qualitative Analysis.** If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.
4. **Methodology.** A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project.

OPR's regulatory text indicates that the guidelines must be implemented statewide by July 1, 2020. However, the OPR Technical Advisory allows local agencies to retain their congestion-based LOS standards in general plans and for project planning purposes. This EIR relies on VMT as the basis for evaluating transportation impacts under CEQA, as detailed in Appendix I, and the Project's LOS effects have been documented in the Transportation Impact Analysis (TIA) prepared for the proposed Project and provided to the City.

Sustainable Communities Strategies: Senate Bill 375

The Sustainable Communities and Climate Protection Act of 2008 (Sustainable Communities Act, SB 375, Chapter 728, Statutes of 2008) supports the state's climate action goals to reduce GHG emissions through coordinated transportation and land use planning with the goal of more sustainable communities. Under the Sustainable Communities Act, the California Air Resources Board (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 (MPOs). CARB will periodically review and update the targets, as needed.

Each of California's MPOs must prepare a Sustainable Communities Strategy (SCS) as an integral part of its 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 to meet the targets. The alternative planning strategy is not a part of the RTP. The Project is within the Southern California Association of Governments (SCAG) MPO, which has adopted Connect SoCal (2020–2045 RTP/SCS) as their SCS, as discussed below.

The Sustainable Communities Act also establishes incentives to encourage local governments and developers to implement the SCS or the alternative planning strategy. Developers can get relief from certain CEQA requirements if their new residential and mixed-use projects are consistent with a region's SCS (or alternative planning strategy) that meets the targets (see California Public Resources Code Sections 21155, 21155.1, 21155.2, 21159.28).

California Department of Transportation

As the owner and operator of the State Highway System, the California Department of Transportation (Caltrans) implements established state planning priorities in all functional plans, programs, and activities. Caltrans has the responsibility to coordinate and consult with local jurisdictions when proposed local land use planning and development may impact state highway facilities. To comply with SB 743 implementation, the Caltrans Transportation Impact Study Guide (Caltrans 2020a), replaced the Guide for the Preparation of Traffic Impact Studies (Caltrans 2002). Per the 2020 Transportation Impact Study Guide, Caltrans' primary review focus is VMT, replacing LOS as the metric used in CEQA transportation analyses. Caltrans recommends use of OPR's recommended thresholds and guidance on methods of VMT assessment found in OPR's Technical Advisory (OPR 2018). In addition to VMT, Caltrans has developed an Interim Local Development and Intergovernmental Review Safety Review Practitioners Guidance (December 2020) which may request a targeted operational and safety analysis to address a specific geometric or operational issue related to the State Highway System and connections with the State Highway System (Caltrans 2020b). To comply with this requirement, an assessment of queuing at I-15 off-ramps and U.S. Highway 395 (US Hwy 395) intersections in the Project study area has been included in the EIR.

Regional

Southern California Association of Governments RTP/SCS

SCAG's 2020–2045 RTP/SCS (also known as the Connect SoCal Plan) was made available in March 2020 and presents the land use and transportation vision for the region through the year 2045, providing a long-term investment framework for addressing the region's challenges (SCAG 2020). Connect SoCal is a long-range visioning

plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The SCAG RTP/SCS lays the framework for sustainable development in the SCAG region, which includes the City of Hesperia. Priorities of the plan include increasing investment in transit and investing in transportation strategies and projects that will result in improved air quality, public health, and reduced GHG emissions. The Proposed Final Connect SoCal Plan was adopted by SCAG's Regional Council on September 3, 2020.

Regional Funding Mechanisms – Measure "I" Funds

In 2004, the voters of San Bernardino County approved the 30-year extension of Measure "I," a one-half of one percent sales tax on retail transactions, through the year 2040, for transportation projects including, but not limited to, infrastructure improvements, commuter rail, public transit, and other identified improvements. The Measure "I" extension requires that a regional traffic impact fee be created to ensure development is paying its fair share. A regional Nexus study was prepared by San Bernardino County Transportation Authority (SBCTA) and concluded that each jurisdiction should include a regional fee component in their local programs to meet the Measure "I" requirement. The regional component assigns specific facilities and cost sharing formulas to each jurisdiction and was most recently updated in September 2017. Revenues collected through these programs are used in tandem with Measure "I" funds to deliver projects identified in the Nexus Study.

While Measure "I" is a self-executing sales tax administered by SBCTA, the funds raised through Measure "I" have funded in the past, and will continue to fund, new transportation facilities in San Bernardino County, including within the City of Hesperia.

Local

City of Hesperia General Plan Circulation Element

The General Plan Circulation Element outlines the City's plans to provide a transportation network system that allows the movement of people, goods, and services easily and safely throughout the city (City of Hesperia 2010). It also outlines the city's goals and implementation policies to provide a safe and efficient transportation system strategy, including non-motorized modes such as bicycle, pedestrian, and transit modes. It also designates the Specific Plan to cover all freeway frontages within the City as well as the commercial and industrial areas parallel to the freeway corridor. The goals, policies, and development standards applicable to the Project are also found in the Main Street and Freeway Corridor Specific Plan (MSFCSP).

Goal CI-1. Develop a safe, efficient, convenient, and attractive transportation system throughout the community, providing links within the City and with neighboring regions, and accommodating automobile, truck, pedestrian, recreational, equestrian, rail, air, and public transit needs which will meet current and future development requirements within the planning area.

Policy CI-1.10. Ensure that new development provides for adequate road improvements to serve internal circulation needs, as well as to mitigate impacts of increased traffic on the existing road system.

Goal CI-2. Develop and implement a City-wide Congestion Management Plan

Policy CI-2.5. Maintain the City's development impact fee program for future development which includes improvements to roadways to mitigate of the impact of the new development.

Policy CI-2.7. Review and monitor street improvements to ensure that improvements optimize traffic flow efficiency.

Policy CI-2.8. Reduce trip generation through development and implementation of Transportation Demand Management Programs.

Goal CI-4. Provide a circulation system that facilitates the movement of goods and services throughout the City while protecting residences, sensitive land uses, and pedestrians from activities along rail and truck corridors

Policy CI-4.2. Locate new development and their access points in such a way that traffic is not encouraged to utilize local residential streets for access to the development and its parking.

Policy CI-4.3. Discourage non-local traffic from using neighborhood streets through project design and traffic control measures.

Policy CI-4.4. Develop an efficient and effective truck route system that is compatible with land uses and street improvement standards, and provide monitoring to ensure compatibility.

Main Street and Freeway Corridor Specific Plan

The MSFCSP establishes a framework for the Main Street and freeway corridors and is intended to facilitate and support development and improvements along these corridors. The regulations of the MSFCSP replace those set forth in the planning and zoning provisions of the City's Development Code, and any other applicable ordinances. The CIBP zone falls within three land use districts, Main Street/I-15 District, US Hwy 395/I-15 District, and Industrial District. The Main Street/I-15 and US Hwy 395/I-15 Districts provide enhanced vehicular, truck, and rail accessibility by taking advantage of their location along the I-15 corridor with its connection to US Hwy 395, and its linkage to the Southern California Logistics Airport. The Project site falls within the Main Street/I-15 District and the US Hwy 395/I-15 District. The MSFCSP has following goals related to circulation (City of Hesperia 2021):

Goal C-1. Increase freeway access to Interstate-15, for purposes of conveying regional traffic into and out of the community.

Goal C-2. Explore and provide the highest level of access for all modes of transportation and maintains efficient circulation in the Specific Plan area throughout the day.

Policy C-2.1. Preserve the traffic-carrying capacity of arterial streets by implementing policies that include the promotion of shared access locations among multiple properties or establishments, reciprocal access agreements, shared parking, and the use of side streets to provide access to parcels, if possible.

Policy C-2.2. Increase trip reduction efforts.

Policy C-2.3. Provide truck route designations for specific facilities in the City.

Policy C-2.4. Reduce the number of median openings to only those intersections that are signalized.

Policy C-2.6. Encourage present and future public transit use.

Policy C-2.7. Identify activity centers that would benefit from increased transit access and work with Victor Valley Transit Authority (VVTA) to enhance service to these centers.

Policy C-2.8. Facilitate bicycle use and circulation within the Specific Plan area.

Policy C-2.9. Promote a safe and attractive pedestrian environment to encourage pedestrian traffic within and across the districts, especially in the City Center District, where wider sidewalks for pedestrians are desirable.

City of Hesperia Development Impact Fee Program

The City of Hesperia has created its own local development impact fee (DIF) program to impose and collect fees from new residential, commercial, and industrial development for the purpose of funding roadways and intersections necessary to accommodate City growth as identified in the City's General Plan Circulation Element. The City's DIF includes a Regional Circulation System Fee to comply with Measure "I" and a Local Circulation System Fee to address transportation improvements which are locally noteworthy. The City of Hesperia DIF facilities list has been provided by City staff.

The Project applicant will be subject to the City's DIF fee program and will pay the requisite City DIF fees at the rates then in effect. The Project applicant's payment of the requisite DIF fees at the rates then in effect pursuant to the DIF Program will reduce its deficiencies to DIF-funded facilities. After the City's DIF fees are collected, they are placed in a separate interest-bearing account pursuant to the requirements of Government Code Section 66000 et seq. The timing to use the DIF fees is established through periodic capital improvement programs which are overseen by the City's Public Works Department.

Fair-Share Contribution

Project improvements may include a combination of fee payments to established programs (e.g., DIF), construction of specific improvements, payment of a fair share contribution toward future improvements or a combination of these approaches. Improvements constructed by development may be eligible for a fee credit or reimbursement through the program where appropriate (to be determined at the City of Hesperia's discretion).

When off-site improvements are identified with a minor share of responsibility assigned to proposed development, the approving jurisdiction may elect to collect a fair-share contribution or require the development to construct improvements. Improvements included in a defined program and constructed by development may be eligible for a fee credit or reimbursement through the program where appropriate.

4.10.2 Existing Conditions

This section provides a summary of the existing circulation network, bicycle and pedestrian facilities, transit service, and truck routes in the study area. It also provides a summary of the baseline VMT for projects in the City of Hesperia using SBCTA's San Bernardino Transportation Analysis Model (SBTAM).

Existing Circulation Network

The Project site is located between I-15 and US Hwy 395, south of Main Street and north of Poplar Street, on the western side of the City. The study area includes 12 existing and future intersections, as shown in Figure 4.10-1, Project Site Location and Traffic Study Area. Regional access to the Project site is available from the I-15/Joshua

Street interchange (#8 and #9) to the south of the site. Local access to the Project site is proposed along Poplar Street, Lassen Road, and Mesa Linda Street. Four Project access driveways would be provided, as shown in Figure 4.10-1, Project Site Location and Traffic Study Area. Two driveways are proposed on the western side of the site off Lassen Road and two driveways are proposed on the easternmost side of the Project site along Mesa Linda Street. Paved passenger vehicle parking areas would be provided along the east and west side of the building, while tractor-trailer stalls and loading docks would be provided on the north side of the building.

Each roadway within the City is designated with a classification depending on its role in the overall circulation network and its relationship to surrounding uses. The City's Circulation Element consists of 10 street classifications. Within the study area, US Hwy 395 is designated as a Special Street, which represents streets with specialized hybrid cross-sections designed for unique road situations. US Hwy 395 is used to convey local traffic to I-15 and provide access to cities in the region, including Adelanto and Phelan. Main Street, west of I-15 and Phelan Road are Major Arterials. Mesa Linda Street, south of Main Street, and Sultana Street, west of Mesa Linda Street, are Arterials. Poplar Street, between US Hwy 395 and Lassen Road is a Secondary Arterial. East of Lassen Road, Poplar Street is a Major Arterial. Joshua Street, within the city limits, is a Secondary Arterial. Cataba Road is not designated with a specific roadway classification in the Circulation Element (City of Hesperia 2008).

Bicycle and Pedestrian Facilities

The City of Hesperia's non-motorized transportation plan is shown in Figure 4.10-2, City of Hesperia Non-Motorized Transportation Plan. There are no existing bicycle facilities within the study area. A Class I bike path (dedicated, separated path) is proposed along Main Street, east of I-15, and a Class II bike route (on-street striped bicycle lane) is proposed along Mariposa Avenue, between Mojave Street and the southern City limits, and on Joshua Street, east of Mariposa Street. A Class III bike facility (signed only bike route) is also proposed along Joshua Street, between US Hwy 395 and Mariposa Street (City of Hesperia 2018). The Project site is in a less developed area of the City, with limited pedestrian facilities provided. Where new development has occurred, sidewalks are typically provided along site frontages. Some pedestrian facilities, including curbs and sidewalks, are present along Poplar Street, Mesa Linda Street, and Lassen Road near existing commercial, industrial, and manufacturing facilities located to the south and east of the Project site.

Transit Service

Transit service in the City of Hesperia is primarily served by VVTA, which provides regional and local services throughout Victor Valley. Regionally, the City is served by passenger rail services offered by the National Railroad Passenger Corporation (Amtrak). Victor Valley and its neighboring communities are also expected to benefit from the development of Brightline West, a high-speed passenger rail system that will connect Los Angeles with Las Vegas and will include a stop in Victor Valley (Brightline West 2021). A brief description of each service provider is provided below.

Victor Valley Transit Authority

VVTA provides local bus service for the communities of Adelanto, Apple Valley, Hesperia, Victorville, and unincorporated areas of San Bernardino County. VVTA operates five bus routes in Hesperia, providing bus connections between shopping centers and the Mall of Victor Valley, hospitals, schools and colleges, and residential areas. VVTA also offers paratransit services for persons with special needs on any paved street within Hesperia as long as it is within their service boundaries. The VVTA paratransit services do not travel a fixed route and provide a flexible alternative to the fixed bus routes (City of Hesperia 2010b).

Routes 21P/W, 25, 64, and 68, shown in Figure 4.10-3, Existing Transit Routes, are the closest bus routes to the Project site, with bus stops on Main Street, Escondido Avenue, and Live Oak Street (VVTA 2021), as described below.

- **Route 21P/W** serves Victor Valley, Pinon Hills, and Wrightwood. The 21W route provides service between the Wrightwood Community Center and the Victor Valley Mall, and the 21P route provides service between the Pinon Hill Community Center and Cataba Road/Main Street. The Cataba Road and Main Street bus stop would serve as the nearest bus stop to the Project site, located approximately ¼ mile to the northwest of the Project site. Route 21P/W provides 1.25-hour weekday peak service headways (VVTA 2021).
- **Route 25** serves Escondido Avenue, Ranchero Road, Oak Hills High School, Mariposa Road, and San Joaquin Valley College. The Cataba Road and Main Street bus stop would serve as the nearest bus stop to the Project site, located approximately ¼ mile to the northwest of the Project site. Route 25 provides 2-hour weekday peak service headways (VVTA 2021).
- **Route 64** serves High County, North Star Ranch, Hesperia High School, Hesperia Junior High School, Hesperia Civic Center, Mojave High School, Sultana High School, and Hesperia Transfer Point. The Cataba Road and Main Street bus stop would serve as the nearest bus stop to the Project site, located approximately ¼ mile to the northwest of the Project site. Route 64 provides 45 minutes to 1 hour and 15-minute weekday peak service headways (VVTA 2021).
- **Route 68** serves Hesperia Transfer Point, Hesperia Civic Center, Hesperia High School, Super Target, and the Mall of Victor Valley. The Cataba Road and Main Street bus stop would serve as the nearest bus stop to the Project site, located approximately ¼ mile to the northwest of the Project site. Route 68 provides 1-hour weekday peak service headways (VVTA 2021).

Amtrak

Amtrak is a national rail operator, with 21,000 route miles in 46 states, the District of Columbia, and three Canadian Provinces. Amtrak operates more than 300 trains each day at speeds up to 150 mph to more than 500 destinations. Amtrak is the chosen operator for state-supported corridor services in 17 states and four commuter rail agencies (Amtrak 2021). The closest Amtrak station to the Project site is the Victorville Amtrak Station, which is located approximately 16 miles to the north. The Victorville Amtrak Station is part of the Southwest Chief Route, an east–west rail line extending from Los Angeles, California, to Chicago, Illinois (Amtrak 2021b).

Brightline West

As noted above, Brightline West is a proposed high-speed passenger rail system that would be designed to connect the extended communities of Los Angeles, Palmdale, Cajon Pass, Victor Valley with Las Vegas through 200 to 300 miles of rail. Once developed, an estimated 50 million one-way trips are expected to be made between California and Las Vegas. Moreover, vehicle trips are expected to be reduced by more than 3 million vehicles annually once in operation (Brightline 2021).

Truck Routes

The City has adopted enforceable truck routes as shown in Figure 4.10-4, Local Truck Routes. Within the study area, designated truck routes include the entire length of I-15 and US Hwy 395 within the City limits, Phelan Road, east of US Hwy 395, and Joshua Street, between Caliente Road and Mariposa Road. Main Street east of US Hwy 395 is no longer designated as a City truck route; therefore, all Project truck traffic traveling to and from I-15 will be routed through the Joshua Street interchange.

Baseline VMT

The SBTAM travel forecasting model was used to measure VMT performance. The SBTAM is a useful tool to estimate VMT as it considers interaction between different land uses based on socio-economic data such as population, households, and employment. For land use projects such as the Project, model-based approach (tour- or trip- based travel demand models) offer the best methods for assessing VMT and for comparing those assessments to VMT thresholds. The origin–destination (OD) VMT per service population was used as it provides the most representative and conservative analysis for the proposed Project. Table 4.10-1 presents the County's baseline for OD VMT per service population (based on the travel demand model). As shown in Table 4.10-1, the County's baseline for OD VMT per service population is 28.9.

Table 4.10-1. Baseline Vehicle Miles Traveled for County of San Bernardino

VMT Metric	2016 Countywide Average
OD VMT per Service Population	28.9

Source: Appendix I
Note: VMT = vehicle miles traveled; OD = origin–destination

4.10.3 Thresholds of Significance

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

A. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
B. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).
C. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
D. Result in inadequate emergency access.
E. Result in cumulatively considerable transportation impacts.

Methodology

This section describes the methodology used to analyze the potential impacts of the Project per each CEQA transportation threshold.

Program, Plan, Ordinance and Policy

The programs, plans, ordinances, and policies listed in Section 4.10.1, Relevant Plans, Policies, and Ordinances, were analyzed for their applicability to the proposed Project under Threshold A.

Vehicle Miles Traveled

The methodology contained in the City of Hesperia Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS) (City TIA Guidelines; City of Hesperia 2020) was used to analyze the Project under Threshold B. This includes the following general steps:

1. **VMT Screening & Qualitative Review:** The first step is to determine when a VMT analysis is required. Consistent with OPR's Technical Advisory, projects that meet certain screening thresholds based on their size, location and land use may be presumed to result in a less than significant transportation impact. For example, projects located within a Transit Priority Area or a low VMT generating traffic analysis zone (TAZ) (subject to additional secondary screening criteria) and absent substantial evidence to the contrary are anticipated to result in a less than significant impact and can be screened from further analysis.
2. **VMT Analysis Methodology:** If a project is not screened from requiring a project-level VMT analysis, the San Bernardino Transportation Analysis Model (SBTAM) model is used to estimate a project's VMT. This analysis includes the project-generated VMT and project effect on VMT estimates for the project TAZ.
3. **VMT Impact Thresholds:** The City uses VMT per service population for its impact threshold. A project would result in a significant impact if the baseline project-generated VMT per service population exceeds the San Bernardino County regional average baseline of 32.7% VMT per service population, or the cumulative project-generated VMT per service population exceeds the San Bernardino County regional average baseline of 32.7% VMT per service population.[1] The project's effect on VMT would be considered significant if it resulted in either of the following conditions to be satisfied:
   - The baseline link-level boundary (County of San Bernardino) VMT per service population increases under the plus project condition compared to the no project condition, or
   - The cumulative link-level boundary (County of San Bernardino) VMT per service population increases under the plus project condition compared to the no project condition.
4. **VMT Mitigation:** The types of mitigation that affect VMT are those that reduce the number of single-occupant vehicles generated by a project. Mitigation can be accomplished by altering the proposed land uses, by implementing transportation demand management (TDM) measures, or participating in a VMT fee program and/or VMT mitigation exchange/banking program.

Hazardous Features (Queuing and Safety Analysis)

Threshold C requires an evaluation of whether the Project substantially increases hazards due to a geometric design feature or incompatible use. Based on the City's General Plan consistency requirement and Caltrans Interim Local Development Intergovernmental Review Safety Review Practitioners Guide (December 2020), an operational analysis of Joshua Street at US Hwy 395 and at the I-15 ramps was conducted. For the off-ramp locations, a potentially significant safety impact is identified if the addition of project vehicle trips would result in an off-ramp queue that extends onto the freeway mainline. An off-ramp queue that extends onto the freeway mainline causes a potential safety concern if a significant speed differential exists between the off-ramp queue vehicles and the freeway mainline vehicles.

Emergency Access

The emergency access analysis was evaluated under Threshold C and evaluates whether the Project would comply with the City's emergency access and/or evacuation requirements including those imposed by the Fire Department.

[1] The City's TIA guidelines state the current County of San Bernardino VMT threshold is 32.7 VMT/Service Population. However, the screening tool identifies the County baseline as 33.2 VMT/Service Population and the project-specific travel demand model run identified the baseline as 28.9 (as presented in Table 4.10-1).

Project Trip Generation

Project trip generation estimates used in the Project's TIA are based on daily and AM and PM peak hour trip generation rates obtained from the Institute of Transportation Engineers (ITE) Trip Generation Manual 10th Edition (ITE 2017) and the Transportation Uniform Mitigation Fee (TUMF) High-Cube Warehouse Trip Generation Study (WSP, January 29, 2019). The layout of the building is most representative of a high-cube warehousing land use. However, as a specific end-user is not in place for the proposed Project, a 35% General Light Industrial and 65% High-Cube Warehousing split of the total building square footage, consistent with the splits used in the Hesperia Commerce Center II Traffic Impact Analysis (July 2, 2020), is applied to provide a conservative analysis. Therefore, the General Light Industrial trip rates were used to obtain trip generation estimates for 35% of the Project (totaling approximately 145,145 square feet) and the High-Cube Fulfillment Center Warehouse trip rates were used to obtain trip generation estimates for 65% of the Project (totaling approximately 269,555 square feet). Additionally, passenger car equivalent (PCE) factors were applied to the trip generation estimates to account for truck traffic. While trip generation is not used in the EIR for the purpose of determining impacts based on traffic delay or congestion, it is helpful in assessing issues such as access and traffic hazards. Trip generation also plays an important role in evaluating mobile emissions and noise impacts. The ITE-based daily trip estimates used in the Project's TIA are shown in Appendix I of this report.

4.10.4 Impacts Analysis

Threshold A: Would the Project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Less-than-Significant Impact. The Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, as discussed below. Impacts would be less than significant.

Regional Transportation Plan/Sustainable Communities Strategy

The Project would be consistent with the 2020–2045 RTP/SCS as analyzed in Table 4.9-1, Consistency with 2020–2045 RTP/SCS Goals, in Section 4.9, Land Use and Planning.

City of Hesperia General Plan Circulation Element and Main Street and Freeway Corridor Specific Plan

The Project would be consistent with the applicable goals and policies of the General Plan Circulation Element and the MSFCSP. The Project would not hinder the City's ability to develop a safe, efficient, convenient, and attractive transportation system throughout the community. The Project would include on and off-site roadway improvements to serve internal circulation needs, as well as to mitigate impacts of increased traffic on the existing road system. The Project would also participate in the City's development impact fee program. The Project is also located in an area that would not encourage traffic to utilize local residential street for access or parking needs. Consistent with the Main Street/I-15 and US Hwy 395/I-15 Districts, the Project location takes advantage of the location along the I-15 corridor with its connection to US Hwy 395.

Transit, Bicycle, and Pedestrian Facilities

The Project would not conflict with any plans or policies regarding existing or proposed bicycle and pedestrian facilities in the study area and would be consistent with the City of Hesperia General Plan Non-Motorized Transportation Plan (Figure 4.10-3). Currently, there are no sidewalks along the Project frontage and the intersections adjacent to the Project site do not currently have pedestrian crosswalks. As such, it is recommended that the Project applicant work in conjunction with the City to improve pedestrian facilities and connectivity along the Project frontage by constructing sidewalks and pedestrian crossings at intersections adjacent to the Project site.

VVTA Routes 25, 64, and 68 are the closest transit service routes to the Project and the closest bus stop is approximately ¼ mile to the northwest of the Project site at Cataba Road and Main Street. The VVTA Routes could potentially serve the Project in the future. Transit service is reviewed and updated by VVTA periodically to address ridership, budget, and community demand needs. Changes in land use can affect these periodic adjustments which may lead to either enhanced or reduced service where appropriate. As such, it is recommended that the Project applicant work in conjunction with VVTA to potentially provide bus service to the site.

Based on analysis provided above, the Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, and its impact to transportation plans and programs would be less than significant.

Threshold B: Would the Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less-than-Significant Impact. CEQA Guidelines Section 15064.3(b) focuses on VMT for determining the significance of transportation impacts. As shown in the following analysis, the Project is estimated to generate VMT per service population below the county regional average for this metric. The Project would be consistent with CEQA Guidelines Section 15064.3(b); therefore, impacts would be less than significant.

VMT Screening

The City TIA Guidelines (City of Hesperia 2020) provide details on appropriate screening thresholds that can be used to identify when a proposed land use project is anticipated to result in a less-than-significant impact without conducting a more detailed analysis. A land use project need only to meet one of the below screening thresholds to result in a less-than- significant impact.

- **TPA Screening:** Consistent with guidance identified in the Technical Advisory and City's Guidelines, projects located within a Transit Priority Area (TPA) (e.g., within ½ mile of an existing "major transit stop" or an existing stop along a "high-quality transit corridor") may be presumed to have a less than significant impact absent substantial evidence to the contrary. Based on the Screening Tool results presented in Appendix I, the Project site is not located within ½ mile of an existing major transit stop, or along a high-quality transit corridor.
- **Low VMT Area Screening:** As noted in the Technical Advisory and the City's Guidelines, residential and office projects that locate in areas with low VMT and that incorporate similar features (density, mix of uses, and transit accessibility) will tend to exhibit similarly low VMT. The Screening Tool uses the sub-regional SBTAM to measure VMT performance within individual TAZs within the region. The Project's physical location based on parcel number was input into the Screening Tool to determine the TAZ's VMT as compared to the County average. A parcel within the Project site was selected and the Screening Tool was run for VMT per service population (e.g., population and employment) measure of VMT. Based on the Screening Tool results (see Appendix I), the VMT per service population for the project TAZ is 95.1, and the County of San Bernardino

VMT per service population is 33.2.2 Therefore, the TAZ would be 186.4% above the County's threshold, which would not meet the required baseline screening criteria established in the City's guidelines. The Project would not qualify as residing in a low VMT area.

- **Project-Type Screening:** The City's Guidelines states that projects that are consistent with the current SCS or general plan, and that generate fewer than 110 daily vehicle trips be presumed to have a less-than-significant impact on VMT. The Project would generate 1,281 daily vehicle trips (1,634 passenger car equivalents) (see Appendix I for the detailed Project trip generation estimates) and would not be eligible to screen out based on project type screening.

As outlined above, the Project does not meet the screening criteria identified in the City's guidelines. Therefore, the Project's potential impact on VMT was evaluated and is summarized below.

VMT Analysis Approach

Project VMT has been calculated using the most current version of SBTAM. The OPR Technical Advisory (2018) provides technical assistance and recommendations for the analysis of VMT. The methodology recommendations for the VMT analysis include a discussion on vehicle types. An excerpt from the OPR Technical Advisory regarding vehicle types is below:

> **Vehicle Types.** Proposed Section 15064.3, subdivision (a), states, "For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project." Here, the term "automobile" refers to on-road passenger vehicles, specifically cars and light trucks. Heavy-duty truck VMT could be included for modeling convenience and ease of calculation (for example, where models or data provide combined auto and heavy truck VMT). For an apples-to-apples comparison, vehicle types considered should be consistent across project assessment, significance thresholds, and mitigation.

Per Section 21099 of the Public Resource Code, the selection of the VMT criteria for determining the significance of transportation impacts was intended to promote reductions of GHG emissions; to develop multimodal transportation networks; and to diversify land uses. As mentioned in the OPR's Technical Advisory, there are various legislative mandates and state policies that establish quantitative GHG emission reduction targets. Pursuant to Senate Bill 375, the CARB GHG emissions reduction targets for MPOs call for reductions in GHG emissions only from cars and light trucks. Therefore, a custom model run using the SBTAM was conducted to estimate VMT from automobiles (i.e., cars and light trucks) only, and the Project's VMT and the threshold VMT were extracted only for automobile VMT. This allows for an apples-to-apples comparison of VMT generated by vehicle types across project assessment, significance thresholds, and mitigation (if any). While the abovementioned OPR Technical Advisory allows for heavy-duty truck VMT to be included in modeling, it is important to note that this allowance was provided for modeling convenience and ease of calculation; however, in keeping with the intent of Section 21099 of the California Public Resources Code and Section 15064.3, subdivision (a) of the CEQA Guidelines (which specify that automobile VMT is the primary metric that should be evaluated), the extra step of removing heavy truck VMT from SBTAM was undertaken to provide for a project-level analysis that most appropriately meets the intent of SB 743. Additionally, as noted during an informational question-and-answer session conducted by OPR to provide information and guidance on conducting project-level VMT analysis (OPR 2020), it is automobile VMT (i.e., cars and light-duty trucks) that needs to be quantified for all land uses, including warehouses. Therefore, a custom model

[2] The City's TIA guidelines state the current County of San Bernardino VMT threshold is 32.7 VMT/Service Population. However, the screening tool identifies the County baseline as 33.2 VMT/Service Population.

run using the SBTAM was conducted to estimate VMT from automobiles (i.e., cars and light trucks) only, and the Project's VMT and the threshold VMT were extracted only for automobile VMT.

Per standard travel demand modeling procedure, two model runs were conducted to estimate Project's VMT. The first model run included the existing land uses for the area with no changes. While the base year VMT is available from the SBCTA Screening Tool (i.e., 33.2 VMT per service population as described in the screening discussion), the first model run was conducted to set the thresholds and to present an apples-to-apples comparison of only automobile VMT. The model run included both the baseline conditions (2016) and cumulative conditions (2040). The second model run was conducted with socio-economic data from the proposed Project and provided the Project generated VMT per service population, as shown in Table 4.10-2. Roadway (or link-level boundary) VMT was also calculated for all vehicles to estimate Project's effect on VMT as shown in Table 4.10-3. Detailed calculations and model outputs are included in Appendix I.

VMT Per Service Population

The Project generated VMT is defined as the VMT attributed to automobile trips to and from the Project. Based on the City thresholds, if a project-generated VMT per service population exceeds the baseline County of San Bernardino average VMT per service population, the project has a significant impact under CEQA. Table 4.10-2 summarizes the findings of this evaluation.

Table 4.10-2. Summary of OD VMT Per Service Population (Automobile only)

Metric	Baseline Conditions (Year 2016)		Cumulative Conditions (Year 2040)	
	Project	San Bernardino County	Project	San Bernardino County
Population	—	2,140,539	—	2,721,775
Employment	657	790,400	657	1,027,872
Service Population (SP)	657	2,930,939	657	3,749,647
VMT	16,825	84,840,769	16,825	112,779,783
VMT per SP	25.6	28.9	25.7	30.1
Is Project OD VMT per SP below regional baseline?	Yes		Yes	
Significant Impact	**No**		**No**	

Source: SBTAM Model Results (Appendix I).
Note: OD = origin–destination VMT = vehicle miles traveled.

As shown in the table, the County average automobile VMT is 28.9 VMT per service population under baseline (Year 2016) conditions. The Project generated VMT is 25.6 VMT per service population under baseline (Year 2016) conditions, which is below the baseline threshold. Under the cumulative (Year 2040) conditions, the County average automobile VMT is 30.1 VMT per service population. The Project generated VMT is 25.7 VMT service population under cumulative conditions, which is also below the cumulative baseline threshold. Therefore, based on the City's thresholds, the Project generated VMT would have a less than significant impact.

Project Effect on VMT

The Project effect on VMT evaluates the change in roadway (or link-level boundary) VMT within the County streets due to the proposed Project. Based on the City thresholds, if the link-level boundary VMT per service population increases Countywide under the plus Project condition compared to the no Project condition, the Project would have a significant impact per Project effect on VMT criteria. Table 4.10-3 shows the roadway (or link-level) VMT per service population for the County without and with Project conditions for both the baseline and Cumulative (2040) conditions.

Table 4.10-3. Roadway (or Link-Level Boundary) VMT (County of San Bernardino)

Metric	Baseline Conditions (Year 2016)		Cumulative Conditions (Year 2040)	
	Without Project	With Project	Without Project	With Project
Roadway (or link level) VMT	57,484,358	57,453,875	88,660,625	88,380,178
Service Population (SP)	2,891,240	2,891,897	3,699,498	3,700,155
VMT per SP	19.9	19.9	24.0	23.9
Would the Project increase VMT per SP?	No		No	
Significant Impact	**No**		**No**	

Source: SBTAM Model Results; Appendix I.
Note: VMT = vehicle miles traveled.

As shown in Table 4.10-3, with the proposed Project, the VMT per service population within the County (19.9 VMT per service population) will stay the same under the baseline conditions. Under the cumulative conditions, with the proposed Project, the VMT per service population within the County will decrease from 24.0 VMT per service population to 23.9 VMT per service population. Because the Project would not increase the roadway (or link-level boundary) VMT per service population in either the baseline or cumulative conditions, the Project's effect on VM would be less than significant.

VMT Per Service Population (with Heavy Trucks)

While not required by CEQA, a model run using the SBTAM was also conducted to estimate VMT from both automobiles and trucks. This information is provided for informational purposes only and a detailed evaluation can be found in Appendix B. The County average VMT (including automobiles and heavy trucks) is 30.6 VMT per service population under baseline (Year 2016) conditions. The Project generated VMT is 37.0 VMT per service population under baseline (Year 2016) conditions, which exceeds the baseline threshold. Under the cumulative (Year 2040) conditions, the County average VMT (including automobiles and heavy trucks) is 32.1 VMT per service population. The Project generated VMT is 36.6 VMT service population under cumulative conditions, which also exceeds the cumulative baseline threshold.

VMT Impact Determination

As determined from the VMT analysis summarized above, under the baseline conditions, the Project generated OD VMT for automobiles is 25.6 VMT per service population, which is less than the baseline threshold of 28.9 VMT per service population (established for automobiles only VMT from the Project specific model run). Under cumulative conditions, the Project generated OD VMT for automobiles is 25.7 VMT per service population, which is also less than the cumulative threshold of 30.1 VMT per service population. The roadway (or link level boundary) VMT within the County of San Bernardino is 19.9 VMT per service population without Project conditions which will stay the

same under Project conditions. Therefore, based on City's thresholds, the Project generated VMT and the Project's effect on VMT would have a less than significant impact. The Project would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).

Threshold C: Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Significant and Unavoidable Impact. The following discussion describes the potential for increased hazards as a result of geometric design features of the Project, and/or as a result of the addition of Project traffic to adjacent roadways and Caltrans facilities.

Project Site Access

Vehicular and truck traffic access will be provided via the following driveways:

- Driveway A via Lassen Road north – full access; passenger cars/trucks
- Driveway B via Mesa Linda Street north – full access; passenger cars/trucks
- Driveway C via Lassen Road south – full access; passenger cars
- Driveway D via Mesa Linda Street south – full access; passenger cars

Proposed Site Access Improvements

All roadway improvements required as part of the Project, whether located on or off site, would be designed and constructed in accordance with all applicable local, state, and federal roadway standards and practices. The following assumptions are made for all "plus Project" conditions included in this analysis upon review of applicable improvements, and the extension and build-out of the rights-of-way (ROWs) of adjacent streets:

- Lassen Road would be built to a 50-foot half width with development of the Poplar 18 Project, located on the western side of the roadway. Lassen Road would be built to its ultimate ROW (100 feet) with development of this Project east of the roadway, constructing the remaining 50-foot half width.
- The Project would provide frontage improvements along Poplar Street, between Lassen Road and Mesa Linda Street, and would provide a 50-foot half width. Although this is not consistent with the major arterial classification of this section of Poplar Street in the Circulation Element (120-foot ROW, with a 92-foot curb-to-curb width, assuming no bike lane), previous discussions with the City have indicated that a 50-foot half width would be acceptable along this segment. The ultimate ROW and curb-to-curb buildout of Poplar Street would occur with development adjacent to the southern boundary of the roadway.
- The Project would provide frontage improvements along Mesa Linda Street, north of Poplar Street to the Project boundary, and would provide a 50-foot half width. Although this segment of Mesa Linda Street is not designated a roadway classification per the City's Circulation Element, a 50-foot half width would be consistent with the arterial designation of Mesa Linda Street, north of Sultana Street.

The Project driveway intersections along Lassen Road and Mesa Linda Street have been analyzed as unsignalized intersections with stop control at the driveway egress (#9–#12), and will be improved and designed per local standards to accommodate Project traffic. Figure 4.10-5, Truck Turning Templates (Driveway), shows the proposed travel paths at each truck access driveway, and Figure 4.10-6, Truck Turning Templates (Internal), shows the truck inbound and outbound path at the Project driveways. As shown, the Project driveways are anticipated to accommodate the wide turning radius of trucks as currently designed.

These improvements would be overseen by the applicable lead agency and their qualified traffic engineers. This approach would ensure compliance with all applicable roadway design requirements. As such, no hazardous design features would be part of the Project's roadway improvements or site access.

Off-Site Queuing Analysis

A queuing analysis was performed for US Hwy 395 from Main Street to Joshua Street to assess vehicle queues along the roadways. A queuing analysis was also performed for the southbound off-ramp at I-15 and Joshua Street to assess vehicle queues for the off ramp that may potentially result in deficient peak hour operations at the ramp-to-arterial intersections and may potentially "spill back" onto the I-15 mainline. The queuing analysis was performed for the Existing plus Project, Opening Year (2024) plus Project, and Horizon Year (2040) plus Project conditions, as summarized below.

Existing Plus Project Conditions

As shown in Table 4.10-4, Peak-Hour Queuing Summary for Existing Plus Project Conditions, the following intersection turning movements are anticipated to experience periodic queuing issues during the peak hours based on the 95th percentile peak hour traffic flows for the Existing plus Project traffic conditions:

- #1: US Hwy 395/Phelan Road/Main Street northbound left; southbound left – AM and PM peak hours
- #5: US Hwy 395/Three Flags Road northbound left; northbound right – PM peak hour
- #6: US Hwy 395/Joshua Street northbound right – PM peak hour

There are no off-ramp movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak hours under Existing plus Project traffic conditions.

Opening Year (2024) Plus Project Conditions

As shown in Table 4.10-5, Peak-Hour Queuing Summary for Opening Year (2024) Plus Project Conditions, the following intersection turning movements are anticipated to experience periodic queuing issues during the peak hours based on the 95th percentile peak hour traffic flows for the Opening Year (2024) plus Project traffic conditions:

- #1: US Hwy 395/Phelan Road/Main Street northbound left; southbound left – AM and PM peak hours
- #3: US Hwy 395/Poplar Street westbound left; westbound right – AM and PM peak hours
- #5: US Hwy 395/Three Flags Road northbound left – PM peak hour
- #5: US Hwy 395/Three Flags Road northbound right – AM and PM peak hours
- #6: US Hwy 395/Joshua Street northbound left – AM peak hour
- #6: US Hwy 395/Joshua Street northbound right – PM peak hour
- #6: US Hwy 395/Joshua Street; southbound left – AM and PM peak hours
- #7: I-15 Southbound Ramps/Joshua Street southbound left– AM and PM peak hours

Horizon Year (2040) Plus Project Conditions

As shown in 4.10-6, Peak-Hour Queuing Summary for Horizon Year (2040) Plus Project Conditions, the following intersection turning movements are anticipated to experience periodic queuing issues during the peak hours based on the 95th percentile peak hour traffic flows for the Horizon Year (2040) plus Project traffic conditions:

- #1: US Hwy 395/Phelan Road/Main Street northbound left; southbound left – AM and PM peak hours
- #3: US Hwy 395/Poplar Street westbound left; westbound right – AM and PM peak hours
- #3: US Hwy 395/Poplar Street southbound left – AM and PM peak hour
- #5: US Hwy 395/Three Flags Road northbound right – PM peak hour
- #6: US Hwy 395/Joshua Street northbound right– AM and PM peak hour
- #6: US Hwy 395/Joshua Street southbound left –PM peak hour
- #7: I-15 Southbound Ramps/Joshua Street southbound left– AM and PM peak hours
- #7: I-15 Southbound Ramps/Joshua Street southbound right – PM peak hour

Improvement measures required to mitigate Project's impact would include fair-share contribution to Intersections #1, #3, #5, #6, and #7. Since the City does not have jurisdiction over these facilities, these improvements cannot be assumed to be in place prior to Project's occupancy. Therefore, the Project's impact to increase in hazardous conditions (i.e., queuing) would be significant and unavoidable.

Level of Service Analysis

Although not required under CEQA, the results of the LOS analysis conducted for the proposed Project are summarized below for full disclosure and informational purposes only. Per the City's Guidelines, the LOS analysis included all major intersections (intersections of collector, or higher, streets) where the Project would add more than 50 peak hour Project trips, as well as intersections adjacent to the Project site. Twelve intersections were analyzed for the Existing, Opening Year (2024), and the Horizon Year (2040) conditions, with and without the Project.

As shown in 4.10-7, Existing and Existing plus Project Peak Hour Intersection Level of Service, all study area intersections are forecast to continue to operate with satisfactory LOS under Existing plus Project conditions during both peak hours, with exception of the following intersection:

- #3 (US Hwy 395/Poplar Street) – LOS F in AM and PM peak hours *(unsignalized)*

As shown in Table 4.10-8, Opening Year (2024) and Opening Year (2024) Plus Project Peak Hour Intersection Level of Service, all study area intersections are forecast to continue to operate with satisfactory LOS under Opening Year (2024) plus Project conditions during both peak hours, with the exception of following intersections:

- #1 (US Hwy 395/Phelan Road–Main Street) – LOS F in AM and PM peak hours *(signalized)*
- #3 (US Hwy 395/Poplar Street) – LOS F in AM and PM peak hours *(unsignalized)*
- #4 (Lassen Road/Poplar Street) – LOS E in AM peak hour (unsignalized
- #7 (I-15 SB Off-Ramp/Joshua Street) – LOS F in AM peak hour *(unsignalized)*

As shown in Table 4.10-9, Horizon Year (2040) and Horizon Year (2040) plus Project Peak Hour Intersection Level of Service, all study area intersections are forecast to continue to operate with satisfactory LOS under Horizon Year (2040) plus Project conditions during both peak hours, with the exception of the following intersections:

- #1 (US Hwy 395/Phelan Road–Main Street) – LOS F in AM and PM peak hours *(signalized)*
- #3 (US Highway 395/Poplar Street) – LOS F in AM and PM peak hours *(unsignalized)*
- #4 (Lassen Road/Poplar Street) – LOS F in AM and PM peak hours *(unsignalized)*
- #5 (US Hwy 395/Three Flags Avenue) – LOS F in PM peak hour *(signalized)*
- #6 (US Hwy 395/Joshua Street–I-15 ramps) – LOS F in AM and PM peak hour *(signalized)*

Peak hour signal warrants were performed at the unsignalized intersections (#3 and #4). The warrant is met in both peak hours at both intersections. As such, a signal would be warranted at the US Hwy 395/Poplar Street and Lassen Road/Poplar Street intersections under Horizon Year (2040) plus Project conditions.

Table 4.10-10, Proposed Intersection Improvement Measures identifies 9 intersection improvements that would be necessary to bring the intersection LOS back to acceptable levels under Opening Year (2024) and Horizon Year (2040) plus Project conditions at all intersections operating at unsatisfactory levels of service.

Threshold D: Would the Project result in inadequate emergency access?

Less-than-Significant Impact. As mentioned above, the Project has four access driveways, and in the event of an emergency all the driveways would enable vehicles to enter/exit the Project site. All street improvements will be designed with adequate width, turning radius, and grade to facilitate access by City's firefighting apparatus, and to provide alternative emergency ingress and egress. The site plan would be subject to plan review by the City's Fire Department to ensure proper access for fire and emergency response is provided and required fire suppression features are included. Therefore, the Project's impact due to inadequate emergency access would be less than significant.

Threshold E: Would the Project result in cumulatively considerable transportation impacts?

Significant and Unavoidable Impact. As discussed above in Threshold C, the Project may increase a hazardous condition due to queuing impacts at the intersections #1, #3, #5, #6, and #7 under the Horizon Year (2040) plus Project analysis scenario. Since the City does not have jurisdiction over these facilities, these improvements cannot be assumed to be in place prior to Project's occupancy. Therefore, Project's impact to increase in hazardous conditions (e.g., queuing) would be significant and unavoidable, and thus, the Project could contribute to a cumulatively considerable impact associated with queuing and hazardous design features.

Table 4.10-4. Peak-Hour Queuing Summary for Existing Plus Project Conditions

No.	Intersection	Movement	Available Stacking Distance (Feet)	Existing (2021)				Existing plus Project			
				95th Percentile Queue (Feet)		Acceptable?[1]		95th Percentile Queue (Feet)		Acceptable?[1]	
				AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
1	US Hwy 395 & Phelan Rd./Main St.	NBL[2]	280	401	403	No	No	398	403	No	No
		SBL	240	310	324	No	No	302	322	No	No
3	US Hwy 395 & Poplar St.	WBL	540	0	24	Yes	Yes	59	462	Yes	Yes
		WBR	540	29	39	Yes	Yes	27	148	Yes	Yes
		SBL	375	49	34	Yes	Yes	60	35	Yes	Yes
5	US Hwy 395 & Three Flags Rd.	NBL[2]	190	47	212	Yes	No	45	197	Yes	No
		NBL[2]	190	35	891	Yes	No	35	724	Yes	No
		SBL	225	39	58	Yes	Yes	34	62	Yes	Yes
		SBR	225	23	23	Yes	Yes	21	25	Yes	Yes
6	US Hwy 395 & Joshua St.	NBL	190	126	126	Yes	Yes	11	135	Yes	Yes
		NBR	330	350	350	Yes	No	1	341	Yes	No
		SBL	220	107	107	Yes	Yes	90	149	Yes	Yes
7	I-15 SB Ramps & Joshua St.	SBL	25	26	26	Yes	No[3]	13	24	Yes	Yes
		SBR	1,500	43	43	Yes	Yes	44	45	Yes	Yes
8	I-15 NB Ramps & Joshua St.	EBLT[4]	1,000	29	29	Yes	Yes	30	32	Yes	Yes

Source: Appendix I.

Notes: NBL = northbound left; NBR = northbound right; NBTR = northbound thru-right; SBL = southbound left; SBR = southbound right; WBL = westbound left; WBT = westbound thru; WBR = westbound right; EBL = eastbound left; EBLT = eastbound left thru.

1 Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided.

2 95th percentile volume exceeds capacity; queue may be longer.

3 Queue extends past available pocket length for movement, but does not extend into freeway mainline lanes.

4 Available stacking distance measured from the I-15 SB Off-Ramp/Joshua Street intersection.

Table 4.10-5. Peak-Hour Queuing Summary for Opening Year (2024) Plus Project Conditions

No.	Intersection	Movement	Available Stacking Distance (Feet)	Opening Year (2024)				Opening Year (2024) plus Project			
				95th Percentile Queue (Feet)		Acceptable?[1]		95th Percentile Queue (Feet)		Acceptable?[1]	
				AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
1	US Hwy 395 & Phelan Rd./Main St.	NBL[2]	280	403	394	No	No	387	405	No	No
		SBL	240	298	269	No	No	303	270	No	No
3	US Hwy 395 & Poplar St.	WBL	540	735	624	No	No	702	624	No	No
		WBR	540	687	842	No	No	843	847	No	No
5	US Hwy 395 & Three Flags Rd.	SBL	375	66	44	Yes	Yes	75	48	Yes	Yes
		NBL[2]	190	186	244	Yes	No	159	233	Yes	No
6	US Hwy 395 & Joshua St.	NBR[2]	190	1278	1338	No	No	1258	1328	No	No
		SBL	225	39	40	Yes	Yes	35	37	Yes	Yes
7	I-15 SB Ramps & Joshua St.	SBR	225	24	16	Yes	Yes	20	18	Yes	Yes
		NBL	190	204	183	No	No	171	233	No	Yes
8	I-15 NB Ramps & Joshua St.	NBR	330	305	457	Yes	No	341	449	Yes	No
		SBL	220	186	278	No	No	197	280	No	No

Source: Appendix I.
Notes: NBL = northbound left; NBR = northbound right; NBTR = northbound thru-right; SBL = southbound left; SBR = southbound right; WBL = westbound left; WBT = westbound thru; WBR = westbound right; EBL = eastbound left.
1 Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided.
2 95th percentile volume exceeds capacity; queue may be longer.
3 Queue extends past available pocket length for movement, but does not extend into freeway mainline lanes.
4 Available stacking distance measured from the I-15 SB Off-Ramp/Joshua Street intersection

Table 4.10-6 Peak-Hour Queuing Summary for Horizon Year (2040) Plus Project Conditions

No.	Intersection	Movement	Available Stacking Distance (Feet)	Horizon Year (2040)				Horizon Year (2040) plus Project			
				95th Percentile Queue (Feet)		Acceptable?[1]		95th Percentile Queue (Feet)		Acceptable?[1]	
				AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
1	US Hwy 395 & Phelan Rd./Main St.	NBL[2]	280	374	388	No	No	355	402	No	No
		SBL	240	337	268	No	No	341	271	No	No
3	US Hwy 395 & Poplar St.	WBL	540	646	561	No	No	631	618	No	No
		WBR	540	841	637	No	No	808	624	No	No
		SBL	375	346	376	Yes	No	418	436	No	No
5	US Hwy 395 & Three Flags Rd.	NBL[2]	190	130	221	Yes	No	114	186	Yes	Yes
		NBR[2]	190	95	1289	Yes	No	83	1351	Yes	No
		SBL	225	81	120	Yes	Yes	84	136	Yes	Yes
		SBR	225	20	146	Yes	Yes	18	16	Yes	Yes
6	US Hwy 395 & Joshua St.	NBL	190	188	210	Yes	No	177	183	Yes	Yes
		NBR	330	246	368	Yes	No	336	428	No	No
		SBL	220	149	234	Yes	No	158	238	Yes	No
7	I-15 SB Ramps & Joshua St.	SBL	25	43	62	No[3]	No	49	69	No[3]	No
		SBR	1,500	157	1973	Yes	No	188	2008	Yes	No
8	I-15 NB Ramps & Joshua St.	EBLT[4]	1,000	39	218	Yes	Yes	42	125	Yes	Yes

Source: Appendix I.

Notes: NBL = northbound left; NBR = northbound right; NBTR = northbound thru-right; SBL = southbound left; SBR = southbound right; WBL = westbound left; WBT = westbound thru; WBR = westbound right; EBL = eastbound left; EBLT = eastbound left thru.

1 Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided.

2 95th percentile volume exceeds capacity; queue may be longer.

3 Queue extends past available pocket length for movement, but does not extend into freeway mainline lanes.

4 Available stacking distance measured from the I-15 SB Off-Ramp/Joshua Street intersection.

Table 4.10-7. Peak-Hour Queuing Summary for Horizon Year (2040) Plus Project Conditions

No.	Intersection	Movement	Available Stacking Distance (Feet)	Horizon Year (2040)				Horizon Year (2040) plus Project			
				95th Percentile Queue (Feet)		Acceptable?[1]		95th Percentile Queue (Feet)		Acceptable?[1]	
				AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
1	US Hwy 395 & Eucalyptus St.	NBL	475	69	36	Yes	Yes	71	37	Yes	Yes
		NBR	345	31	28	Yes	Yes	31	28	Yes	Yes
		SBL	440	215	313	Yes	Yes	282	294	Yes	Yes
		SBR	300	383	264	No	Yes	380	264	No	Yes
4	US Hwy 395 & Phelan Rd./Main St.	NBL[2]	280	336	388	No	No	354	391	No	No
		SBL	240	322	268	No	No	331	269	No	No
8	I-15 SB Ramps & Main St.	SBL	1,750	2061	2202	No	No	1924	2126	No	No
		SBL	1,100	1363	1318	No	No	1344	1275	No	No
		SBR	530	555	692	No	No	556	645	No	No
9	I-15 NB Ramps & Main St.	NBL	1,790	944	1444	Yes	Yes	1219	1396	Yes	Yes
		NBTR	1,100	888	2135	Yes	No	2256	2105	No	No
		NBR	615	407	888	Yes	No	710	874	No	No
13	US Hwy 395 & Poplar St.	WBL	540	588	561	No	No	249	303	Yes	Yes
		WBR	540	747	637	No	No	263	582	Yes	No
		WBR	540	N/A	N/A	N/A	N/A	213	738	Yes	No
		SBL	375	371	376	Yes	No	231	289	Yes	Yes
21	US Hwy 395 & Three Flags Rd.	NBL[2]	190	101	221	Yes	No	197	220	No	No
		NBR[2]	190	87	1289	Yes	No	920	1337	No	No
		SBL	225	81	120	Yes	Yes	88	137	Yes	Yes
		SBR	225	18	146	Yes	Yes	19	18	Yes	Yes
22	US Hwy 395 & Joshua St.	WBL[3]	100	106	258	No	No	90	252	Yes	No
		WBT[3]	100	191	207	No	No	208	113	No	No
		WBR[3]	100	137	500	No	No	312	496	No	No
		NBL	190	199	210	No	No	201	197	No	No
		NBR	330	252	368	Yes	No	440	461	No	No

Table 4.10-7. Peak-Hour Queuing Summary for Horizon Year (2040) Plus Project Conditions

No.	Intersection	Movement	Available Stacking Distance (Feet)	Horizon Year (2040)				Horizon Year (2040) plus Project			
				95th Percentile Queue (Feet)		Acceptable?[1]		95th Percentile Queue (Feet)		Acceptable?[1]	
				AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
		SBL	220	147	234	Yes	No	189	290	Yes	No
23	I-15 SB Ramps & Joshua St.	SBL	25	45	62	No[4]	No	55	57	No[4]	No
		SBR	1,500	163	1973	Yes	No	594	1964	Yes	No
24	I-15 NB Ramps & Joshua St.	EBLT[4]	1,000	43	218	Yes	Yes	42	143	Yes	Yes

Source: Appendix I.
Notes: NBL = northbound left; NBR = northbound right; NBTR = northbound thru-right; SBL = southbound left; SBR = southbound right; WBL = westbound left; WBT = westbound thru; WBR = westbound right; EBL = eastbound left; EBLT = eastbound left thru.

1 Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided.
2 95th percentile volume exceeds capacity; queue may be longer.
3 Westbound approach queues included per City request to determine stacking distance into the adjacent Outpost Road & Pilot Travel Center intersection/driveway.
4 Queue extends past available pocket length for movement, but does not extend into freeway mainline lanes.
5 Available stacking distance measured from the I-15 SB Off-Ramp/Joshua Street intersection.

Table 4.10-8. Existing and Existing plus Project Peak Hour Intersection Level of Service

No.	Intersection	Jurisdiction	Satisfactory LOS	Existing				Existing plus Project				Inconsistent with LOS Standards?	
				AM Peak		PM Peak		AM Peak		PM Peak			
				Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	AM	PM
1	US Hwy 395/ Phelan Road - Main Street	City of Hesperia; Caltrans[3]	E	52.8	D	69.1	E	52.8	D	71.3	E	No	No
2	Mesa Linda Street/Main Street	City of Hesperia	E	11.6	B	12.0	B	21.2	C	19	B	No	No
3	US Hwy 395/ Poplar Street	City of Hesperia; Caltrans	E	**81.7**	**F**	**110.8**	**F**	**141.2**	**F**	**>300**	**F**	**Yes**	**Yes**
4	Lassen Road/ Poplar Street	City of Hesperia	D	9.3	A	9.1	A	10.6	B	9.5	A	No	No
5	US Hwy 395/ Three Flags Avenue	City of Hesperia; Caltrans	E	13.3	B	12.3	B	13.4	B	12.3	B	No	No
6	US Hwy 395/ Joshua Street–I-15 ramps	City of Hesperia; Caltrans	E	11.4	B	12.6	B	12.1	B	13.9	B	No	No
7	I-15 SB Off-Ramp/Joshua Street	City of Hesperia; Caltrans	E	9.6	A	10.1	B	9.8	A	10.5	B	No	No
8	I-15 NB On-Ramp/Joshua Street	City of Hesperia; Caltrans	E	N/A[6]									
9	Lassen Road/ Driveway North	City of Hesperia	D	*Does Not Exist*				8.7	A	8.7	A	No	No
10	Mesa Linda Street/Driveway North	City of Hesperia	D	*Does Not Exist*				8.9	A	8.9	A	No	No

Table 4.10-8. Existing and Existing plus Project Peak Hour Intersection Level of Service

No.	Intersection	Jurisdiction	Satisfactory LOS	Existing				Existing plus Project				Inconsistent with LOS Standards?	
				AM Peak		PM Peak		AM Peak		PM Peak			
				Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	AM	PM
11	Lassen Road/ Driveway South	City of Hesperia	D	*Does Not Exist*				8.9	A	8.8	A	No	No
12	Mesa Linda Street/Driveway South	City of Hesperia	D	*Does Not Exist*				9.3	A	9.5	A	No	No

Source: Appendix I.
Notes: HCM = Highway Capacity Manual; TWSC = Two-Way Stop-Controlled; **X** = Unsatisfactory operating conditions/LOS.
1 Acceptable LOS determined from Goal CI-2 of the City of Hesperia Circulation Element.
2 Delay in seconds per vehicle.
3 Level of Service (LOS).
4 SBCTA CMP Intersection.
5 TWSC in baseline conditions; signalized in all plus Project conditions.
6 HCM 6th Edition expects at least one 'Stop' controlled approach at the intersection; delay cannot be where no stop-control exists.

Table 4.10-9. Opening Year (2024) and Opening Year (2024) Plus Project Peak Hour Intersection Level of Service

No.	Intersection	Jurisdiction	Satisfactory LOS	Opening Year (2024)				Opening Year (2024) plus Project				Inconsistent with LOS Standards?	
				AM Peak		PM Peak		AM Peak		PM Peak			
				Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	AM	PM
1	US Hwy 395/ Phelan Road - Main Street	City of Hesperia; Caltrans[3]	E	**161.1**	**F**	**226.6**	**F**	**163.4**	**F**	**230.3**	**F**	**Yes**	**Yes**
2	Mesa Linda Street/Main Street	City of Hesperia	E	40.6	D	35.7	D	41.6	D	39.0	D	No	No
3	US Hwy 395/Poplar Street	City of Hesperia; Caltrans	E	**>300**	**F**	**>300**	**F**	**>300**	**F**	**>300**	**F**	**Yes**	**Yes**
4	Lassen Road/Poplar Street	City of Hesperia	D	29.5	D	13.9	B	**48.5**	**E**	16.0	C	**Yes**	No
5	US Hwy 395/Three Flags Avenue	City of Hesperia; Caltrans	E	25.1	C	20.0	C	27.9	C	20.8	C	No	No
6	US Hwy 395/Joshua Street–I-15 ramps	City of Hesperia; Caltrans	E	46.3	D	54.1	D	57.7	E	61.3	E	No	No
7	I-15 SB Off-Ramp/Joshua Street	City of Hesperia; Caltrans	E	36.8	E	20.4	C	**51.9**	**F**	21.8	C	**Yes**	No
8	I-15 NB On-Ramp/Joshua Street	City of Hesperia; Caltrans	E	N/A[6]									
9	Lassen Road/Driveway North	City of Hesperia	D	*Does Not Exist*				9.4	A	9.4	A	No	No

Table 4.10-9. Opening Year (2024) and Opening Year (2024) Plus Project Peak Hour Intersection Level of Service

No.	Intersection	Jurisdiction	Satisfactory LOS	Opening Year (2024)				Opening Year (2024) plus Project				Inconsistent with LOS Standards?	
				AM Peak		PM Peak		AM Peak		PM Peak			
				Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	AM	PM
10	Mesa Linda Street/Driveway North	City of Hesperia	D	*Does Not Exist*				11.3	B	11.6	B	No	No
11	Lassen Road/Driveway South	City of Hesperia	D	8.4[7]	A[7]	8.7[7]	A[7]	10.2	B	9.5	A	No	No
12	Mesa Linda Street/Driveway South	City of Hesperia	D	*Does Not Exist*				14.7	B	14.6	B	No	No

Source: Appendix I.
Notes: X – Unsatisfactory operating conditions/LOS.
1 Acceptable LOS determined from Goal CI-2 of the City of Hesperia Circulation Element.
2 Delay in seconds per vehicle.
3 Level of Service (LOS).
4 SBCTA CMP Intersection.
5 TWSC in baseline conditions; signalized in all plus Project conditions.
6 HCM 6th Edition expects at least one 'Stop' controlled approach at the intersection; delay cannot be where no stop-control exists.
7 Project driveway does not exist; however, cumulative Project traffic is routed through this intersection at the proposed Poplar 18 Project driveway, which serves as the western leg of this driveway intersection.

Table 4.10-10. Horizon Year (2040) and Horizon Year (2040) plus Project Peak Hour Intersection Level of Service

No.	Intersection	Jurisdiction	Satisfactory LOS	Horizon Year (2040)				Horizon Year (2040) plus Project				Inconsistent with LOS Standards?	
				AM Peak		PM Peak		AM Peak		PM Peak			
				Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	AM	PM
1	US Hwy 395/ Phelan Road–Main Street	City of Hesperia; Caltrans[3]	E	**>300**	**F**	**>300**	**F**	**>300**	**F**	**>300**	**F**	**Yes**	**Yes**
2	Mesa Linda Street/Main Street	City of Hesperia	E	12.6	B	21.9	C	18.1	B	32.8	C	No	No
3	US Hwy 395/ Poplar Street	City of Hesperia; Caltrans	E	**169.7**	**F**	**>300**	**F**	**212.9**	**F**	**>300**	**F**	**Yes**	**Yes**
4	Lassen Road/ Poplar Street	City of Hesperia	D	**>300**	**F**	**>300**	**F**	**>300**	**F**	**>300**	**F**	**Yes**	**Yes**
5	US Hwy 395/ Three Flags Avenue	City of Hesperia; Caltrans	E	37.5	D	**89.6**	**F**	42.1	D	**90.1**	**F**	No	**Yes**
6	US Hwy 395/ Joshua Street–I-15 ramps	City of Hesperia; Caltrans	E	41.8	D	**106.2**	**F**	51.5	D	**113.1**	**F**	No	**Yes**
7	I-15 SB Off-Ramp/Joshua Street	City of Hesperia; Caltrans	E	15.7	C	24.8	C	17.6	B	26.7	C	No	No
8	I-15 NB On-Ramp/Joshua Street	City of Hesperia; Caltrans	E	N/A[6]									
9	Lassen Road/ Driveway North	City of Hesperia	D	Does Not Exist				10.0	B	9.5	A	No	No
10	Mesa Linda Street/Driveway North	City of Hesperia	D	Does Not Exist				14.3	B	13.3	B	No	No

Table 4.10-10. Horizon Year (2040) and Horizon Year (2040) plus Project Peak Hour Intersection Level of Service

No.	Intersection	Jurisdiction	Satisfactory LOS	Horizon Year (2040)				Horizon Year (2040) plus Project				Inconsistent with LOS Standards?	
				AM Peak		PM Peak		AM Peak		PM Peak			
				Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	AM	PM
11	Lassen Road/ Driveway South	City of Hesperia	D	Does Not Exist				10.4	B	9.5	A	No	No
12	Mesa Linda Street/Driveway South	City of Hesperia	D	Does Not Exist				20.7	C	18.6	B	No	No

Source: Appendix I.
Notes: X – Unsatisfactory operating conditions/LOS.
1 Acceptable LOS determined from Goal CI-2 of the City of Hesperia Circulation Element.
2 Delay in seconds per vehicle.
3 Level of Service (LOS).
4 SBCTA CMP Intersection.
5 TWSC in baseline conditions; signalized in all plus Project conditions.
6 HCM 6th Edition expects at least one 'Stop' controlled approach at the intersection; delay cannot be where no stop-control exists.

Table 4.10-11. Proposed Intersection Improvement Measures

No.	Intersection	Jurisdiction	Satisfactory LOS	Opening Year plus Project		Horizon Year plus Project	
				Intersection Improvement	LOS with Improvements	Intersection Improvement	LOS with Improvements
1	US Hwy 395/ Phelan Road - Main Street	City of Hesperia; Caltrans	E	**#1** Add a 2nd NBL turn lane Add a 3rd NBT lane Add a 2nd SBL turn lane Add a 3rd EBT lane Add a WBR turn lane Modify the traffic signal to implement overlap phasing for the WBR turn lane	AM Peak hour: 67.0/E PM Peak Hour: 65.5/E	**#3** Same + Add a 4th NBT lane Add two (2) WBR turn lanes Add a 3rd SBT lane Add a 3rd WBT lane Add an EBR turn lane	AM Peak hour: 78.8/E PM Peak Hour: 69.7/E
3	US Hwy 395/ Poplar Street	City of Hesperia; Caltrans	E	**#2** Install a traffic signal (CA MUTCD Peak Hour Signal Warrant is met under AM and PM peak hours) and re-stripe WB lanes to include: a WBR, a WBT, and a WBL turn lane[2] Add a west leg, including an EB left-turn lane and an EB right through lane, along with a NB left-turn lane[2]	AM Peak hour: 49.2/D PM Peak Hour: 65.8/E	**#4** Same + Add a 3rd NBT lane Add a NBR turn lane Add a 2nd SBL turn lane Add a 2nd SBT lane Convert WB through lane to a shared WB left-	AM Peak hour: 58.2/E PM Peak Hour: 71.9/E

Table 4.10-11. Proposed Intersection Improvement Measures

No.	Intersection	Jurisdiction	Satisfactory LOS	Opening Year plus Project		Horizon Year plus Project	
				Intersection Improvement	LOS with Improvements	Intersection Improvement	LOS with Improvements
						through-right turn lane	
4	Lassen Road/ Poplar Street	City of Hesperia	D	**#5** Add stop signs on the eastbound and westbound approaches, converting the intersection from two-way stop-control (TWSC) to an all-way stop-control (AWSC) Add an EBL turn lane	AM Peak hour: 24.3/C PM Peak Hour: 14.8/B	**#6** Install a traffic signal (CA MUTCD Peak Hour Signal Warrant is met under AM and PM peak hours) Add a NBL turn lane, and maintain a NB through-right lane Add a WBL turn lane, and maintain a WB through-right lane Add an EBT lane Add an EBL turn lane Add an EBR turn lane	AM Peak hour: 44.0/D PM Peak Hour: 39.7/D
5	US Hwy 395/Three Flags Avenue	City of Hesperia; Caltrans	E	None	N/A	**#7** Add a 3rd NBT lane Add a 3rd SBT lane	AM Peak hour: 25.0/C PM Peak Hour: 47.3/D

Table 4.10-11. Proposed Intersection Improvement Measures

No.	Intersection	Jurisdiction	Satisfactory LOS	Opening Year plus Project		Horizon Year plus Project	
				Intersection Improvement	LOS with Improvements	Intersection Improvement	LOS with Improvements
6	US Hwy 395/ Joshua Street–I-15 ramps	City of Hesperia; Caltrans	E	None	N/A	**#8** Add a 3rd NBT lane Add a 3rd SBT lane Add a 2nd EBT lane Add a 2nd EBL turn lane Add a 2nd WBR lane	AM Peak hour: 27.0/C PM Peak Hour: 70.6/E
7	I-15 SB Off-Ramps/Joshua Street	City of Hesperia; Caltrans	E	**#9** Add free SBR turn channelized lane on the off-ramp to Joshua Street	AM Peak hour: 13.1/B PM Peak Hour: 21.8/C	**N/A** Same	AM Peak hour: 11.2/B PM Peak Hour: 17.3/B

Source: Appendix I.
Notes: NBL= Northbound left; NBT= Northbound through; NBR= Northbound right; SBL= Southbound left; SBT= Southbound through; SBR= Southbound right; WBL= Westbound left; WBT= Westbound through; WBR= Westbound right; EBL= Eastbound left; EBT= Eastbound through; EBR= Eastbound right; N/A = not applicable.

4.10.5 Mitigation Measures and Level of Significance After Mitigation

Threshold A: Would the Project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

The Project would have a less-than-significant impact and no mitigation is required.

Threshold B: Would the Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

The Project would have a less-than-significant impact and no mitigation is required.

Threshold C: Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The Project could result in potentially significant impacts associated with increasing hazards due to a geometric design feature related to queuing. Improvement measures required to mitigate Project's impact would include fair-share contribution to Intersections #1, #3, #5, #6, and #7. Since the City does not have jurisdiction over these facilities, these improvements cannot be assumed to be in place prior to Project's occupancy. Therefore, the Project's impact related to an increase in hazardous conditions (i.e., queuing) would be significant and unavoidable.

Threshold D: Would the Project result in inadequate emergency access?

The Project would have a less-than-significant impact and no mitigation is required.

Threshold E: Would the Project result in cumulatively considerable transportation impacts?

The Project could result in potentially significant impacts with regard to cumulatively considerable transportation impacts. The Project may increase a hazardous condition due to queuing impacts at the intersections #1, #3, #5, #6, and #7 under the Horizon Year (2040) plus Project analysis scenario. Since the City does not have jurisdiction over these facilities, these improvements cannot be assumed to be in place prior to Project's occupancy. Therefore, Project's impact to increase in hazardous conditions (i.e., queuing) would be significant and unavoidable, and the Project could thereby contribute to a cumulatively considerable impact associated with queuing and hazardous design features.

4.10.6 References Cited

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SOURCE: Bing Maps; RGA 2021

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FIGURE 4.10-1

Project Location and Study Area

Poplar 18 Project

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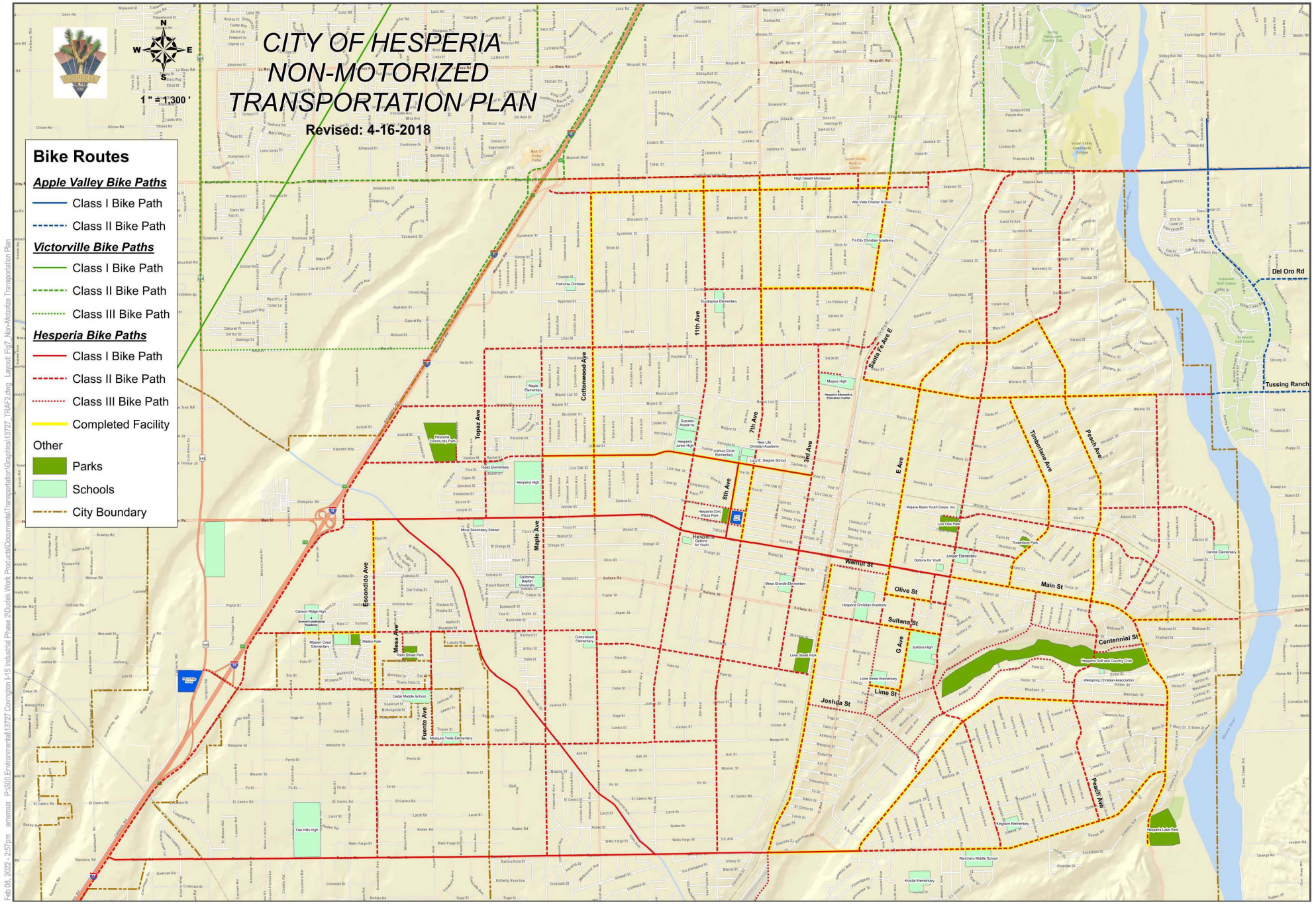

SOURCE: City of Hesperia 2018

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FIGURE 4.10-2

City of Hesperia Non-motorized Transportation Plan

Poplar 18 Project

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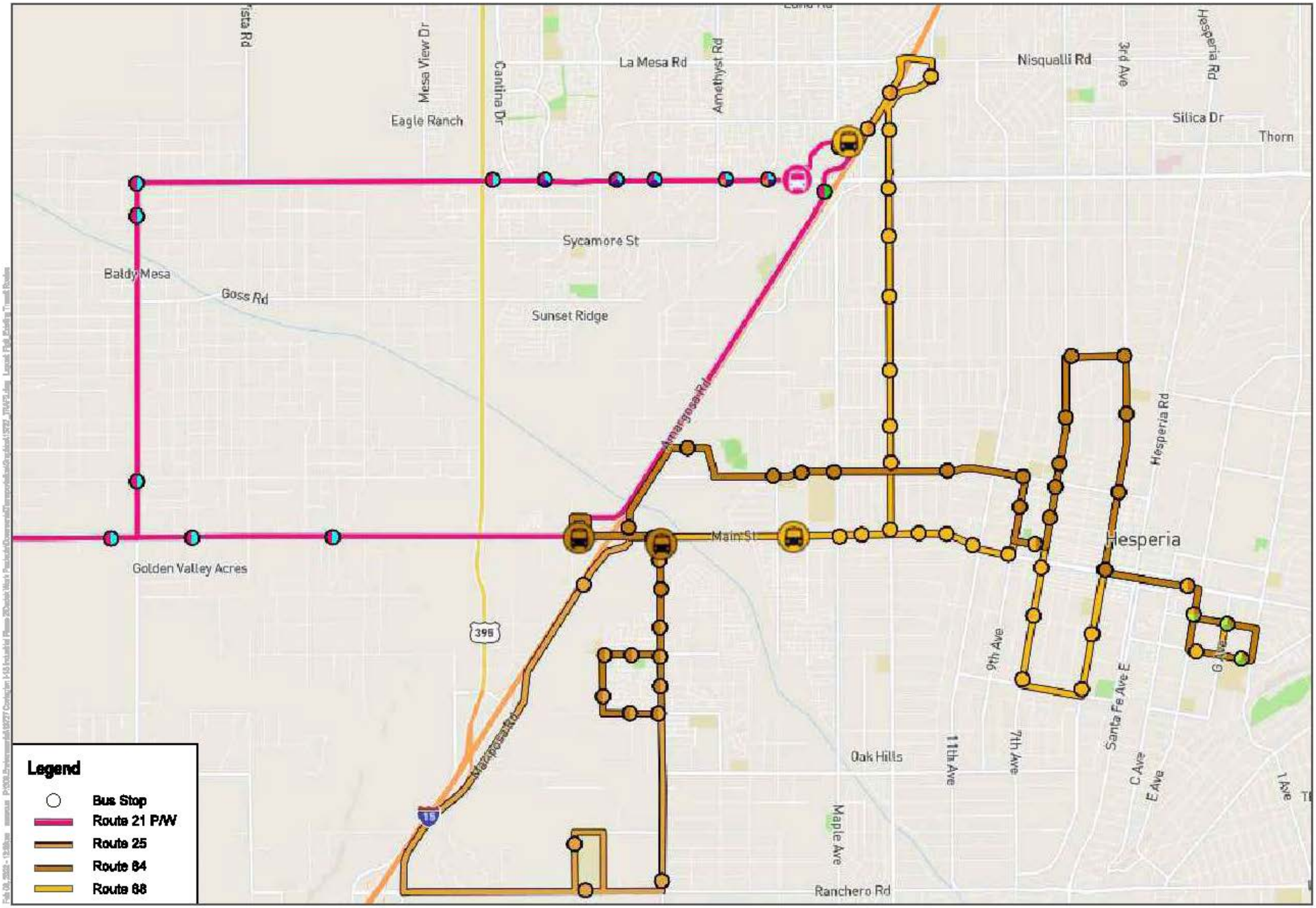

SOURCE: VVTA 2021

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FIGURE 4.10-3
Existing Transit Routes
Poplar 18 Project

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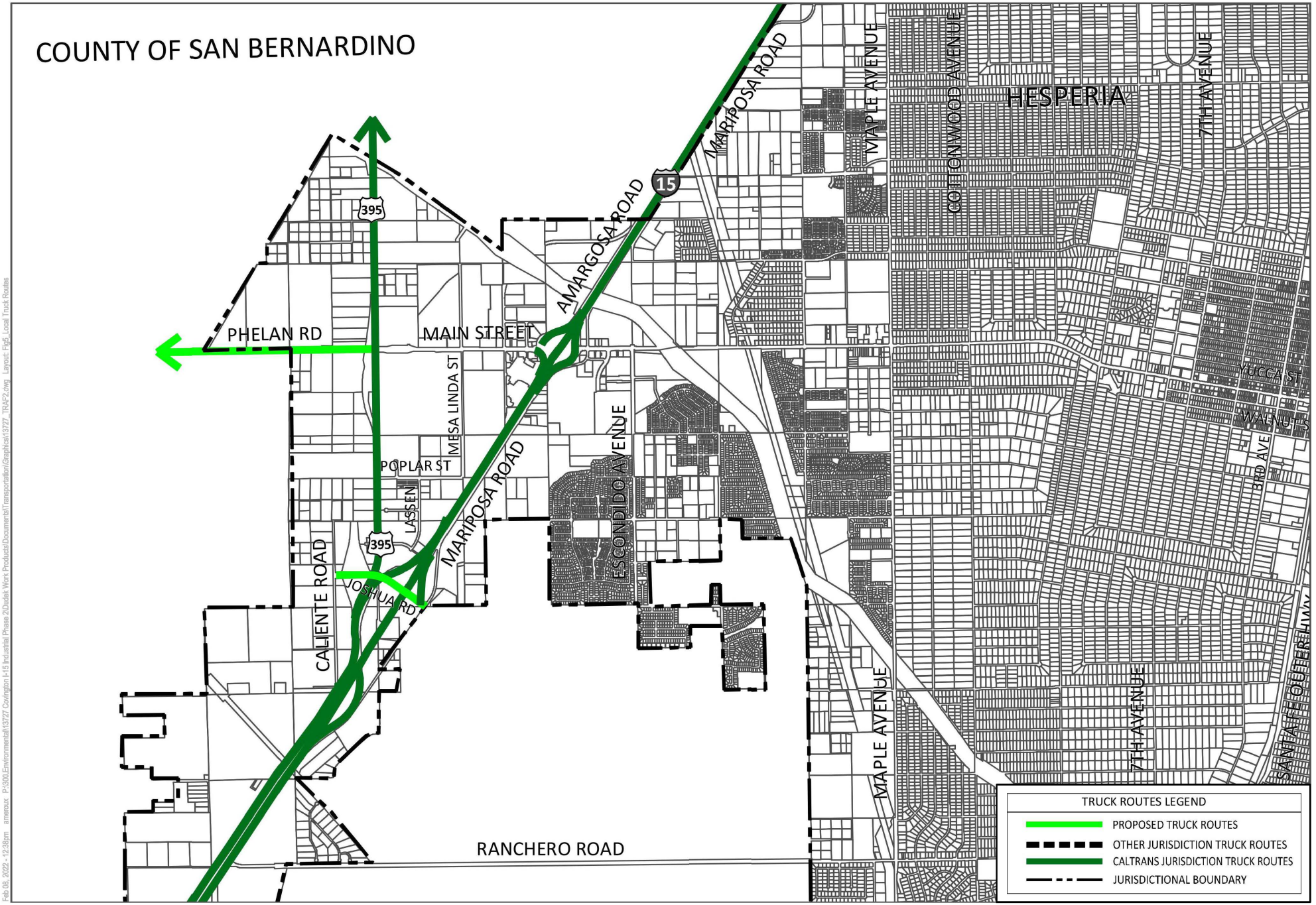

SOURCE: City of Hesperia 2010

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FIGURE 4.10-4

Local Truck Routes

Poplar 18 Project

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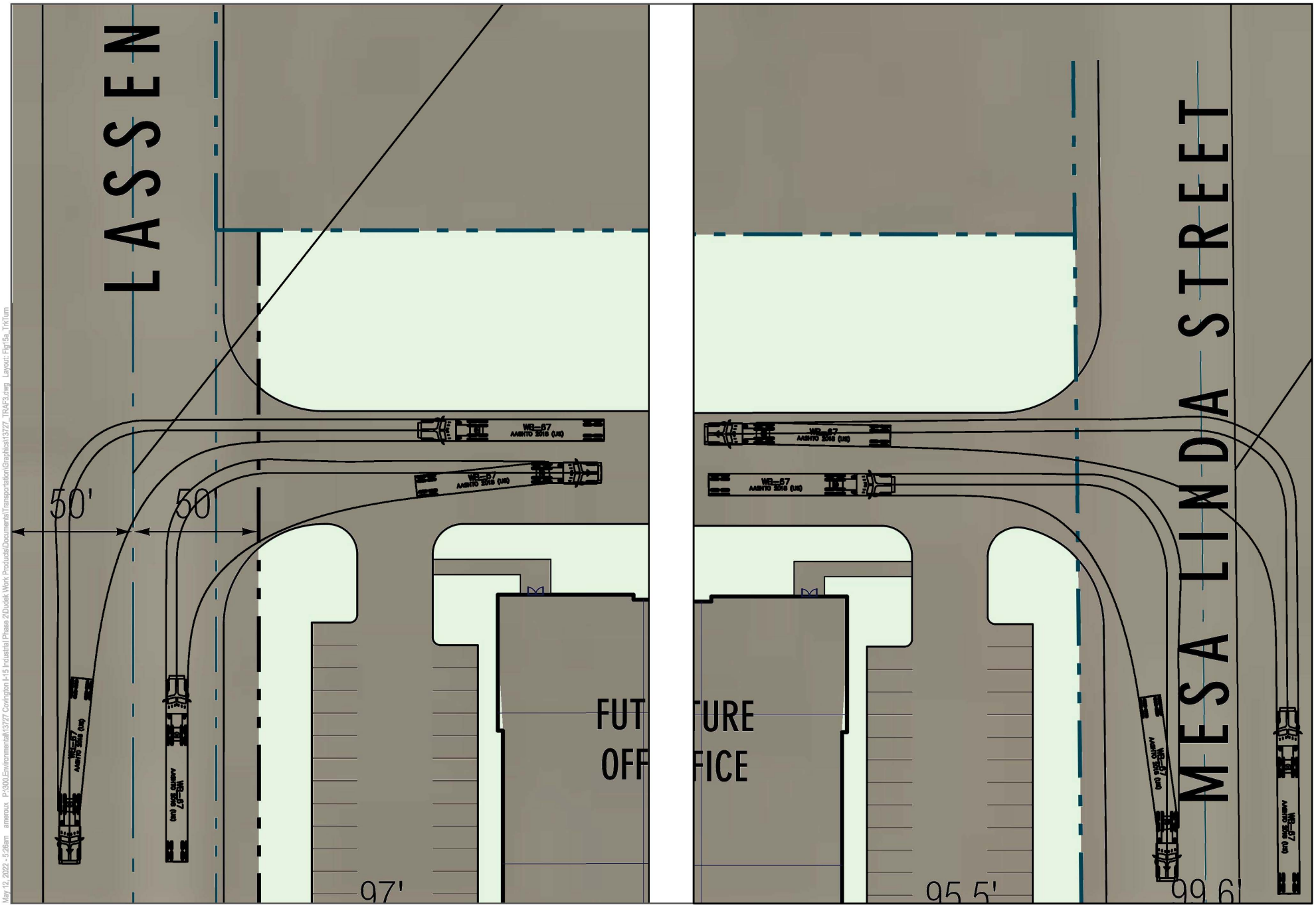

SOURCE: Bing Maps; RGA 2021; AASHTO 2018

FIGURE 4.10-5

Truck Turning Templates (Driveway)

Poplar 18 Project

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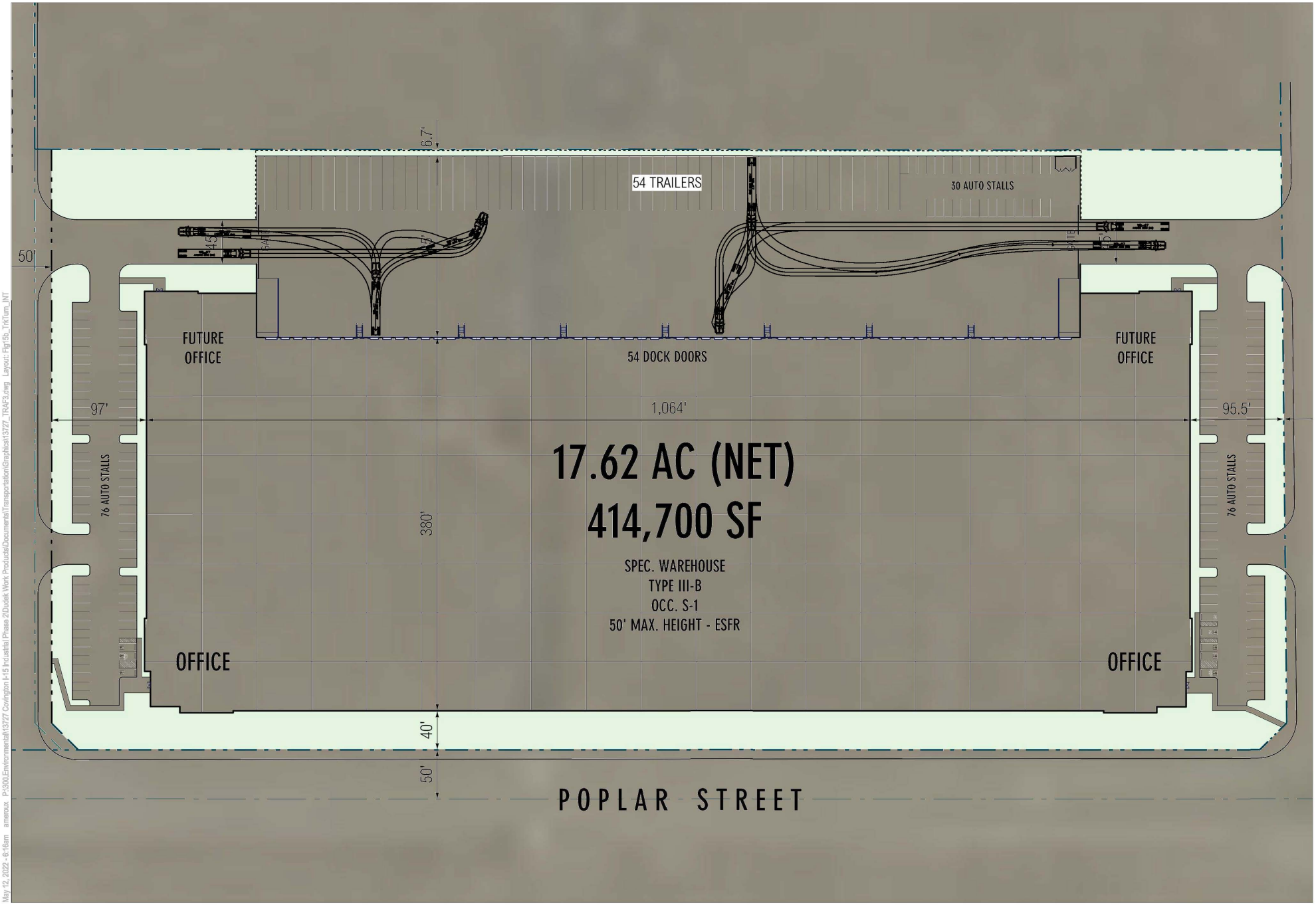

SOURCE: Bing Maps; RGA 2021; AASHTO 2018

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FIGURE 4.10-6

Truck Turning Templates (Internal)

Poplar 18 Project

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4.11 Utilities and Service Systems

This section describes the existing utility conditions of the Poplar 18 Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to the implementation of the Project.

In addition to the documents incorporated by reference (see Section 2.7 of Chapter 2 of this Environmental Impact Report [EIR]), the following analysis is based, in part, on the following sources:

- Preliminary Drainage Report, prepared by WestLAND Group Inc. in September 2022 (Appendix G-1)
- Preliminary Water Quality Management Plan (WQMP), prepared by WestLAND Group in May 2022 (Appendix G-2)
- Water Supply Assessment Report, prepared by KEC Engineers, Inc. in August 2022 Appendix G-3)

4.11.1 Existing Conditions

Water

Water Supply

The City's water system is managed by the Hesperia Water District, which is a subsidiary special district of the City. The Hesperia Water District provides utility service for the water and sewer system within the City and operates as a self-sustaining utility business enterprise. With minor exceptions, the Hesperia Water District's service area matches the City's boundaries and covers approximately 74 square miles.

In the 2015 Urban Water Management Plan (UWMP), Hesperia Water District estimated that it receives approximately 88.0% of its water from groundwater, 5.5% from purchased water, and 6.5% from recycled water (Hesperia Water District 2016). Regarding the portion of the District's water supply that originates as groundwater, the District receives water from fifteen active wells within the City, the entirety of which is located within Alto Subarea sub basin of the Mojave River Groundwater Basin. The Mojave Water Agency serves as the entity responsible for managing the use, replenishment, and protection of the groundwater basin. The Mojave River Ground Water Basin is an adjudicated basin and thus has a managed groundwater extraction rate, reducing the potential for over-extraction to occur (Hesperia Water District 2021). The Upper Mojave River Ground Water Basin is also classified by the California Department of Water Resources (DWR) as having a very low priority in regard to prioritizing the completion of a Groundwater Sustainability Plan (DWR 2019) (see Section 4.11.2, Relevant Plans, Policies, and Ordinances, for additional detail).

In addition to relying on groundwater, the Hesperia Water District purchases imported State Water Project water. However, the Hesperia Water District does not directly resell State Water Project water to retail customers. Rather, the Hesperia Water District partners with the Mojave Water Agency and other retail water purveyors to use imported State Water Project water to replenish the Upper Mojave Water Basin as part of the Regional Recharge and Recovery Project (also referred to as the "R3" project) which is managed by the Mojave Water Agency. Hesperia Water District can then purchase the rights to recover banked water and distribute it as a potable supply. This practice further assists regional water providers in sustainable management of the Mojave Groundwater Basin.

Lastly, the Hesperia Water District also receives recycled water from the Hesperia Subregional Water Recycling Facility in Hesperia, which is owned and operated by the Victor Valley Wastewater Reclamation Authority

(VVWRA). This facility receives, treats, and recycles a portion of the City's wastewater and distributes recycled water to a select number of customers within the City (City of Hesperia 2021).

Pursuant to the Urban Water Management Planning Act, Hesperia Water District prepares a UWMP on a 5-year basis to evaluate current and projected water supplies and demands amongst other water planning issues. Hesperia Water District's most recent UWMP, prepared in 2016, includes plans for provision of water (including drought scenarios) for its service area. The plan uses regional population, land use plans, and projections of future growth as the basis of planning for future water supply and demonstrating compliance with state water conservation goals and policies. Hesperia Water District comprehensively updates its UWMP every 5 years to refine population projections and include all new land use patterns and development but has not yet released.

According to the Hesperia Water District UWMP, Hesperia Water District has the supply needed to meet current and projected water demands through 2045 during normal-, historic single-dry-, and historic multiple-dry-year periods, as shown in Table 4.11-1, which presents the supplies and demands, as estimated for the 2020 report, for the various drought scenarios for the projected planning period of 2025–2045 in 5-year increments. Demands are shown with the effects of assumed urban demand reduction (conservation) measures that would be implemented during drought conditions.

Table 4.11-1. Supply and Demand Comparison (Acre-Feet per Year)

Supply and Demand		2025	2030	2035	2040	2045
Average Year						
Supply totals		15,250	16,290	16,990	17,740	18,420
Demand totals		15,250	16,290	16,990	17,740	18,420
Difference		0	0	0	0	0
Single-Dry Year						
Supply totals		15,250	16,290	16,990	17,740	18,420
Demand totals		15,250	16,290	16,990	17,740	18,420
Difference		0	0	0	0	0
Multiple Dry Years Supply and Demand Comparison						
First Year	Supply totals	15,250	16,290	16,990	17,740	18,420
	Demand totals	15,250	16,290	16,990	17,740	18,420
	Difference	0	0	0	0	0
Second Year	Supply totals	15,460	16,430	17,140	17,880	18,540
	Demand totals	15,460	16,430	17,140	17,880	18,540
	Difference	0	0	0	0	0
Third Year	Supply totals	15,670	16,570	17,290	18,020	18,660
	Demand totals	15,670	16,570	17,290	18,020	18,660
	Difference	0	0	0	0	0
Fourth Year	Supply totals	15,880	16,710	17,440	18,160	18,780
	Demand totals	15,880	16,710	17,440	18,160	18,780
	Difference	0	0	0	0	0

Table 4.11-1. Supply and Demand Comparison (Acre-Feet per Year)

Supply and Demand		2025	2030	2035	2040	2045
Fifth Year	Supply totals	16,090	16,850	17,590	18,300	18,900
	Demand totals	16,090	16,850	17,590	18,300	18,900
	Difference	0	0	0	0	0

Source: Hesperia Water District 2021.

Existing Water Use

The Project consists of vacant, undeveloped land. As such, there is no existing water demand on site.

Water Infrastructure

The City's existing water distribution system includes approximately 550 miles of underground pipelines. In addition, the distribution system includes a number of water reservoirs, referred to as Plants, to store water to help equalize fluctuations between supply and demand, to supply sufficient water for firefighting, and to meet demands during an emergency or an unplanned outage of a major source of supply.

Within the immediate vicinity of the Project site, existing water lines include water lines within Poplar Street and Mesa Linda Street.

Wastewater

Sewer Infrastructure

The City owns, operates, and maintains a wastewater collection system, including approximately 128 miles of gravity sewer pipe, 2,407 manholes, 704 cleanouts, one operational lift station, and one force main. The primary sources of wastewater in the City's system includes sanitary flow from residential, commercial, and industrial sources. As of 2016, approximately 11% of the City of Hesperia's geographical area was served by sewers. The remaining area is either undeveloped or served by on-site septic tanks (Hesperia Water District 2022).

The portion of the City's wastewater that is not treated by on-site septic tanks is conveyed to and treated and recycled at the Hesperia Subregional Water Recycling Facility which is owned and operated by VVWRA. Currently, this facility is capable of treating up to 1.0 million gallons per day (mgd) of wastewater that is expandable to 4.0 mgd. The water recycling facility is a "scalping plant," meaning that only wastewater is treated here. No solid waste is treated at this site. Solid waste is returned to the sewer line where it continues via VVWRA's 3-mile interceptor to the VVWRA Regional Wastewater Treatment Plant (RWWTP) in Victorville. When measured in 2016, the RWWTP treated on average 12.5 mgd of wastewater and had a maximum treatment capacity of 18.0 mgd (City of Hesperia 2016, 2022; Hesperia Water District 2016, 2021).

Within the immediate vicinity of the Project site, there is a gravity line starting east of Highway 395 in line with Sultana Street, and a 10-inch line going from east to west along Poplar Street.

Existing Wastewater Generation

The Project site is undeveloped and vacant. As such, no wastewater is currently generated.

Stormwater Drainage

The Project site consists of 17.87 acres of rectangular shaped undeveloped land with surface elevations ranging between 3,615 feet above mean seal level (amsl) at the southwestern corner of the site to a low point of approximately 3,590 feet amsl in the northeast corner of the site. Stormwater runoff occurs as sheet flow in a mostly southwest to northeast direction across the Project site. There are no current stormwater collection facilities on the Project site.

Within the greater Project area, stormwater facilities are managed by the San Bernardino County Flood Control District. Locally, Oro Grande Wash is a regional storm drain facility that is part of the City of Hesperia's Master Plan of Drainage. The wash has an earthen bottom and is routinely maintained by the San Bernardino County Flood Control District. This flood control channel flows for approximately 9 miles to the north and northeast of the Project site, recharging the underlying groundwater basin (Upper Mojave River Valley Basin) before eventually draining into the Mojave River, which in turn terminates in Silver Lake.

While there are no stormwater drainage facilities located on site because the site is undeveloped, stormwater flows as sheet flow to the northeast where it naturally evaporates and/or infiltrates into the soil. Stormwater that is conveyed on the site can be delineated as originating from two drainage areas, essentially a western half and eastern half of the site (Figure 4.8-1, Existing Drainage Conditions, in Section 4.8, Hydrology and Water Quality).

Solid Waste

The collection, transport, and disposal of solid waste and recyclables from business use and residential use in the City are provided by Advance Disposal Company Inc. (Advance Disposal). After waste is collected, it is delivered to the Advance Disposal Co & Recycling Center, located at 17105 Mesa Street in Hesperia, approximately 6 miles to the northeast of the Project site. Currently, 75% or more of solid waste generated by the City is being recycled (Advance Disposal 2022). Any remaining waste is collected and hauled to the Victorville Sanitary Landfill (City of Hesperia 2010). Details on this landfill are provided below (CalRecycle 2022a):

> The Victorville Sanitary Landfill is located at 18600 Stoddard Wells Road in Victorville, approximately 13.2 miles to the northeast of the Project site. This landfill is owned and operated by the County of San Bernardino Solid Waste Management Division. The Victorville Landfill has a maximum permitted daily throughput of 3,000 tons, has a maximum capacity of 93,400,000 cubic yards, and has a remaining capacity of 79,400,000 cubic yards. As of 2020, this landfill was expected to remain open for another 27 years.

Construction waste is typically disposed of at inert landfills, which are facilities that accept materials such as soil, concrete, asphalt, and other construction debris. San Bernardino County has two landfills that accept inert waste, the Victorville Sanitary Landfill and the Chino Valley Rock Landfill (County of San Bernardino 2018). The Chino Valley Rock Landfill is located at 13434 Ontario Avenue in Ontario, approximately 31 miles to the southwest of the Project site. The Chino Valley Rock Landfill has a maximum daily throughput of 1,500 tons and a maximum capacity of 4,600,500 tons per year (CalRecycle 2022b). However, as waste from the City is already disposed of at the Victorville Sanitary Landfill, it is unlikely that Chino Valley Rock Landfill would be used. In addition, the City has a franchise agreement with Advance Disposal, which designates them as the City's exclusive waste hauler, including all construction waste.

Existing Solid Waste Generation

The Project site is undeveloped and vacant. As such, no solid waste is currently generated.

Electricity

Electrical power for the City is provided by Southern California Edison (SCE). SCE, a subsidiary of Edison International, serves approximately 180 cities in 11 counties across central and Southern California. According to the California Energy Commission, approximately 104,125 gigawatt-hours of electricity were used in SCE's service area in 2019 (CEC 2022). Demand forecasts anticipate that approximately 115 gigawatt-hours of electricity will be used in SCE's service area in 2025 under a high demand forecast (CEC 2022). SCE receives electric power from a variety of sources. According to the California Public Utilities Commission's 2019 California Renewables Portfolio Standard Annual Report, 36% of SCE's power came from eligible renewables, such as biomass/waste, geothermal, small hydroelectric, solar, and wind sources during 2018 (CPUC 2019).

The City is served by a total of three existing substations, with the substation serving the Project site being the Aqueduct Substation, located east of the Project site near the intersection of Muscatel Street and Topaz Street (SCE 2021). The Aqueduct Substation transforms an incoming 220-kilovolt (kV) electrical current into a 115 kV and 12 kV current, which is distributed to the substation's end users via a network of underground and aboveground electrical lines.

California's electricity industry is an organization of traditional utilities, private generating companies, and state agencies, each with a variety of roles and responsibilities to ensure that electrical power is provided to consumers. In order to ensure projected supply meets demand, SCE tracks planned development and coordinates with the California Independent System Operator (CAISO). The CAISO is a nonprofit public benefit corporation and is the impartial operator of the state's wholesale power grid and is charged with maintaining grid reliability, and to direct uninterrupted electrical energy supplies to California's homes and communities. While utilities (such as SCE) still own transmission assets, the CAISO routes electrical power along these assets, maximizing the use of the transmission system and its power generation resources. The CAISO matches buyers and sellers of electricity to ensure that enough power is available to meet demand. To these ends, every 5 minutes the CAISO forecasts electrical demands, accounts for operating reserves, and assigns the lowest cost power plant unit to meet demands while ensuring adequate system transmission capacities and capabilities.

Part of the CAISO's charge is to plan and coordinate grid enhancements to ensure that electrical power is provided to California consumers. To this end, transmission owners (investor-owned utilities such as SCE) file annual transmission expansion/modification plans to accommodate the state's growing electrical needs. The CAISO reviews and either approves or denies the proposed additions. In addition, and perhaps most importantly, the CAISO works with other areas in the western United States electrical grid to ensure that adequate power supplies are available to the state. In this manner, continuing reliable and affordable electrical power is assured to existing and new consumers throughout the state.

As the Project site is currently undeveloped, there is no electric infrastructure on site. However, existing 12 kV overhead electrical lines emanating from the Aqueduct Substation are located along Phelan Road and U.S. Highway 395.

Existing Electricity Use

The Project site is undeveloped and vacant. As such, no electricity is currently used.

Natural Gas

Natural gas service for the City is provided by the Southern California Gas Company (SoCalGas). The territory serviced by SoCalGas encompasses approximately 20,000 square miles and more than 500 communities. In the California Energy Demand mid-energy demand scenario, natural gas demand is projected to have an annual growth rate of 0.03% in SoCalGas's service territory. In 2019, approximately 2,409 million cubic feet per day were used in SoCalGas's service area, or 879,285 million cubic feet (California Gas and Electric Utilities 2022). By, 2025, the projected demand is expected to be 2,342 million cubic feet per day (California Gas and Electric Utilities 2022). As of 2021, the total capacity available was estimated at 3,425 million cubic feet per day[1] (California Gas and Electric Utilities 2022). Projections out to 2035 continue to show available capacity that is well above the existing and future anticipated natural gas demand in the area serviced by SoCalGas (California Gas and Electric Utilities 2022).

As the Project site is currently undeveloped, there are no underground gas pipelines on site. However, an existing natural gas pipeline is located within Phelan Road.

Existing Natural Gas Use

The Project site is undeveloped and vacant. As such, no natural gas is currently used.

Telecommunications

There are a number of telecommunications service providers in the City including Frontier Communications, Spectrum, and Hughes Net. These are private companies that provide connections to their communication systems on an as-needed basis and maintain existing infrastructure in the vicinity of the Project site. Because the end user of the Project has not yet been identified, it is unknown at this time which provider would provide telecommunications services. However, because existing infrastructure is located within the vicinity of the Project site, it is anticipated that telecommunication lines would be extended onto the Project site from their existing locations.

Existing Telecommunications Use

The Project site is undeveloped and vacant. As such, no telecommunications services are currently used.

4.11.2 Relevant Plans, Policies, and Ordinances

Federal

National Pollutant Discharge Elimination System Permit Program

The National Pollutant Discharge Elimination System (NPDES) permit program was established in the Clean Water Act to regulate municipal and industrial discharges to surface waters of the United States. Discharge from any point source is unlawful unless the discharge is in compliance with an NPDES permit. Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities.

[1] One cubic foot of natural gas has approximately 1,020 British thermal units (BTU) of natural gas or 1.02 thousand British thermal units (kBTU) of natural gas.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (40 CFR, Section 268, Subpart D), contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs that include federal landfill criteria. The federal regulations address the location, operation, design, and closure of landfills, as well as groundwater monitoring requirements.

State

California Code of Regulations, Titles 14 and 27

Title 14 (Natural Resources, Division 7) and Title 27 (Environmental Protection, Division 2 [Solid Waste]) of the California Code of Regulations (CCR) govern the handling and disposal of solid waste and operation of landfills, transfer stations, and recycling facilities.

Assembly Bills 939 and 341: Solid Waste Reduction

The California Integrated Waste Management Act of 1989 (Assembly Bill [AB] 939) was enacted as a result of a national crisis in landfill capacity, as well as a broad acceptance of a desired approach to solid waste management of reducing, reusing, and recycling. AB 939 mandated local jurisdictions to meet waste diversion goals of 25% by 1995 and 50% by 2000 and established an integrated framework for program implementation, solid waste planning, and solid waste facility and landfill compliance. AB 939 requires cities and counties to prepare, adopt, and submit to the California Department of Resources Recycling and Recovery (CalRecycle) a source reduction and recycling element to demonstrate how the jurisdiction will meet the diversion goals. Other elements included encouraging resource conservation and considering the effects of waste management operations. The diversion goals and program requirements are implemented through a disposal-based reporting system by local jurisdictions under California Integrated Waste Management Board (CIWMB) regulatory oversight. Since the adoption of AB 939, landfill capacity is no longer considered a statewide crisis. AB 939 has achieved substantial progress in waste diversion, program implementation, solid waste planning, and protection of public health, safety, and the environment from landfills operations and solid waste facilities.

In 2011, AB 341 was passed, making a legislative declaration that it is the policy goal of the state that not less than 75% of solid waste generated be source reduced, recycled, or composted by the year 2020. AB 341 requires that local agencies adopt strategies that will enable 75% diversion of all solid waste by 2020. This bill requires all commercial businesses and public entities that generate 4 cubic yards or more of waste per week to have a recycling program in place. In addition, multifamily apartments with five or more units are also required to form a recycling program.

Senate Bill 1374: Construction and Demolition Waste Reduction

Senate Bill (SB) 1374 requires that annual reports submitted by local jurisdictions to CIWMB include a summary of the progress made in the diversion of construction and demolition waste materials. In addition, SB 1374 requires the CIWMB to adopt a model ordinance suitable for adoption by any local agency that required 50% to 75% diversion of construction and demolition waste materials from landfills. Local jurisdictions are not required to adopt their own construction and demolition ordinances, nor are they required to adopt CIWMB's model by default.

Assembly Bill 1327: California Solid Waste Reuse and Recycling Access Act of 1991

AB 1327, which was established in 1991, required CalRecycle to develop a model ordinance for the use of recyclable materials in development projects. Local agencies were then required to adopt the model ordinance, or an ordinance of their own, governing adequate areas for collection and loading of recyclable materials in development projects.

Assembly Bill 1826: Mandatory Commercial Organics Recycling

In October 2014, Governor Brown signed AB 1826 Chesbro (Chapter 727, Statutes of 2014), requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste generated per week. (*Organic waste* is defined as food waste, green waste, landscape, and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste.) This law also requires local jurisdictions across the state to implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. This law phases in the mandatory recycling of commercial organics over time. In particular, the minimum threshold of organic waste generation by businesses decreases over time, which means an increasingly greater proportion of the commercial sector will be required to recycle organic waste.

Senate Bill X7-7

SB X7-7, which became effective on February 3, 2010, is the water conservation component to the Delta legislative package (SB 1, Delta Governance/Delta Plan). The bill implements water use reduction goals established in 2008 to achieve a 20% statewide reduction in urban per capita water use by December 31, 2020. The bill requires each urban retail water supplier to develop urban water use targets to help meet the 20% goal by 2020 and an interim 10% goal by 2015. The bill establishes methods for urban retail water suppliers to determine targets to help achieve water reduction targets. The retail water supplier must select one of the four compliance options. The retail agency may choose to comply with SB X7-7 as an individual or as a region in collaboration with other water suppliers. Under the regional compliance option, the retail water supplier must report the water use target for its individual service area.

Sustainable Groundwater Management Act

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package—AB 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley)—collectively known as the Sustainable Groundwater Management Act (SGMA). SGMA requires governments and water agencies of high- and medium-priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over-drafted basins, sustainability should be achieved by 2040. For the remaining high- and medium-priority basins, 2042 is the deadline. Through SGMA, the DWR provides ongoing support to local agencies through guidance, financial assistance, and technical assistance. SGMA empowers local agencies to form Groundwater Sustainability Agencies to manage basins sustainably and requires those Groundwater Sustainability Agencies to adopt Groundwater Sustainability Plans for crucial groundwater basins in California.

Urban Water Management Plans

Pursuant to the California Urban Water Management Act (California Water Code Sections 10610–10656), urban water purveyors are required to prepare and update a UWMP every 5 years. UWMPs are prepared by California's

urban water suppliers to support long-term resource planning and ensure adequate water supplies. Every urban water supplier that either delivers more than 3,000 AFY of water annually or serves more than 3,000 connections is required to assess the reliability of its water sources over a 20-year period under normal-year, dry-year, and multiple-dry-year scenarios in a UWMP. UWMPs must be updated and submitted to the DWR every 5 years for review and approval. The Project site is within the area addressed by the Hesperia Water District UWMP.

Senate Bill 610 and Senate Bill 221: Water Supply Assessments

SB 610 and SB 221, amended into state law effective January 1, 2002, improve the linkage between certain land-use decisions made by cities and counties and water supply availability. The statutes require detailed information regarding water availability and reliability with respect to certain developments to be included in the administrative record, to serve as the evidentiary basis for an approval action by the City or County on such projects. Under Water Code Section 10912[a], projects subject to the California Environmental Quality Act (CEQA) requiring a Water Supply Assessment (WSA) include: residential development of more than 500 dwelling units; shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space; commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space; hotel, motel or both, having more than 500 rooms; industrial, manufacturing, or processing plants, or industrial parks planned to house more than 1,000 persons, occupying more than 40 acres of land or having more than 650,000 square feet of floor area; mixed-use projects that include one or more of the projects specified; or a project that would demand an amount of water equivalent to or greater than the amount required by a 500 dwelling units. A fundamental source document for compliance with SB 610 is the UWMP. The UWMP can be used by the water supplier to meet the standard for SB 610. SB 221 applies to the Subdivision Map Act, conditioning a tentative map on the applicant to verify that the public water supplier has sufficient water available to serve the proposed development.

Pursuant to the requirements of SB 610, a WSA was prepared for the Project and includes a comprehensive assessment of historical demands and a projection of future demands based on forecasted development of the remaining developable lands within the City's water service area (Appendix J).

Executive Order B-29-15

In response to the ongoing drought in California, Executive Order (EO) B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25% relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives became permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the DWR modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

Sanitary Sewer General Waste Discharge Requirements

On May 2, 2006, the State Water Resources Control Board adopted a General Waste Discharge Requirement (Order No. 2006-0003) for all publicly owned sanitary sewer collection systems in California with more than 1.0 miles of sewer pipe. The order provides a consistent statewide approach to reducing sanitary sewer overflows by requiring public sewer system operators to take all feasible steps to control the volume of waste discharged into the system in order to prevent sanitary sewer waste from entering the storm sewer system, and to develop a Sewer System

Management Plan. The General Waste Discharge Requirement also requires that storm sewer overflows be reported to the State Water Resources Control Board using an online reporting system.

California Code of Regulations Title 24, Part 11

In 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code, Part 11 of Title 24, commonly referred to as the CALGreen Code, establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency, water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all new construction of residential and non-residential buildings. CALGreen standards are updated periodically. The latest version (CALGreen 2019) became effective on January 1, 2020.

Mandatory CALGreen standards pertaining to water, wastewater, and solid waste include the following (24 CCR Part 11):

- Mandatory reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings
- Mandatory reduction in outdoor water use through compliance with a local water-efficient landscaping ordinance or the California Department of Water Resources' Model Water Efficient Landscape Ordinance
- Diversion of 65% of construction and demolition waste from landfills

Regional

Water Quality Control Plans (Basin Plans)

The Porter–Cologne Water Quality Control Act, Section 13000, directs each Regional Water Quality Control Board (RWQCB) to develop a water quality control plan (Basin Plan) for all areas within its region. The Basin Plan is the basis for each RWQCB's regulatory program. The Project site is located within the purview of the Lahontan RWQCB (Region 6), and the Project must comply with applicable elements of the Basin Plan for Region 6. The Basin Plan gives direction on the beneficial uses of state waters, describes the water quality that must be maintained, and provides programs necessary to achieve the standards established in the Basin Plan. Beneficial uses of waters within the Mojave River Watershed are addressed in the Mojave River Basin Plan Amendment of the Lahontan Basin Plan.

Mojave River Watershed Water Quality Management Plan

The 2013 Phase II Small Municipal Separate Storm Sewer System (MS4) Permit, adopted by the State Water Resources Control Board, and issued statewide, requires all new development covered by this Order to incorporate low impact development (LID) best management practices (BMPs) to the maximum extent practicable. In San Bernardino County, the Phase II MS4 Permit is applicable within the Mojave River Watershed. In addition, the order also requires the development of a standard design and post-development BMP guidance for incorporation of site design/LID, source control, and treatment control BMPs (where feasible and applicable), and hydromodification mitigation measures to the maximum extent practicable to reduce the discharge of pollutants to receiving waters. The purpose of this technical guidance document for the WQMP is to provide direction to project proponents on the regulatory requirements applicable to a private or public development activity, from project conception to completion. This technical guidance document is intended to serve as a living document, which will be updated as needed to remain applicable beyond the current Phase II MS4 Permit term. Any non-substantive updates to the

technical guiding document and WQMP template will be provided in the annual report. Future substantive updates shall be submitted to the Lahontan RWQCB for review and approval, prior to implementation.

Local

City of Hesperia General Plan

The Conservation Element of the City of Hesperia General Plan (City of Hesperia 2010) identifies, establishes, and sets forth goals or policies to promote the sustainability and environmental integrity of natural resources throughout the City. In addition, the Land Use Element of the General Plan identifies, establishes, and sets forth goals or policies regarding long-term plans for the development of the municipality. Goals or policies related to utilities and service systems in the General Plan includes the following:

Conservation Element

Goal CN-1. Conserve water resources within the Upper Mojave River Groundwater Basin.

Policy CN 1.1. Promote the use of desert vegetation with low water usage and drought-tolerant materials in landscaped areas.

Policy CN 1.2. Educate residents on water conservation methods with best practices and tips.

Policy CN 1.3. Promote reduced use of high nitrate fertilizers, herbicides, pesticides and other chemicals in landscaping areas that can contaminate the quality of the groundwater.

Policy CN 1.4. Limit the disturbance of natural water hydrology by minimizing the creation of impervious surface area and continued utilization of underground retention/detention facilities to recharge groundwater.

Policy CN 1.5. Work with local agencies and jurisdictions to provide a coordinated effort to ensure a safe and constant water supply for the region.

Policy CN 1.6. Encourage the use of low-water consumption fixtures in homes and businesses.

Policy CN 1.7. Require new development to use new technology, features, equipment, and other methods to reduce water consumption.

Goal CN-2. Establish building and development standards to maximize the reclamation of water resources.

Policy CN 2.1. Minimize impacts to washes that convey drainage by prohibiting development within drainage corridors that are not consistent with the Master Plan of Drainage.

Policy CN 2.2. Encourage the use of reclaimed water for irrigation and other non-potable uses.

Policy CN 2.3. Protect open space areas used for recharging groundwater basins.

Policy CN 2.4. Continue to implement the use of reclaimed water through the City's "purple pipe" ordinances and regulations to further the use of reclaimed and treated water.

Policy CN 2.5. Implement the state and local laws and policies to develop retention basins for the replenishment of the underground water supply.

Policy CN 2.6. Coordinate City policies and activities with the Victor Valley Wastewater Reclamation Authority.

Goal CN-3. Minimize development and set aside necessary open space near and along the surface waters as well as those washes and other water passageways located in the City to preserve and protect plant and animal species and their natural habitat dependent on such surface waters and waterways.

Policy CN 3.1. Monitor the development impacts on these surface water resources within the City.

Policy CN 3.2. Preserve areas within the Oro Grand Wash and un-named wash #1 that exhibit ideal native habitat in a natural state.

Goal LU-5. Designate and protect land for public uses to serve the needs of the community for schools, parks, community facilities, open space, utilities, and infrastructure.

Goal LU-6. Promote sustainable development and building practices in all facets of project development through the completion of construction.

Policy LU-6.1. Promote the use of green building standards and Leadership in Energy and Environmental Design (LEED), or other equivalent programs, in both private and public projects.

Policy LU-6.2. Promote sustainable building practices that go beyond the requirements of Title 24 of the California Administrative Code and encourage energy-efficient design elements, consistent with Policy LU-6.1.

Policy LU-6.3. Support sustainable building practices that encourage the use of recycled or other building materials that promote environmental quality, economic vitality, and social benefits. Support construction, and operational practices that limit impacts to the environment.

Policy LU-6.4. Encourage sustainable development that incorporates green building best practices and involves the reuse of previously developed property and/or vacant sites within a built-up area.

Policy LU-6.5. Encourage development that incorporates green building practices to conserve natural resources as part of sustainable development practices.

Policy LU-6.6. Encourage in-fill development on lands located adjacent to existing developed areas and utilities to maximize the efficiency of land use and infrastructure.

Policy LU-6.7. Encourage the development of public facilities in a manner that assures adequate levels of service while remaining compatible with existing and future land uses.

Goal LU-7. Facilitate a self-contained community with a well-designed and maintained community with a full range of densities and uses within the capacity of infrastructure and services.

Policy LU-7.1. Continue to encourage quality design in all new construction to further improve the built environment of the City.

Policy LU-7.2 Promote sustainable building practices that go beyond the requirements of Title 24 of the California Administrative Code and encourage energy-efficient design elements, consistent with Policy LU-6.1.

Policy LU-7.3. Support sustainable building practices that encourage the use of recycled or other building materials that promote environmental quality, economic vitality, and social benefits. Support construction, and operational practices that limit impacts on the environment.

Policy LU-7.4. Encourage sustainable development that incorporates green building best practices and involves the reuse of previously developed property and/or vacant sites within a built-up area.

Policy LU-7.5. Encourage development that incorporates green building practices to conserve natural resources as part of sustainable development practices.

Policy LU-7.6. Encourage in-fill development on lands located adjacent to existing developed areas and utilities to maximize the efficiency of land use and infrastructure.

Policy LU-7.7. Encourage the development of public facilities in a manner that assures adequate levels of service while remaining compatible with existing and future land uses.

Erosion and Sediment Control Plan

For projects that would include soil disturbance during construction, project applicants must submit an erosion and sediment control plan for approval to the City of Hesperia. The City will not issue a grading or building permits until the erosion and sediment control plan for the Project is approved.

The purpose of the erosion and sediment control plan is to:

1. Identify potential pollutant sources that may affect the quality of stormwater runoff and prevent non-stormwater discharges from the construction site.
2. Document the BMPs that will be implemented to prevent, to the maximum extent practicable, construction site pollutants from leaving the site during all phases of construction.
3. Document erosion control, sediment control, and good housekeeping BMPs that shall be implemented year-round as appropriate based on construction activities.

4.11.3 Thresholds of Significance

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

A. Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.
B. Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years.

C. Result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.
D. Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.
E. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.
F. Result in cumulatively considerable impacts relating to utilities and service systems.

4.11.4 Impacts Analysis

Threshold A: Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less-than-Significant Impact. As discussed in further detail below, the Project would result in less-than-significant impacts with regard to the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

Water Facilities

The Project would involve the construction of water distribution infrastructure (i.e., pipes, valves, meters, etc.) to provide domestic water, firewater, and irrigation to the Project site. As discussed in Section 4.11.1, Existing Conditions, there are existing water lines within Poplar Street and Mesa Linda Street. The proposed Project would require a new water line into one of these existing water mains.

The construction of the proposed water improvements described above has the potential to cause environmental effects associated with buildout of the Project as a whole. The aforementioned water pipeline improvements have been considered as part of the Project, however, and their disturbance footprints and construction techniques, as well as their associated impacts, have been accounted for within this Draft EIR. There are no unique impacts associated with the installation of water infrastructure to serve the Project that have not been discussed and accounted for in this document. Therefore, impacts associated with water facilities would be less than significant.

Water Treatment Facilities

While the Project would result in an incremental increase in demand for water treatment capacity, the Project's water demand would not result in or require new or expanded water treatment facilities beyond those facilities that are already planned as part of Hesperia Water District's 2020 UWMP. As such, implementation of the Project would not result in the need to expand water treatment facilities. Therefore, impacts associated with water treatment facilities would be less than significant.

Wastewater Conveyance Facilities

As previously discussed, within the immediate vicinity of the Project site, existing sewer lines include a gravity line starting east of Highway 395 in line with Sultana Street (to the north of the Project site) and another also going from east to west along Poplar Street. The relocation and construction of the proposed sewer improvements has the potential to cause environmental effects associated with buildout of the Project as a whole. However, the proposed

sewer improvements have been considered as part of the Project, and their disturbance footprints and construction techniques, as well as their associated impacts, have been accounted for within this Draft EIR. There are no unique impacts associated with the installation of sewer infrastructure to serve the Project that have not been discussed and accounted for in this document. Therefore, impacts associated with wastewater conveyance facilities would be less than significant.

Wastewater Treatment Facilities

Upon build-out of the Project, the Project's wastewater would be conveyed to the Hesperia Subregional Water Recycling Facility and to the VVWRA RWWTP, which has a treatment capacity of 18.0 mgd and currently produces an average flow of 12.5 mgd, or approximately 70% of its total capacity. According to the wastewater generation rates used in the Project's air quality, greenhouse gas emissions, and energy analyses, the Project would generate approximately 0.2102 mgd of wastewater. Projected wastewater from the Project would represent approximately 3.8% of the remaining capacity of the treatment facility. Given the remaining capacity of the VVWRA RWWTP, the VVWRA RWWTP would be able to adequately accommodate the Project's contribution of wastewater. As such, no improvements to any of the City's or VVWRA's facilities would be required to ensure sewer service to the Project site. Therefore, impacts associated with new wastewater treatment facilities would be less than significant.

Stormwater Drainage Facilities

The Project site and a majority of the surrounding area are characterized as a rural, undeveloped, vacant land comprised of pervious surfaces. Ground surface cover within the Project site is moderately vegetated with native grasses, shrubs, and trees. The predominance of pervious surfaces currently allows for the percolation of water into the underlying soils. Developed land typically has a much lower rate of percolation, increasing the amount of runoff reaching the storm drain infrastructure. However, as discussed in Section 4.8, stormwater infiltration would be used as an LID feature as part of the Project.

The Project-specific preliminary drainage report (Appendix G-1) includes analysis of existing and proposed hydrologic conditions to determine whether the post-construction runoff would have any impact on the receiving storm drain system. An analysis was completed for the 2-year, 10-year, 25-year, and 100-year, 24-hour storm event, in accordance with the San Bernardino County Hydrology Manual, to calculate the existing and Project conditions. The proposed stormwater drainage system basins would be sized and designed to prevent flooding from a 100-year storm while also accommodating the required retention volume for water quality purposes. The basins would be designed to capture the entire volume generated from a 10-year 24-hour storm, meaning no runoff would be discharged off site (Appendix G-1).

The Project-specific Preliminary WQMP (Appendix G-2) indicates that stormwater runoff from the Project site would be conveyed to two on-site aboveground infiltration/retention basins and one underground corrugated metal pipe detention systems, which would be designed to capture and infiltrate more than the difference between the existing drainage and propose drainage conditions.

The construction of the proposed storm drain improvements described above has the potential to cause environmental effects associated with buildout of the Project as a whole. The storm drain improvements have been considered as part of the Project, and their disturbance footprints and construction techniques, as well as their associated impacts, have been accounted for within this Draft EIR. There are no unique impacts associated with the installation of storm drain improvements to serve the Project that have not been discussed and accounted for in this document. Therefore, impacts associated with stormwater drainage facilities would be less than significant.

Electric Power, Natural Gas, and Telecommunications

Development of the Project would increase demands for electricity and natural gas and would increase requirements for telecommunication technology infrastructure. Upgrades would be required with respect to electric power, natural gas, and telecommunication facilities (i.e., cable television services), based on the change in land use (i.e., greater intensification). These utilities would be part of a dry utility package that would be installed on site and in the adjacent public roadways to provide service to the Project. Upgrades would be confined to the connections to the Project site and not any off-site centralized facilities. The existing infrastructure is located directly adjacent to the Project site within the public streets. Connection to these existing utilities would require limited construction, which would be temporary and limited to trenching, to the depth of the underground lines. Project construction would occur in accordance with all applicable regulatory requirements. These upgrades and connections have been considered as part of the Project, and their disturbance footprints and construction techniques, as well as their associated impacts, have been accounted for within this Draft EIR.

Electricity would be provided to the Project site by SCE. SCE conducts ongoing monitoring and electrical project development to ensures that it can provide adequate electrical service to the Project area. SoCalGas's Projections out to 2035 continue to show available capacity that is well above the existing and future anticipated natural gas demand in the area serviced by SoCalGas (California Gas and Electric Utilities 2022). There are a number of private telecommunications service providers that provide connections to their communication systems on an as-needed basis and maintain existing infrastructure in the vicinity of the Project site. Project demand for electricity, natural gas and telecommunications would be adequately served by existing infrastructure and capacity. Therefore, impacts associated with electric, natural gas, and telecommunication lateral connections would be less than significant.

Threshold B: Would the Project have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years?

Less-than-Significant Impact. Implementation of the Project would result in the construction of two industrial/warehouse buildings and associated improvements areas on an approximately 17.87-acre site. Based on estimates that were used to calculate energy usage for the operation of the Project, the total water demand for the Project was estimated at 79.3 million gallons per year or 217,260 gallons per day, which is the equivalent of 243 acre-feet per year (AFY). As there is currently no existing water demand for the Project site, the net increase in water demand would be equivalent to the Project's proposed water demand of 243 AFY.

The 2021 Hesperia Water District UWMP has planned for growth within its service area over the next 20 years. Hesperia Water District has made an allowance for future demand estimates. Future demand services are based on historical growth rates in the service area. According to Table 7-2 in the Hesperia Water District 2021 UWMP, Hesperia Water District projects a water demand increase of 3,170 AFY from 2025 (15,250 AFY) to 2045 (18,420 AFY). The net water demand of the proposed Project development would be accounted for within this growth, as the Project is consistent with the underlying City land use designations for the Project site.

As long-term water supply is a significant concern in California, Hesperia Water District, in cooperation with VVWRA, plans to increase water supply reliability throughout its service region by expanding the Hesperia Subregional Water Recycling Facility's water treatment capacity from 1.0 mgd to 2.0 mgd by 2030 as well as build a second water recycling facility within the City that would be able to treat 2.6 mgd of wastewater by 2040. The City additionally plans to construct multiple recharge basins in cooperation with Mojave Water Agency to deliver and recharge State Water Project water into underlying groundwater basins within the Hesperia Water District's service area (Hesperia Water District 2016). Collectively, these additional measures would enable water supply to meet or exceed water

demand for Hesperia Water District for now and into the future. The UWMP identities a sufficient and reliable water supply for Hesperia Water District's service area, including sufficient water supply for the Project. In addition, the WSA that was prepared for the proposed Project, also concluded that there would be sufficient water supplies for the proposed demand in normal, single dry year, and multiple dry year scenarios (Appendix X). Therefore, impacts associated with water supply would be less than significant.

Threshold C: Would the Project result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?

Less- than-Significant Impact. As previously discussed, upon build-out of the Project, the Project's wastewater would be conveyed to the Hesperia Subregional Water Recycling Facility and to the VVWRA RWWTP, which has a treatment capacity of 18.0 mgd and currently produces an average flow of 12.5 mgd, or approximately 70% of its total capacity. According to the wastewater generation rates used in the Project's air quality, greenhouse gas emissions, and energy analyses, the Project would generate approximately 0.2102 mgd of wastewater. Projected wastewater from the Project would represent approximately 3.8% of the remaining capacity of the treatment facility. Given the remaining capacity of the VVWRA RWWTP, the VVWRA RWWTP would be able to adequately accommodate the Project's contribution of wastewater. Furthermore, as previously discussed, to accommodate an increase in population growth throughout the region, the Hesperia Water District, in cooperation with the VVWRA, plans to expand the water recycling facility to treat 2.0 mgd of wastewater by 2030 as well as build a second water recycling facility within the City that would be able to treat 2.6 mgd of wastewater by 2040.

In addition, Districts are empowered by the California Health and Safety Code to charge a fee for the privilege of connecting (directly or indirectly) to the Districts' sewage systems for increasing the strength or quantity of wastewater discharged from connected facilities. This connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the wastewater treatment system to accommodate the Project. Therefore, impacts associated with wastewater treatment capacity would be less than significant.

Threshold D: Would the Project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less-than-Significant Impact. Construction and operation of the Project would result in less-than-significant impacts with regard to the generation of solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

Short-Term Construction Impacts

Construction of the Project would result in the generation of solid waste such as scrap lumber, concrete, residual wastes, packing materials, plastics, and soils. Per the CALGreen Code, at least 65% of construction and demolition waste must be diverted from landfills. The City also has construction and demolition debris diversion requirements; however, the CALGreen standards require an equivalent level of diversion (65% diversion). Any hazardous wastes that are generated during construction activities would be managed and disposed of in compliance with all applicable federal, state, and local laws. The remaining 35% of construction material that is not required to be recycled would either be disposed of or voluntarily recycled at a solid waste facility with available capacity. As previously described, there are two existing landfills within San Bernardino County that accept inert waste, the Victorville Sanitary Landfill and the Chino Valley Rock Landfill. However, as waste from the City is already transported to the Victorville Sanitary Landfill, it would continue to be transported there. As of 2020, this landfill had an expected remaining capacity of 93,400,000 cubic yards and will remain open for another 27 years.

The City has a franchise agreement with Advance Disposal, which designates them as the City's exclusive waste hauler. Therefore, it is not an option to self-haul or use other companies to transport construction debris. However, the City currently recycles 75% or more of all solid waste produced in the City, exceeding the minimum requirement of 65% per CALGreen requirements. As such, any construction requiring disposal at an inert waste landfill would be sufficiently accommodated by existing landfills.

For the reasons stated above, Project construction would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals (e.g., CALGreen standards). Therefore, short-term construction impacts associated with solid waste disposal would be less than significant.

Long-Term Operational Impacts

Once operational, the Project would produce solid waste on a regular basis, in association with operation and maintenance activities. Anticipated solid waste generation attributable to the Project is shown in Table 4.11-2. The solid waste generation rates assume compliance with the California Code of Regulations Title 24, Part 11.

Table 4.11-2. Anticipated Solid Waste Generation

Project Components	Size Metric	Units of Size Metric	Rate	Solid Waste Generation (tons per year)
Unrefrigerated Warehouse – No Rail	1,000 square feet	414,700	0.94 tons per 1,000 square feet per year	389,818
			Total	389,818

Source: CAPCOA 2022.

As previously discussed, the City has a franchise agreement with Advance Disposal, which designates them as the City's exclusive waste hauler. Advance Disposal owns and operates the Advance Disposal Co & Recycling Center, which recycles 75% or more of the municipal's waste prior to being transferred to the Victorville Sanitary Landfill. This landfill has a maximum daily permitted throughput of 3,000 tons per day. Assuming solid waste is collected weekly, the net solid waste that is anticipated to be produced by the Project would equate to approximately 0.087% of the available capacity of the Victorville Landfill through its estimated closure date.

Prior to Victorville Sanitary Landfill reaching capacity, additional landfills and strategies would be identified so that disposal needs continue to be met. Landfills within San Bernardino County that exceed the expected lifespan of the Victorville Landfill include the Barstow Sanitary Landfill, which is expected to remain open another 51 years, and the Landers Landfill, which is expected to remain to open another 52 years (CalRecycle 2019). Additional strategies to accommodate solid waste generated by the Project during its lifespan include the expansion of existing landfills, the construction of new landfills, and the selection of landfills outside of the County. As such, in the event of closure of the Victorville Sanitary Landfill, other landfills in the region would be able to accommodate solid waste from the Project, and regional planning efforts would ensure continued landfill capacity into the foreseeable future.

For the reasons described above, Project operations would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

Therefore, long-term operational impacts associated with solid waste disposal would be less than significant.

Threshold E: Would the Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less-than-Significant Impact. As described above, solid waste from commercial uses in the City is brought to the Advance Disposal Co & Recycling Center, where waste is sorted for recyclable materials. From there, the remainder of the waste is taken to the Victorville Sanitary Landfill. This facility is regulated under federal, state, and local laws. Additionally, the City is required to comply with the solid waste reduction and diversion requirements set forth in AB 939, AB 341, AB 132, and AB 1826.

In addition, as previously described, waste diversion and reduction during Project construction and operations would be completed in accordance with CALGreen standards and City diversion standards. As a result, the Project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. Therefore, impacts associated with solid waste statutes and regulations would be less than significant.

Threshold F: Would the Project result in cumulatively considerable impacts related to utilities and service systems?

Less-than-Significant Impact. The Project would not result in cumulatively considerable impacts related to utilities and service systems, as discussed below.

Water Supply

The development of the Project would increase land-use intensities in the area, resulting in increased water usage. The Project would be served by Hesperia Water District. As such, the development of the Project would increase the amount of water used in the Hesperia Water District's service area. Hesperia Water District 2021 UWMP estimates the annual water demand for 2025 is projected to be 15,250 acre-feet. This equates to approximately 4.97 billion gallons a year of water or 13.6 mgd. Hesperia Water District UWMP states that Hesperia Water District and other water agencies in Southern California have planned provisions for regional water for the growing population, including drought scenarios for its service area. This plan includes a new water demand forecast prepared for the major categories of demand and uses regional population, demographic projections, the dry climate, historical water use to develop these forecasts. As such, the Project would not be expected to result in increased water usage causing the need for new entitlements, resources, and/or treatment facilities that are not already being planned to accommodate regional growth forecasts.

In addition, the 2021 UWMP and the WSA prepared for the proposed Project concluded that water demand and supply projections for Hesperia Water District, including the Project, demonstrate that projected supplies exceed demand through the year 2045. These projections consider land use, water development programs and projects, and water conservation. For example, Hesperia Water District, in coordination with the VVWRA, plans on expanding the Hesperia Subregional Water Recycling Facility water treatment capacity from 1.0 mgd to 2.0 mgd by 2030 as well as building a second water recycling facility within the City that would be able to treat 2.6 mgd of wastewater by 2040. The City additionally plans to construct multiple recharge basins in cooperation with Mojave Water Agency to deliver and recharge State Water Project water into underlying groundwater basins within the Hesperia Water District's service area. Collectively, these additional programs would enable water supply to exceed water demand for the Hesperia Water District now and into the future.

Lastly, compliance with the CALGreen Code would be required for new development. In addition, CALGreen Code standards require a mandatory reduction in outdoor water use, in accordance with the DWR Model Water Efficient Landscape Ordinance. This would ensure that the Project does not result in wasteful or inefficient use of limited water resources and may, in fact, result in an overall decrease in water use per person.

Due to water planning efforts and water conservation standards, impacts would not be cumulatively considerable.

Wastewater

The Project would increase the amount of wastewater that is being generated in the area. However, as previously described, with the upsizing and installation of the sewer improvements, the wastewater treatment facilities in the Project would have the capacity to convey and treat municipal flows. Additionally, Hesperia Water District addresses its long-term planning efforts through the development of a long-term capital plan, which serves as a fundamental roadmap of required water, recycled water, and water reclamation facilities needed to support the build out of existing jurisdictional general plans throughout its service area. Hesperia Water District's Capital Plan relies on its Wastewater Master Plan (City of Hesperia 2008a) and Recycled Water Master Plan (City of Hesperia 2008b), which identifies the wastewater and recycled water infrastructure projects that will be necessary to accommodate future build-out in its service area. As cumulative increases in wastewater treatment demand within the service area require facility upgrades, Hesperia Water District would charge service connection fees. Such fees would ensure that capital improvements are completed sufficiently to accommodate increased wastewater inflows associated with the Project area. As such, due to Hesperia Water District's long-term planning efforts, Hesperia Water District would have adequate capacity to serve the Project and cumulative projects' projected demand in addition to the provider's existing commitments using existing entitlements and infrastructure, and impacts would not be cumulatively considerable.

Solid Waste

Development of the Project would increase land-use intensities in the area, resulting in increased solid waste generation in the service area for the Victorville Sanitary Landfill. However, per CALGreen, 65% of construction and debris waste must be diverted from landfills. Once operational, AB 939 mandates that cities divert from landfills, at a minimum, 50% of the total solid waste generated to recycling facilities. According to Advance Disposal, the exclusive waste hauler of the City of Hesperia, the City currently recycles 75% or more of debris generated within the municipality. In addition, to reduce on-site solid waste generation, the Project would be required to implement waste reduction, diversion, and recycling during both construction and operation. Therefore, through compliance with state and local solid waste diversion requirements, Project impacts would not be cumulatively considerable.

Electric Power, Natural Gas, and Telecommunication

Development of the Project would add to demands for energy and would increase requirements for telecommunication technology infrastructure. As stated in Section 4.11.1, the CAISO plans and coordinates grid enhancements to ensure that electrical power is provided to California consumers. To this end, transmission owners (investor-owned utilities such as SCE) file annual transmission expansion/modification plans to accommodate the state's growing electrical needs. The CAISO reviews and either approves or denies the proposed additions. In addition, and perhaps most importantly, the CAISO works with other areas in the western United States electrical grid to ensure that adequate power supplies are available to the state. In this manner, continuing reliable and affordable electrical power is assured to existing and new consumers throughout the state. Typically, upgrades to utility networks fall under the jurisdiction of the California Public Utilities Commission and would be subject to environmental review as electrical projects are proposed. As a result of this process which involves ongoing monitoring and electrical project development, SCE ensures that it can provide adequate electrical service to the Project area.

As part of the Project, natural gas and telecommunication lines would be extended onto the Project site from their existing locations within the vicinity of the Project site, resulting in localized less-than-significant impacts. Given the nature of telecommunication and gas lines (which are not typically subject to the constraints of existing

facilities), once telecommunication lines are extended to the Project site, no additional telecommunication or gas line construction is anticipated to be required. Additionally, cumulative development would be subject to review on a case-by-case basis. Should the applicable service provider determine that upgrades or extensions of infrastructure be required, any such upgrades would be included within each project's environmental review. As a result, impacts associated with upgrades of electric, natural gas, and telecommunication facilities would not be cumulatively considerable.

4.11.5 Mitigation Measures and Level of Significance After Mitigation

Threshold A: Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

The Project would result in less-than-significant impacts with regard to the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. No mitigation is required.

Threshold B: Would the Project have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years?

The Project would result in less-than-significant impacts with regard to the availability of sufficient water supplies to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years. No mitigation is required.

Threshold C: Would the Project result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?

The Project would result in less-than-significant impacts with regard to the capability of the Project's future wastewater treatment provider to serve the Project, in addition to the provider's existing commitments. No mitigation is required.

Threshold D: Would the Project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

The Project would result in less-than-significant impacts with regard to the generation of solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. No mitigation is required.

Threshold E: Would the Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

The Project would result in less-than-significant impacts to compliance with federal, state, and local management and reduction statutes and regulations related to solid waste. No mitigation is required.

Threshold F: Would the Project result in cumulatively considerable impacts related to utilities and service systems?

The Project would result in less-than-significant cumulative impacts related to utilities and service systems. No mitigation is required.

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5 Effects Found Not to Be Significant

Section 15128 of the California Environmental Quality Act (CEQA) guidelines requires that an environmental impact report (EIR) briefly describe potential environmental effects that were determined not to be significant and therefore were not discussed in detail in the EIR. The environmental issues discussed in the following sections are not considered significant for the Poplar 18 Project (Project), and the reasons for these less-than-significant impact or no impact determinations are discussed herein.

5.1 Agricultural and Forestry Resources

Conversion of Agricultural Lands and Forestlands

According to the California Department of Conservation California Important Farmland Finder (CDOC 2021a), the Project site is designated as "grazing land." Grazing land does not contain Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (collectively "Important Farmland"). The Project would not occur within any farmland locations and would not result in the conversion of this land to nonagricultural use. The Project site is not located on or adjacent to any lands under a Williamson Act contract (City of Hesperia 2010b). Further, the Project site and surrounding area are not zoned for agricultural uses, but instead for commercial, industrial, business park, rural estate residential, and neighborhood commercial uses (City of Hesperia 2010a). As such, implementation of the Project would not conflict with existing zoning for agricultural use or land under a Williamson Act contract.

In regard to forestland or timberland, the Project site is not located on or adjacent to forestland, timberland, or timberland zoned timberland production (City of Hesperia 2010a). Therefore, no impacts associated with Important Farmland, Williamson Act contracts/Farmland Security Zones, forestland, or timberland would occur.

5.2 Geology and Soils

Fault Rupture

The Alquist-Priolo Earthquake Zoning Act (Alquist-Priolo Act) requires the delineation of fault zones along active faults in California. The purpose of the Alquist-Priolo Act is to regulate development on or near active fault traces to reduce hazards associated with fault rupture. The Alquist-Priolo Earthquake Fault Zones are the regulatory zones that include surface traces of active faults. According to the California Department of Conservation, the Project site is not located in an Alquist-Priolo Earthquake Fault Zone (CDOC 2021b). According to the City of Hesperia (City) General Plan, although several faults exist within and in proximity to the City, no faults exist beneath the Project site (City of Hesperia 2010a). Thus, the potential for surface rupture is low on the Project site. Although the Project site could potentially be subject to strong ground shaking during an earthquake, because of the absence of an underlying fault in the Project area, there is no potential for faulting on site. Therefore, no impacts associated with fault rupture would occur.

Seismic Ground Shaking

Similar to other areas located in seismically active Southern California, the City is susceptible to strong ground shaking during an earthquake. However, the Project site is not located within an Alquist-Priolo Earthquake Fault Zone, and the site would not be affected by ground shaking more than any other area in this seismic region. Pursuant to

Title 15, Buildings and Construction, of the Hesperia Municipal Code, the Project would incorporate the design recommendations included in its geotechnical report, which will be subject to review and approval by City staff prior to issuance of a grading permit. The Project's geotechnical report provides specific design recommendations to ensure the structural integrity of the Project in the event that seismic ground shaking is experienced at the Project site. These recommendations include performing remedial grading, over-excavating existing soils, and recompacting these soils with structured fill, among other technical design recommendations (Appendix E). Additionally, the Project's structures would be designed consistent with the most recent version of the California Building Code, which includes universal standards relating to seismic load requirements. Compliance with recommendations of the Project's geotechnical report, impacts associated with strong seismic ground shaking would be less than significant.

Ground Failure

Soil liquefaction is a seismically induced form of ground failure that has been a major cause of earthquake damage in Southern California. Liquefaction is a process by which water-saturated granular soils transform from a solid to a liquid state because of a sudden shock or strain such as an earthquake. Due to the existing geologically young, loose, unconsolidated sediments throughout the City, liquefaction has the potential to occur within the City. However, according to Exhibit SF-1 of the City's General Plan Safety Element (City of Hesperia 2010a), the Project site is not within an area of the City that has the potential for liquefaction. In addition, the Project's geotechnical report states that based on subsurface conditions encountered at boring locations, liquefaction is not considered to be a concern for the Project site (Appendix E). With implementation of the recommendations of the Project's geotechnical report, impacts associated with potential seismic-related ground failure, including liquefaction, would be less than significant.

Landslide

According to Exhibit SF-1 of the City's General Plan Safety Element (City of Hesperia 2010a), the Project site is not located in an area identified as susceptible to slope instability. The Project site is relatively flat and is not located adjacent to any potentially unstable topographical feature such as a hillside or riverbank. Therefore, no impacts associated with landslides would occur.

Soil Erosion and Topsoil Loss

The Project would involve earthwork and other construction activities that would disturb surface soils and temporarily leave exposed soil on the ground's surface. Common causes of soil erosion from construction sites include stormwater, wind, and soil being tracked off site by vehicles. To help curb erosion, Project construction activities must comply with all applicable federal, state, and local regulations for erosion control. The Project would be required to comply with standard regulations, including South Coast Air Quality Management District Rules 402 and 403, which would reduce construction erosion impacts. Rule 402 requires that dust suppression techniques be implemented to prevent dust and soil erosion from creating a nuisance off site (SCAQMD 1976). Rule 403 requires that fugitive dust be controlled with best available control measures so that is does not remain visible in the atmosphere beyond the property line of the emission sources (SCAQMD 2005).

Since Project construction activities would disturb 1 or more acres, the Project must adhere to the provisions of the National Pollutant Discharge Elimination System Construction General Permit. Construction activities subject to this permit include clearing, grading, and ground disturbances such as stockpiling and excavating. The Construction General Permit requires implementation of a stormwater pollution prevention plan, which would include

construction features for the Project (i.e., best management practices [BMPs]) designed to prevent erosion and protect the quality of stormwater runoff. Sediment-control BMPs may include stabilized construction entrances, straw wattles on earthen embankments, sediment filters on existing inlets, or the equivalent. Therefore, construction impacts related to soil erosion would be less than significant.

Once developed, the Project site would include buildings, paved surfaces, and other on-site improvements that would stabilize and help retain on-site soils. The remaining portions of the Project site containing pervious surfaces would primarily consist of landscape areas. These landscape areas would include a mix of trees, shrubs, plants, and groundcover that would help retain on-site soils while preventing wind and water erosion from occurring. Therefore, operational impacts related to soil erosion would be less than significant.

Unstable Geologic Unit or Soil

As discussed previously, the potential for the Project to result in or be affected by landslides and liquefaction is low, and these issues are not anticipated at the Project site. Project activities may occur on geologically unstable soils such as those susceptible to lateral spreading, subsidence, or collapse. However, the Project would be designed consistent with the specific design recommendations of the Project's geotechnical report, which provides recommendations to perform remedial grading, over-excavate existing soils, and recompact these soils with structured fill, among other technical design recommendations (Appendix E). Implementation of these recommendations would address these potentially hazardous conditions and ensure structural integrity in the event that seismic-related issues are experienced at the Project site. Compliance with the recommendations of the geotechnical report is mandated by Section 15.060.040 of the Hesperia Municipal Code, and compliance is subject to inspection by the City Building Official. With implementation of the recommendations of the Project's geotechnical report, impacts would be less than significant.

Expansive Soil

Expansive soils are characterized by their potential shrink/swell behavior. Shrink/swell is the change in volume (expansion and contraction) that occurs in certain fine-grained clay sediments from the cycle of wetting and drying. Clay materials are known to expand with changes in moisture content. The higher the percentage of expansive materials present in near-surface soils, the higher the potential for substantial expansion.

According to the City's General Plan, the City's soils are mostly comprised of water-laid sand, silt, and gravel (City of Hesperia 2010a). The U.S. Department of Agriculture's Web Soil Survey does not identify the Project site or surrounding area as containing clay soils, which are typically expansive. The Project site is documented from 0 to 6 inches as loamy fine sand and from 6 to 60 inches deep as sandy loam and coarse sandy loam, which does not exhibit significant shrink/swell behavior (USDA 2021). Therefore, impacts would be less than significant.

Septic Tanks

The Project would connect to the City's municipal sewer lines. The Project would not require septic tanks or any other alternative wastewater disposal system. Therefore, no impacts associated with the adequacy of soils and septic systems would occur.

5.3 Hazards and Hazardous Materials

Hazardous Materials Use Near Schools

The nearest school to the Project site is San Joaquin Valley College (9331 Mariposa Road), which is located approximately 1.4 miles southeast of the site. As such, the closest school is located well outside a 0.25-mile radius around the Project site. Therefore, no impacts associated with emitting or handling hazardous materials within 0.25 miles of a school would occur.

Hazardous Materials Site Complied Pursuant to Government Code Section 65962.5

The Hazardous Waste and Substances Sites list (Cortese List) is a planning document providing information about the location of hazardous materials release sites. California Government Code Section 65962.5 requires the California Environmental Protection Agency to develop, at least annually, an updated Cortese List. The Department of Toxic Substances Control is responsible for a portion of the information contained in the Cortese List. Other state and local government agencies are required to provide additional hazardous materials release information for the Cortese List (CalEPA 2021). A review of Cortese List online data resources does not identify hazardous materials or waste sites on the Project site or immediately surrounding area (DTSC 2021; RWQCB 2021). Therefore, no impacts would occur.

Airport-Related Safety Hazards or Excessive Noise

The nearest operational public-use airport to the Project site is the Hesperia Airport, which is located approximately 6.2 miles to the south. The airport is located on the Mesa, west of Antelope Valley wash and south of Ranchero Road. According to the Comprehensive Land Use Plan, the Project site is not located within a runway protection zone or safety zone area, which would have potential safety and noise impacts (San Bernardino County 1991). Therefore, no impacts associated with airport hazards would occur.

Emergency Response and Evacuation Plans

According to the City's Hazard Mitigation Plan, the Project would be required to comply with the City's Emergency Operations Plan (City of Hesperia 2017). The City Emergency Operations Plan provides a framework for coordinated response and recovery activities during an emergency (City of Hesperia 2017). In addition, the City's General Plan designates all freeways and arterial roads as emergency evacuation routes. Typically, roadway facilities designated by the City's General Plan Safety Element as major, primary, or secondary highways, as well as other streets with regional access, are assumed to serve as evacuation routes in the event of a regional emergency. As roadways capable of supporting high traffic volumes and providing regional access to other highways, freeways, and neighboring jurisdictions, both Main Street and U.S. Highway 395 (US Hwy 395) are expected to serve as emergency evacuation routes in the event of an emergency. The Project does not propose any changes to the geometry of these roadways, and thus it follows that these roadways' ability to serve as emergency evacuation routes would not be compromised. As a result, the Project would not significantly affect emergency response or evacuation activities. Therefore, impacts associated with emergency response and evacuation routes would be less than significant.

5.4 Hydrology and Water Quality

Flood Hazard, Tsunami, or Seiche Zones

The Project would not be susceptible to flood hazards, tsunami, or seiche. Seiche is generally associated with oscillation of enclosed bodies of water (e.g., reservoirs, lakes) typically caused by ground shaking associated with a seismic event; however, the Project site is not located near an enclosed body of water. Flooding from tsunami conditions is not expected because the Project site is located approximately 60 miles from the Pacific Ocean.

In addition, the Federal Emergency Management Agency Flood Map Service Center identifies the Project site as Zone X, which is classified as an area of minimal flood hazard, outside of the Special Flood Hazard Area and higher than the elevation of the 0.2%-annual-chance flood (FEMA 2021). As such, the Project would not risk release of pollutants due to inundation. Therefore, impacts associated with seiche, tsunami, or flooding would be less than significant.

5.5 Land Use and Planning

Division of an Existing Community

The physical division of an established community typically refers to the construction of a linear feature (e.g., a major highway or railroad tracks) or removal of a means of access (e.g., a local road or bridge) that would impair mobility within an existing community or between a community and outlying area.

Under the existing condition, the Project site is vacant land and is not used as a connection between established communities. Instead, connectivity within the area surrounding the Project site is facilitated via local roadways. As such, the Project would not impede movement within the Project area, within an established community, or from one established community to another. Therefore, no impacts associated with division of an existing community would occur.

Conflict with any Land Use Plan

The Project would be consistent with the applicable goals and policies set forth by the Specific Plan, General Plan, and the 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Therefore, impacts would be less than significant based on the consistency analysis detailed below.

City of Hesperia Land Use Plans, Policies, and Regulations

General Plan

Pursuant to state law, specific plans establish land use regulations for those areas covered by the specific plan. The General Plan designates the specific plan to cover all freeway frontages within the City as well as the commercial and industrial areas parallel to the freeway corridor. The goals, policies, and development standards applicable to the Project are found in the specific plan.

Main Street and Freeway Corridor Specific Plan

The Main Street and Freeway Corridor Specific Plan (MSFCSP) establishes a framework for the Main Street and freeway corridors and is intended to facilitate and support development and improvements along these corridors. The regulations of the MSFCSP replace those set forth in the planning and zoning provisions of the City's Development Code, and any other applicable ordinances.

The Project site is zoned and designated by the MSFCSP as CIBP (City of Hesperia 2021a). The Project site would be developed in accordance with the provisions set forth in this land use designation. The MSFCSP lists CIBP as one of two industrial zones. The CIBP zone is meant to create consolidated areas for employment-creating uses in a business park setting. The zone is intended to provide for service commercial, light industrial, light manufacturing, and industrial support uses, mainly conducted in an enclosed building, to minimize environmental impacts such as noise, vibration, air pollution, glare, or waste disposal. The CIBP zone falls within three land use districts, Main Street/I-15 District, US Hwy 395/I-15 District, and Industrial District. The Main Street/I-15 and US Hwy 395/I-15 Districts provide enhanced vehicular, truck, and rail accessibility by taking advantage of their location along the I-15 corridor with its connection to US Hwy 395, and its linkage to the Southern California Logistics Airport. The Project site falls within the Main Street/I-15 District. The Main Street/I- 15 District takes advantage of regional freeway accessibility and visibility through high-quality development and streetscape enhancements.

Among the permitted uses in the CIBP zone, warehousing and wholesale distribution centers are permitted at 200,000 square feet or less. Warehouses and wholesale distribution centers over 200,000 square feet are conditionally permitted. The MSFCSP states that the maximum gross floor area ratio in CIBP zones is 0.35 (City of Hesperia 2021a). Additionally, maximum building height within the zone is 60 feet at the setback line, thereafter height may be increased at a rate of 1-foot in height for every additional 3-foot increase in front yard setback, up to a maximum building height of 150 feet (City of Hesperia 2021a).

The Project would include construction of a total of 414,700 square feet of warehousing use, which would require a Conditional Use Permit. As part of the Project approvals, the Project Applicant is requesting approval of a Conditional Use Permit. Assuming that the City's decision makers approve the Conditional Use Permit, the Project would be an allowable use within the CIBP zone. Additionally, the Project plans would be reviewed by City staff to ensure consistency with all applicable development standards and regulations.

The MSFCSP contains several goals and policies that address land use and planning and are applicable to the Project. An analysis of the Project's consistency with these goals and policies is provided in Table 5-1.

Table 5-1. Main Street and Freeway Corridor Specific Plan Consistency Analysis

Specific Plan Goal or Policy	Consistency Summary
Specific Plan Goal: LU-1b: Provide for continuing growth within the Specific Plan area, with land uses and intensities appropriately designated to meet the needs of anticipated growth and to achieve the community's objectives.	**Consistent.** The Project would include the construction of an industrial/warehouse building. The Project site is designated as CIBP and would support the expansion of regional commercial development. Additionally, the Project would support the City's goal of increasing jobs within the City and balancing the job to housing ratio. Therefore, the Project would be consistent with the goal.
Policy LU-1.1: With the adoption of the Main Street and Freeway Corridor Specific Plan, establish land use districts that have complimentary rather than competitive uses/zones, and maintain the integrity of and interrelationships between these zones.	**Consistent.** The Project site would be located in the MSFCSP's Main Street/I-15 District. The Main Street/I-15 District is intended for mixed-use development to enhance large-scale regional commercial and service uses. The Project would be compatible with the Main Street/I-15 District and be consistent with its land use designation of CIBP. Therefore, the Project would be consistent with the goal.

Table 5-1. Main Street and Freeway Corridor Specific Plan Consistency Analysis

Specific Plan Goal or Policy	Consistency Summary
Goal LU-2: Create a jobs/housing balance in the City.	**Consistent.** It is assumed the estimated number of employees required for operation would be approximately 657. According to the City's 2019 SCAG profile, the total number of jobs in the City of Hesperia during 2017 was 22,513 (SCAG 2019). Additionally, in 2018, the total number of housing units in the City was 29,601 (SCAG 2019). As such, jobs generated from the Project would contribute to balancing the jobs/housing ratio. Therefore, the Project would be consistent with the goal.
Policy LU-2.1: Designate land near Interstate 15 and Highway 395 for freeway-oriented commercial and industrial/business park development.	**Consistent.** The Project is located approximately 1.3 miles west of I-15. Additionally, the Project site is a quarter mile east of Highway 395. The Project site and surrounding area to the north and partially to the east and south are designated as CIBP. The Project would include construction of an industrial/warehouse building. Therefore, the Project is consistent with the policy.
Policy LU-2.2: Add to the City's industrial land base where logically and physically possible to do so.	**Consistent.** Under existing conditions, the Project site is vacant, undeveloped land. The Project site is designated as CIBP. As such, the Project would include construction of an industrial/warehouse building with designated office space and associated improvements. Because of the nature of the Project and the size of the Project site, the Project would add to the City's industrial land base, while being physically advantageous. Additionally, the Project site is located ¼ mile from Highway 395 and 1.3 miles west of I-15. Therefore, trucks traveling to and from the Project site would have convenient freeway access. Thus, the Project would be consistent with the policy.
Goal LU-6: Make use of vacant sites with the Specific Plan area.	**Consistent.** The Project site is located on vacant land within the MSFCSP area. The Project involves the construction of an industrial/warehouse building. The Project site has a land use designation of CIBP and would comply with provisions associated with development in a CIBP zone outlined in the MSFCSP.

Source: City of Hesperia 2021a.
Notes: CIBP = Commercial/Industrial Business Park; City = City of Hesperia; MSFCSP = Main Street and Freeway Corridor Specific Plan; I = Interstate; SCAG = Southern California Association of Governments.

Regional Transportation Plan/Sustainable Communities Strategy

The 2020–2045 RTP/SCS (also known as the Connect SoCal Plan) was adopted on September 3, 2020, and presents the land use and transportation vision for the region through the year 2045, providing a long-term investment framework for addressing the region's challenges (SCAG 2020). The RTP/SCS explicitly lays out goals related to housing, transportation, equity, and resilience in order to adequately reflect the increasing importance of

these topics in the region, and where possible the goals have been developed to link to potential performance measures and targets. The RTP/SCS development process involved working closely with local governments throughout the region to collect and compile data on land use and growth trends. The core vision of the RTP/SCS is to build upon and expanded land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern.

Analysis of the Project's consistency with the SCAG 2020 RTP/SCS goals is provided in Table 5-2.

Table 5-2. Regional Transportation Plan/Sustainable Communities Strategy Consistency Analysis

RTP/SCS Goals	Consistency Summary
RTP/SCS Goal 1. Encourage regional economic prosperity and global competitiveness.	**Consistent.** The Project would involve construction of a 414,700-square-foot industrial/warehouse building. Thus, the Project would generate jobs and tax revenue for the City and its residents. Once operational, the Project would add to the City's business tax base and would employ approximately 657 workers, helping the City better meet its jobs/housing balance, while also providing commercial/industrial business park use that will help the City offer a more balanced array of land uses throughout the broader Project area.
RTP/SCS Goal 2. Improve mobility, accessibility, reliability, and travel safety for people and goods.	**Consistent.** The Project would include construction of an industrial/warehouse building that would be easily and efficiently accessible to US Hwy 395 and I-15, which would help to facilitate regional goods movement throughout Southern California.
RTP/SCS Goal 3. Enhance the preservation, security, and resilience of the regional transportation system.	**Consistent.** A traffic impact analysis will be conducted to determine the Project's potential impact on the regional and local circulation system. If deemed necessary by this upcoming evaluation, feasible mitigation measures would be required to minimize any adverse effects on the circulation system resulting from the Project to the greatest extent feasible. The findings of this evaluation effort will be included in the Draft EIR.
RTP/SCS Goal 4. Increase person and goods movement and travel choices within the transportation system.	**Consistent.** The Project would include construction and operation of an industrial/warehouse building, which would be easily and efficiently accessible to I-15 and US Hwy 395 and would help to facilitate regional goods movement throughout Southern California.
RTP/SCS Goal 5. Reduce greenhouse gas emissions and improve air quality.	**Consistent.** The Project would involve development of an industrial use that inherently involves the emission of GHG and air contaminant emissions. An air quality and GHG analysis will be required to determine whether the Project could potentially result in any adverse effects related to air quality, health risk, and/or GHG emissions, and mitigation measures will be applied, as necessary, to minimize potential impacts. In addition, according to the SCAG Comprehensive Regional Goods Movement Plan and Implementation Strategy, the region will run out of suitably zoned vacant land designated for warehouse facilities in or around 2028. Thus, the Project would meet the growing demand for warehousing space, and would do so in an area that is proximate to regional highways (I-15 and US Hwy 395), thereby reducing the need for longer distance trips which could result in additional air pollutant and GHG emissions. Additionally, the Project would employ approximately 657 workers, helping the City better meet its jobs/housing balance, which should

Table 5-2. Regional Transportation Plan/Sustainable Communities Strategy Consistency Analysis

RTP/SCS Goals	Consistency Summary
	shorten commute distances of City residents who choose to work on the Project site, which would have a direct positive effect on tailpipe GHG and air contaminant emissions.
RTP/SCS Goal 6. Support healthy and equitable communities.	**Consistent.** The Project would involve development of an industrial use that inherently involves the emission of GHG and air contaminant emissions. An air quality and GHG analysis will be required to determine whether the Project could potentially result in any adverse effects related to air quality, health risk, and/or GHG emissions, and mitigation measures will be applied, as necessary, to minimize potential impacts. In addition, according to the SCAG Comprehensive Regional Goods Movement Plan and Implementation Strategy, the region will run out of suitably zoned vacant land designated for warehouse facilities in or around 2028. Thus, the Project would meet the growing demand warehousing space, and would do so in an area that is proximate to regional highways (I-15 and US Hwy 395), thereby reducing the need for longer distance trips which could result in additional air pollutant and GHG emissions. Additionally, development of the Project at the Project site would provide quick and efficient access to I-15 and US Hwy 395, thereby eliminating the need for truck traffic to take longer routes through residential or commercial/retail areas. The Project would also include a number of components that are designed to reduce energy use, such as incorporating energy efficiency design features in compliance with CALGreen standards. By incorporating these measures, the Project would minimize its potential environmental effects on surrounding sensitive receptors to the maximum extent practicable. Thus, the Project would assist in this goal.
RTP/SCS Goal 7. Adapt to a changing climate and support an integrated regional development pattern and transportation network.	**Consistent.** As climate change continues to increase the number of instances of disruption to local and regional systems, it will become increasingly more urgent for local jurisdictions to employ strategies to reduce their individual contributions. The Project would involve development of an industrial use that inherently involves the emission of GHG and air contaminant emissions. An air quality and GHG analysis will be required to determine whether the Project could potentially result in any adverse effects related to air quality, health risk, and/or GHG emissions, and mitigation measures will be applied, as necessary, to minimize potential impacts. In addition, according to the SCAG Comprehensive Regional Goods Movement Plan and Implementation Strategy, the region will run out of suitably zoned vacant land designated for warehouse facilities in or around 2028. Thus, the Project would meet the growing demand warehousing space, and would do so in an area that is proximate to regional highways (I-15 and US Hwy 395), thereby reducing the need for longer distance trips which could result in additional GHG emissions.
RTP/SCS Goal 8. Leverage new transportation technologies and	**Consistent.** Development of the Project at the Project site would provide quick and efficient access to I-15 and US Hwy 395, thereby eliminating the

Table 5-2. Regional Transportation Plan/Sustainable Communities Strategy Consistency Analysis

RTP/SCS Goals	Consistency Summary
data-driven solutions that result in more efficient travel.	need for truck traffic to take longer routes through residential or commercial/retail areas. In addition, according to the SCAG Comprehensive Regional Goods Movement Plan and Implementation Strategy, the region will run out of suitably zoned vacant land designated for warehouse facilities in or around 2028. Thus, the Project would meet the growing demand warehousing space, and would do so in an area that is proximate to regional highways (I-15 and US Hwy 395), thereby reducing the need for longer distance trips which could result in additional air pollutant and GHG emissions.
RTP/SCS Goal 9. Encourage development of diverse housing types in areas that are supported by multiple transportation options.	**Not Applicable.** The Project site is not zoned for housing, but rather industrial, and business uses. Thus, this goal is not applicable.
RTP/SCS Goal 10. Promote conservation of natural and agricultural lands and restoration of habitats.	**Consistent.** The Project would be located on an area zoned for industrial, and business uses. The Project site does not support agriculture.

Source: SCAG 2020 (RTP/SCS Goals).
Notes: RTP/SCS = Regional Transportation Plan/Sustainable Communities Strategy; City = City of Hesperia; I = Interstate; EIR = Environmental Impact Report; GHG = greenhouse gas; SCAG = Southern California Association of Governments; CALGreen = California Green Building Standards.

5.6 Mineral Resources

Mineral Resources and Recovery Sites

According to the Conservation Element in the City's General Plan, mineral resources such as sand, gravel, and stone have been identified within the City (City of Hesperia 2010a). Additionally, several aggregate resources such as gravelly alluvium and sandy alluvium are known to exist within the City. These resources are primarily located within wash areas and active stream channels.

Although the City has known mineral resources, none are identified as being of value to the region or the residents of the state (City of Hesperia 2010b). The Project would be located within an area that is not zoned for mineral resource extraction operations, and thus, such activities cannot currently occur on the Project site. Therefore, impacts to mineral resources would be less than significant.

5.7 Population and Housing

Inducement Population Growth

The Project would require a temporary construction workforce and a permanent operational workforce, both of which could potentially induce population growth in the Project area. The temporary workforce would be needed to construct the warehouse building and associated improvements. The number of construction workers needed during any given period would largely depend on the specific stage of construction, but would likely range from a

dozen to several dozen workers on a daily basis. These short-term positions are anticipated to be filled primarily by construction workers who reside in the Project site's vicinity; therefore, construction of the Project would not generate a permanent increase in population within the Project area.

According to the U.S. Census Bureau, as of April 1, 2020, the population of the City was approximately 99,818 residents (U.S. Census Bureau 2020). Upon buildout, the City anticipates growing to more than 243,000 residents (City of Hesperia 2010a). As such, the Project-related increase of approximately 657 employees would represent a nominal percentage of the City's projected future population upon General Plan build-out.

In addition, data provided by the California Employment Development Department in August 2021 found that the unemployment rate for San Bernardino County is at 7.6%, which is approximately the same as the state average 7.5% (EDD 2021). As such, the Project's temporary and permanent employment requirements could likely be met by the City's existing labor force without people needing to relocate into the Project region, and the Project would not stimulate population growth or a population concentration above what is assumed in local and regional land use plans. Therefore, impacts to population and housing would be less than significant.

Displacement of Existing Housing and People

The Project site is currently vacant and contains no housing or other residential uses. Given that no residential uses are located on site, it follows that the site does not support a residential population. Therefore, no impacts associated with displacement of housing or people would occur.

5.8 Public Services

Fire Protection Facilities

Fire protection and emergency response services for the Project site are provided by the San Bernardino County Fire Department (SBCFD). SBCFD operates three fire stations within the City, with Fire Station 305 (8331 Caliente Road) located approximately 1.9 miles south of the Project site; Fire Station 304 (15660 Eucalyptus Street) located approximately 5.7 miles northeast; and Fire Station 302 (17288 Olive Street) located approximately 6.9 miles east (SBCFD 2021).

According to the City's General Plan Safety Element, the average response time within the City is approximately 7 minutes, 16 seconds (City of Hesperia 2010a). If needed, fire stations from adjacent cities, such as Victorville and Apple Valley, may respond to emergency calls in Hesperia. Based on the proximity of the Project site to the existing SBCFD facilities, the average response times in the Project area, the ability for nearby cities to respond to emergency calls, and the fact that the Project site is already located within SBCFD's service area, the Project could be adequately served by the SBCFD without the construction of new, or the expansion of existing, facilities.

In addition, as previously analyzed in Section 3.14(a), Population and Housing, the Project would not directly or indirectly induce unplanned population growth in the City. Although the Project could potentially result in an incremental increase in calls for service to the Project site compared to existing conditions, this increase is expected to be nominal (as opposed to new residential or commercial/retail land uses, which do result in greater increase in calls for service) and would not result in the need for new fire protection facilities.

Overall, it is anticipated that the Project would be adequately served by existing SBCFD facilities, equipment, and personnel. Therefore, impacts associated with the construction or expansion of fire protection facilities would be less than significant.

Police Protection Facilities

Police protection and emergency response services for the Project site are provided by the San Bernardino County Sheriff's Department. The sheriff's department operates one station within the City, Hesperia Police Department (15840 Smoke Tree Street), and is located approximately 5 miles east of the Project site. Hesperia Police Department is comprised of approximately 58 law enforcement personnel, including 1 captain, 1 lieutenant, 7 sergeants, 5 detectives, and 44 deputy sheriffs (City of Hesperia 2021b).

As previously addressed, the Project would not directly or indirectly induce unplanned population growth in the City. Although the Project could potentially result in a slight incremental increase in calls for service to the Project site compared to existing conditions, this increase is expected to be nominal (as opposed to new residential or commercial/retail land uses, which do result in a greater increase in calls for service) and would not result in the need for new police protection facilities.

Overall, it is anticipated that the Project would be adequately served by existing San Bernardino County Sheriff's Department facilities, equipment, and personnel. Therefore, impacts associated with the construction or expansion of police protection facilities would be less than significant.

School Facilities

As previously discussed, the Project would not directly or indirectly induce unplanned population growth in the City. Although the Project would require employees to construct and operate the Project, these short-term and long-term employees would likely already reside within the broader Project area. As such, it is not anticipated that many people would relocate to the City as a result of the Project, and an increase in school-age children requiring public education is not expected to occur as a result.

Similar to other development projects in the City, the Project would be subject to Senate Bill 50, which requires payment of mandatory impact fees to offset any impact to school services or facilities. The provisions of Senate Bill 50 are deemed to provide full and complete mitigation of school facilities impacts, notwithstanding any contrary provisions in CEQA or other state or local laws (Government Code Section 65996). In accordance with Senate Bill 50, the Project Applicant would pay its fair share of impact fees based on the Project's square footage per Government Code Section 65995(h). These impact fees are required of most residential, commercial, and industrial development projects in the City. Therefore, no impacts associated with construction or expansion of school facilities would occur.

Parks

The Project would construct an industrial/warehouse building in the City. The Project does not include any residential uses and would not directly or indirectly induce unplanned population growth in the City. As such, the Project would not increase the use of existing neighborhood parks or regional parks in the City and surrounding area. Therefore, no impacts associated with construction or expansion of parks would occur.

Other Public Facilities

Given industrial nature of the Project and the lack of population growth that would result from the Project, it is unlikely that the Project would increase the use of libraries and other public facilities. Therefore, no impacts associated with construction or expansion of other public facilities would occur.

5.9 Recreation

Existing, Expanded, and New Recreation Facilities

The Project would construct an industrial/warehouse building and associated improvements. The Project does not include any residential uses and would not directly or indirectly result in a substantial and unplanned increase in population growth within the Project area. As such, the Project would not increase the use of existing neighborhood parks or regional parks in the City and surrounding area. In addition, as an industrial use, the Project does not include recreational facilities or require the construction or expansion of recreational facilities. Therefore, no impacts associated with park and recreational facilities would occur.

5.10 References

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6 Other CEQA Considerations

6.1 Growth-Inducing Impacts

As stated in Section 15126.2(e) of the California Environmental Quality Act (CEQA) Guidelines, an environmental impact report (EIR) is required to include a discussion of a project's growth-inducing effects. The CEQA Guidelines generally describe such effects as follows: (1) economic growth, population growth, or additional housing in the surrounding environment; (2) removal of obstacles to population growth (e.g., a major expansion of a wastewater treatment facility that allows for more construction in the service area); (3) increases in population that tax existing services requiring construction of new facilities that could cause significant environmental effects; and (4) characteristics of a project that would encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.

The Poplar 18 Project (Project) would require a temporary construction workforce and a permanent operational workforce, both of which could potentially induce population growth in the Project area. The temporary workforce would be needed to construct the industrial/warehouse building and associated improvements. The number of construction workers needed during any given period would largely depend on the specific stage of construction, but would likely range from a dozen to several dozen workers on a daily basis.

Because the future tenants are not known yet, the number of jobs that the Project would generate cannot be precisely determined. The Project would include 414,700 square feet of industrial/warehouse space, excluding associated improvements. It is estimated the total number of employees required for operation would be approximately 657.

According to the U.S. Census Bureau, as of April 1, 2020, the population of the City was approximately 99,818 residents (U.S. Census Bureau 2020). Upon buildout, the City anticipates growing to more than 243,000 residents (City of Hesperia 2010a). As such, the Project-related increase of approximately 657 employees would represent a nominal percentage of the City's projected future population upon General Plan build-out. As such, the Project's temporary and permanent employment requirements could likely be met by the City's existing labor force without people needing to relocate into the Project region, and the Project would not stimulate population growth or a population concentration above what is assumed in local and regional land use plans.

Projects that physically remove obstacles to growth, or projects that indirectly induce growth, are those that may provide a catalyst for future unrelated development in the area. The Project would involve installation of new sewer lines in the Project vicinity. The purpose of these new utilities is solely to serve the needs of the Project, and not to provide capacity for future projects or growth. In addition, since the surrounding Project area is already served by existing wet and dry utilities, the Project would not expand sanitary sewer or stormwater drainage infrastructure into areas not previously served by such utilities.

Further, given that the surrounding Project area is already served by existing wet and dry utilities, it is unlikely that the Project would tax existing community service facilities or require construction or expansion of new regional-scale facilities with capacity to serve more than just the Project. Although roadway improvements are planned to the roads fronting the project site as part of Project implementation, these improvements are necessary to provide for adequate circulation in the Project area; thus, the Project would not result in indirect population growth by providing vehicular access to an area presently lacking such access.

Based on the proximity of the Project site to existing facilities, the average response times in the Project area, the ability for nearby cities to respond to emergency calls, and the fact that the Project site is already located within the San Bernardino County Fire Department and San Bernardino County Sheriff's Department service areas, the Project would be adequately served by public services without the construction of new, or the expansion of existing, facilities. Although the Project could potentially result in an incremental increase in calls for service to the Project site compared to existing conditions, this increase is expected to be nominal (as opposed to new residential or commercial/retail land uses, which do result in greater increase in calls for service) and would not result in the need for new or expanded fire or police facilities. Lastly, since the Project would not directly or indirectly induce unplanned population growth in the City, it is not anticipated that many people would relocate to the City because of the Project, and an increase in school-age children requiring public education is not expected to occur as a result. Thus, the need for new or expanded school facilities is not required.

In conclusion, the Project could cause population growth through new job opportunities. However, this growth falls well within City and regional growth projections for population and housing. The Project would not remove obstacles to population growth and would not cause an increase in population such that new community facilities or infrastructure would be required outside of the Project site. Lastly, the Project is not expected to encourage or facilitate other activities that could significantly affect the environment, as explained above. For these reasons, the Project is not considered to be significantly growth inducing.

6.2 Significant Irreversible Changes

The CEQA Guidelines requires that an EIR address any significant irreversible changes that would be caused by implementation of a project. According to CEQA Guidelines Section 15126.2(c), such a change would involve one or more of the scenarios discussed below.

6.2.1 Change in Land Use That Commits Future Generations to Similar Uses

According to the Main Street and Freeway Corridor Specific Plan (MSFCSP), the land use and zoning designations for the Project site are Commercial/Industrial Business Park (CIBP) (City of Hesperia 2010a). The proposed Project would therefore be consistent with the existing general plan and zoning designations and the MSFCSP. The construction and operation of the proposed Project would develop a total of 414,700 square feet of industrial/warehouse space with associated improvements on land the City already committed to industrial/warehouse (and similar) uses when the City adopted the MSFCSP. The Project would be consistent with the intent of the Main Street/Interstate 15 District in the MSFCSP area, which is to emphasize large-scale employment uses near the interchange along U.S. Highway 395.

6.2.2 Irreversible Damage from Environmental Accidents

Potential environmental accidents of concern include those events that would adversely affect the environment or public due to the type of quantity of materials released and the receptors exposed to that release. Construction activities associated with the Project would involve some risk of environmental accidents. However, these activities would be conducted in accordance with all applicable federal, state, and local regulations, and would follow professional industry standards for safety. Once operational, any materials associated with environmental accidents would comply with applicable federal, state, and local regulations. Use of any such materials would not adversely affect the environment or public due to the type or quantity of materials released and the receptors exposed to that release.

6.2.3 Large Commitment of Nonrenewable Resources

Commitment of nonrenewable resources includes issues related to increased energy consumption, loss of agricultural lands, and lost access to mining reserves. There would be an irretrievable commitment of labor, capital, and materials used during the construction and operation of the Project. Nonrenewable resources would primarily be committed in the form of fossil fuels such as fuel, oil, natural gas, and gasoline used by equipment associated with construction of the Project. Consumption of other nonrenewable or slowly renewable resources would also occur. These resources would include lumber and other forest products, sand and gravel, asphalt, and metals such as steel, copper, and lead.

To ensure that energy implications are considered in project decisions, CEQA requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy (California Public Resources Code Section 21100[b][3]). Energy conservation implies that a project's cost-effectiveness be reviewed not only in dollars, but also in terms of energy requirements. For many projects, cost-effectiveness may be determined more by energy efficiency than by initial dollar costs. A lead agency may consider the extent to which an energy source serving a project has already undergone environmental review that adequately analyzed and mitigated the effects of energy production.

Consistent with California Public Resources Code Section 211009(b)(3), CEQA Guidelines Appendix G, and a ruling set forth by the court in *California Clean Energy Committee v. City of Woodland*, potentially significant energy implications of a project must be considered in an EIR to the extent relevant and appliable to that project. Accordingly, based on the energy consumption thresholds set forth in both Appendix F and Appendix G of the CEQA Guidelines, the Project's estimated energy demands (both short-term construction and long-term operational demands) were evaluated (see Section 4.5, Energy, of this EIR). The overall purpose of the energy analysis was to evaluate whether the Project would result in the wasteful, inefficient, or unnecessary consumption of energy.

As further assessed in the energy analysis, for new development, such as that proposed by the Project, compliance with California Title 24 energy efficiency requirements is considered demonstrable evidence of efficient use of energy. The Project would provide for and promote energy efficiencies beyond those required under other applicable federal and state standards and regulations, and in doing so would meet or exceed all Title 24 standards. On this basis, the Project would not result in the inefficient, wasteful, or unnecessary consumption of energy.

6.3 Significant and Unavoidable Impacts

Pursuant to CEQA Guidelines Section 15126.2(b), an EIR must address any significant environmental impacts, including those that can be mitigated but not reduced to less than significant as a result of implementation of a project. As discussed throughout Chapter 4, Environmental Analysis, of this EIR, at the Project and cumulative levels, the Project would result in significant and unavoidable impacts related to greenhouse gas emissions and transportation. For all other environmental issue areas, the Project would result in either less-than-significant impacts or no impact.

6.4 References Cited

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7 Alternatives

7.1 Alternatives to the Proposed Project

In accordance with California Environmental Quality Act (CEQA) Section 15126.6, this chapter of the Environmental Impact Report (EIR) contains a comparative evaluation of the Poplar 18 Project (Project) with alternatives to the Project, including a No Project Alternative. Consistent with CEQA Section 15126.6, this chapter focuses on alternatives to the Project that are capable of avoiding or substantially reducing any significant adverse impacts associated with the Project, even if the alternatives may impede attainment of Project objectives or prove less cost efficient. In addition, implementation of a Project alternative may potentially result in new impacts that would not have resulted from the Project.

The CEQA Guidelines require that the analysis of alternatives provide sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with a proposed project. Specifically, CEQA Guidelines Section 15126.6(a) outlines 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.

Under case law and CEQA Guidelines Section 15126.6(f), the discussion of alternatives is subject to a rule of reason, and need not be exhaustive. CEQA Guidelines Section 15126.6(d) states that "if an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternatives shall be discussed, but in less detail than the significant effects of the project as proposed." Determining factors that may be used to eliminate alternatives from detailed consideration in an EIR are (a) failure to meet most of the basic project objectives, (b) infeasibility, or (c) inability to avoid significant environmental impacts. CEQA Guidelines Section 15364 defines "feasibility" as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors."

An EIR need not consider a project alternative whose effects cannot be reasonably ascertained, whose implementation is remote and speculative, or whose execution does not substantially lessen or avoid the significant effects of a proposed project.

As discussed throughout Chapter 4, Environmental Analysis, of this EIR, at the project and cumulative levels, the Project would result in significant and unavoidable greenhouse gas (GHG) emissions and transportation impacts. For all other environmental issue areas, the Project would result in either less-than-significant impacts or no impact.

7.2 Project 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 Section 15126.6 in determining whether to exclude alternatives from detailed consideration in an EIR are failure to meet most of the basic objectives of the project, infeasibility, or inability to avoid significant environmental impacts.

With respect to the feasibility of potential alternatives to a proposed project, CEQA Guidelines Section 15126.6(t)(l) states the following:

> Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries … and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site.

In determining an appropriate range of project alternatives to be evaluated in this EIR, a number of possible alternatives were initially considered and then rejected. Project alternatives were rejected because they could not accomplish the basic objectives of the Project, they would not have resulted in a reduction of significant adverse environmental impacts, or they were considered infeasible to construct or operate.

Alternative Land Uses

According to the City's General Plan and the Main Street and Freeway Corridor Specific Plan (MSFCSP), the land use and zoning designations for the Project site is Commercial/Industrial Business Park (CIBP). The Alternative land uses for the Project site, including residential, commercial/retail, and mixed-use, were considered and rejected because these land uses are not consistent with the CIBP zoning designation.

According to the MSFCSP, the purpose of the CIBP zone is to create employment-generating uses in a business park setting. The CIBP zone is intended to provide for service commercial, light industrial, light manufacturing and industrial support uses, mainly conducted in enclosed buildings. Important goals of the development standards for this zone are to ensure a quality appearance from the Interstate (I) 15 freeway corridor and I Avenue, and compatibility with the adjacent commercial, residential, and recreational uses. Permitted and conditionally permitted uses and activities within the CIBP zone include manufacturing, offices warehousing and wholesale distribution centers. Land uses that deviate from industrial-based activities, including residential, standalone retail, and residential mixed-use, are not identified in the MSFCSP as being suitable within the CIBP zone (City of Hesperia 2021).

In addition, given the proximity of other existing industrial uses in both the immediate and broader Project area, most uses other than industrial, manufacturing, heavier commercial, and similar activities would likely not be compatible with the neighboring industrial and truck-related uses; thus, the Project site would be an undesirable location for residential, standalone retail, and residential mixed-use land uses.

Alternate Sites

CEQA does not require that an analysis of alternate sites always be included in an EIR. However, if the surrounding circumstances make it reasonable to consider an alternate site, then a project alternative should be considered and analyzed in the EIR. Pursuant to CEQA Guidelines Section 15126.6(f)(2), in making the decision to include or exclude analysis of an alternate site, the "key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only

locations that would avoid or substantially lessen any of the significant effects of the project need to be considered for inclusion in the EIR."

Development of the Project in an alternate location would have similar impacts as would occur with implementation of the Project at its proposed location. Thus, moving the Project to an alternative site—assuming that another 17.87-acre property exists within the City and is available—would merely displace environmental impacts instead of avoiding or minimizing them.

Further, if the alternate site were to be located farther from major regional transportation routes (e.g., I-15, U.S. Highway 395, and other local truck routes), operational impacts associated with traffic congestion, truck noise, and tailpipe air contaminant emissions would likely be greater than those associated with the Project and disclosed in this EIR, as the vehicles would need to travel farther on local roads to reach regional highway systems.

Moreover, according to the Southern California Association of Governments (SCAG) Comprehensive Regional Goods Movement Plan and Implementation Strategy, the region will run out of suitably zoned vacant land designated for warehouse facilities in or around 2028. At that time, forecasts show that the demand for warehousing space will increase to more than 1 billion square feet. The Comprehensive Regional Goods Movement Plan and Implementation Strategy also states that unless other land not currently zoned for warehousing becomes available, SCAG forecasts that by 2035, a projected shortfall of space of approximately 227 million square feet will occur (SCAG 2013). Thus, it is likely that selection of an alternate site would merely displace the development activity proposed by the Project to another location, resulting in the same or greater environmental effects, given the regional demand for logistics and warehousing space in the SCAG region.

7.3 Project Alternatives Under Further Consideration

The following provides analysis of the No Project/No Development Alternative (Alternative 1) and the two build alternatives: the Other Development Project Alternative (Alternative 2) and the Reduced Development Intensity Alternative (Alternative 3).

The evaluation below provides a relative comparison between the Project and each of the three Project alternatives. The analysis considers the issue areas evaluated in Chapter 4, Environment Analysis, and Chapter 5, Effects Found Not to Be Significant, of this EIR. In many cases, the Project and a Project alternative may share the same level of significance (i.e., both scenarios would result in a less-than-significant impact). However, although they might share the same level of significance under CEQA, the actual degree of impact may be slightly different for each scenario, and this relative difference is the basis for a conclusion of greater or lesser impacts compared to the Project.

An environmentally superior alternative is identified among the alternatives evaluated in this EIR. An alternative would be environmentally superior to the Project if it would result in fewer or less significant environmental impacts while achieving most of the Project objectives.

7.3.1 No Project/No Development Alternative (Alternative 1)

Project Alternative 1 Summary

Under Alternative 1, construction of the Project would not occur. The Project site would remain unchanged, and development activities related to construction and operation of the proposed industrial/warehouse building, associated office spaces, surface parking and loading areas, and all other proposed on- and off-site improvements would not occur.

In the short term, consistent with the existing conditions, the Project site would continue to be undeveloped. Under Alternative 1, the Project site would remain vacant, undeveloped land, although the site would presumably continue to be subject to illegal dumping, trespassing, and unpermitted off-road vehicle use, similar to the existing conditions.

Project Alternative 1 Impact Analysis

The Project site would remain unchanged and would remain a vacant, undeveloped, yet disturbed property. On-site conditions would remain similar to existing conditions; because development activities associated with the Project would not occur, nearly all environmental impacts would be reduced compared with Project conditions. Exceptions would include impacts related to agricultural and forestry resources and recreation, which would result in no impact, whether or not the Project is constructed on the Project site.

Impacts associated with hydrology and water quality would likely be greater under Alternative 1 than with the Project, as the new engineered stormwater drainage system and detention basins would not be constructed on the Project site as proposed under the Project. Under existing conditions, no storm drain or treatment facilities are currently found on site; therefore, stormwater is not currently collected or treated on the Project site prior to being discharged off site. This same stormwater drainage scenario would continue to occur under Alternative 1, resulting in greater impacts related to surface drainage, water quality, erosion, and potentially, periodic isolated flooding.

In addition, based on site reconnaissance performed for the Phase I Environmental Site Assessment, during construction there is a potential to encounter shallow soil contamination due to the observed dumping on the Project site, especially automotive fluid containers and tires. Under the Project scenario, implementation of Mitigation Measure (MM) HAZ-1 requires the removal and disposal of on-site tires and oil containers (e.g., retail motor oil containers and commercial oil drums) from the Project area in accordance with all applicable local, state, and federal guidelines. Further, for excavation and grading activities that occur in areas with the potential for residual contamination, MM-HAZ-1 requires that a qualified environmental professional screen soils in the identified area prior to excavation and grading based on the nature of the potential contamination. In the event that potential contamination is encountered, the contamination shall be evaluated by a qualified environmental professional using the appropriate collection and sampling techniques as determined by the environmental professional based on the nature of the contamination, and the nature and extent of contamination shall be determined and the appropriate handling, disposal, and/or treatment shall be implemented in accordance with applicable regulatory requirements.

However, under Alternative 1, the cleanup activities required pursuit to MM-HAZ-1 would not be initiated, and the existing full and partially full motor oil canisters, used tire piles, and potentially contaminated shallow soils would remain on site. The Project site has previously been a location for illegal dumping activities, and would continue to be so under Alternative 1. The Project would help to remediate the Project site through compliance with MM-HAZ-1, and because this mitigation would not be implemented if not for the Project, Alternative 1 would result in greater impacts related to hazardous materials.

Project Alternative 1 Impact Conclusion

Overall, none of the mitigation measures required for the Project would be necessary with Alternative 1, and this Project alternative would not result in any significant adverse and unavoidable impacts. However, Alternative 1 would not develop a jobs-producing and tax-generating land use near transportation corridors within the housing-rich Victor Valley/High Desert region (Objective 1); concentrate non-residential uses near existing roadways, highways, and freeways (Objective 2); develop a fiscally sound and employment-generating land use that

maximizes utilization of industrial zoned areas (Objective 3); create a project that takes advantage of and enhances existing infrastructure, including the proximity to major regional roadways such as I-15 and U.S. Highway 395, railroad service corridors, and other similar infrastructure (Objective 4); or fulfill the existing and growing demand for logistics and warehouse uses in the region (Objective 5). As such, Alternative 1 would not meet any of the Project objectives.

7.3.2 Other Development Project Alternative (Alternative 2)

Project Alternative 2 Summary

Under Alternative 2, the Project site would be redeveloped with other land uses, consistent with the Project site's existing CIBP zoning designation. As described above, Project site has a land use and zoning designation of CIBP. Therefore, the Alternative 2 scenario involves a land use allowed under the CIBP designation.

The CIBP zone is intended to provide for service commercial, light industrial, light manufacturing, and industrial support uses, mainly conducted in enclosed buildings. The MSFCSP lists several different uses that are either permitted by right or conditionally permitted in the CIBP zone. These include commercial storage facilities/mini-warehouses (i.e., self-storage facilities), offices, manufacturing, small and large equipment sales and rental, schools, vehicle rental and sales, minor and major vehicle repair, and vehicle wash facilities.

It is assumed that Alternative 2 would involve development of a land use that would be permissible either by right or by a Conditional Use Permit, including the land uses listed above. It is also assumed that those uses would share a similar development intensity, floor-area-ratio, and site coverage as the Project. Land uses that are expressly not allowed in the CIBP zone—specifically residential—would not be considered under Alternative 2.

Moreover, given the Project site's proximity to major regional transportation routes (e.g., I-15, U.S. Highway 395, and other local truck routes), and because of the continued demand for new industrial/warehouse operations in the Project region, it is assumed that the Project constructed under Alternative 2 would consist of warehouse, distribution, logistics, or other similar type industrial (or industrial-supporting) land use of a size similar to the Project. Such an alternative could take the form of a similar square footage of industrial space, but warehouse space could be split up into many smaller buildings instead of one larger building.

Project Alternative 2 Impact Analysis

It is assumed that Alternative 2 would involve construction and operation of a land use of similar development and operational intensity as the Project, would have a floor-area-ratio similar to the Project, and would be subject to the same federal, state, and local requirements (e.g., incorporation of a new engineered stormwater drainage system, architectural design review) as the Project. Thus, it is expected that environmental impacts associated with Alternative 2 would be similar—if not identical—to those environmental impacts resulting from implementation of the Project.

In addition, the trip generation rate used to analyze the Project's estimated trip generation (refer to the Transportation Impact Analysis prepared for the Project [Appendix I]) assumed that the Project would support general light industrial and high-cube warehousing uses. These land uses often have lower trip generation rate (either daily or peak hour) than some of the other land uses that are permitted by right or conditionally permitted in the CIBP zone, including but not limited to general office, building material and rental, automobile parts and service center, and car wash (higher daily and peak hour trip generation rates).

As such, other land uses that are allowed on the Project site (either by right or by Conditional Use Permit) could potentially result in greater peak hour or daily trip generation compared with the Project, even if the development footprint is similar or identical. Thus, there would be a potential for increased impacts associated with traffic congestion, tailpipe air and GHG emissions, and traffic noise under Alternative 2.

Alternative 2 Impact Conclusion

All the mitigation measures required for the Project would also apply to Alternative 2, as the land use type, development intensity, and/or site coverage would be similar to the Project; thus, construction and operation characteristics should also be relatively similar. There is the possibility under Alternative 2, however, that some impacts associated with air quality, GHG, and noise may be greater than those resulting from implementation of the Project, given that some of the other allowed land uses in the CIBP zone have a higher peak hour and/or daily trip generation rate.

As an industrial, commercial, office, institutional, or other permissible land use on the Project site, Alternative 2 would be expected to satisfy many of the Project objectives, including developing a jobs-producing and tax-generating land use near transportation corridors within the housing-rich Victor Valley/High Desert region (Objective 1); concentrating non-residential uses near existing roadways, highways, and freeways (Objective 2); developing a fiscally sound and employment-generating land use that maximizes utilization of industrial zoned areas (Objective 3); and creating a project that takes advantage of and enhances existing infrastructure, including the proximity to major regional roadways such as I-15 and U.S. Highway 395, railroad service corridors, and other similar infrastructure (Objective 4). Depending on the use, Alternative 2 may or may not meet Objective 5, which is to fulfill the existing and growing demand for logistics and warehouse uses in the region.

7.3.3 Reduced Development Intensity Alternative (Alternative 3)

In accordance with CEQA Section 15126.6, the purpose of conducting a Project alternative comparative analysis is to identify potential alternatives to the Project that are capable of avoiding or substantially reducing any significant adverse impacts associated with the Project, even if the alternatives may impede attainment of project objectives or prove less cost efficient. As described in Section 7.1 of this chapter and throughout Chapter 4, this EIR has identified the following Project impacts that would be significant and unavoidable.

As discussed in Section 4.6, Greenhouse Gas Emissions, of this EIR, the Project would result in potentially significant impacts with regard to generating GHG emissions. Implementation of MM-GHG-1, MM-GHG-2, and MM-GHG-3, and MM-GHG-4 would also reduce operation-related GHG emissions. However, the effectiveness of the mitigation and the associated emission reductions cannot be accurately quantified at this time and GHG emissions impacts are inherently cumulative in nature. As such, impacts on the project-level and cumulatively would remain significant and unavoidable.

Further, as outlined in Section 4.10, Transportation, several intersections in the vicinity of the Project site currently experience periodic queuing issues during peak hours, which can lead to potential safety concern if a significant speed differential exists between queue vehicles and vehicles proceeding beyond the queue. The Project would result in additional traffic that would exacerbate these conditions under the Existing Plus Project Conditions, Opening Year (2024) Plus Project Conditions, and Horizon Year (2040) Plus Project Conditions (queueing issues would continue to occur without Project-generated traffic for many intersections regardless of the Project). Improvement measures have been identified for which the Project would be required to either construct or contribute fair-share costs to address these conditions. However, some of these intersections are not within the

City's jurisdiction, but rather within the jurisdiction of other agencies, such as the California Department of Transportation. Since the City does not have jurisdiction over these facilities, these improvements cannot be assumed to be in place prior to Project's occupancy, and these impacts are considered significant and unavoidable.

Project Alternative 3 Summary

Presently, the only approach to reducing the Project's operational-related GHG emissions and transportation impacts would be to reduce the total number of daily trips and employees generated by the Project. As such, in an effort to reduce the Project's significant and unavoidable impacts, the City considered a Reduced Development Intensity Alternative (Alternative 3).

Under Alternative 3, the Project would be constructed and operated as planned on the Project site, with the exception that the size of the proposed development would be reduced by 15%, equating to an industrial/ warehouse project consisting of approximately 352,495 square feet, compared to the Project's 414,700 square feet. Since the building footprint would be reduced by 62,205 square feet (approximately 1.4 acres), this extra space on the Project site would remain vacant. All other on- and off-site improvements proposed as part of the Project are assumed to still be required under Alternative 3.

Alternative 3 Impact Analysis

Under Alternative 3, the Project's development footprint would be reduced by 15% compared to the Project. As a result, it is assumed that a similar reduction in the operational intensity and duration of construction activities would occur. Likewise, a smaller building footprint would be expected to support fewer operational activities than the larger footprints proposed as part of the Project. Thus, the severity of many environmental impacts related to construction and operational phases would be either the same or incrementally reduced under Alternative 3. However, because the development intensity would be reduced under Alternative 3 compared to the Project, certain environmental impacts would differ as a result of this reduction, as the following analysis demonstrates.

Aesthetics

Under Alternative 3, the Project would be constructed and operated as planned on the Project site, with the exception that the size of the proposed development would be reduced by 15%, equating to the 62,205 square feet (approximately 1.4 acres) of extra space on the Project site that would likely be developed with a similar landscape concept to that surrounding the industrial buildings. A reduction in building square footage would reduce the scale and massing of the buildings. Additionally, the increase in landscaped area would soften the visual impact of the buildings. Nonetheless, Alternative 3 would still involve the development of approximately 352,495 square feet of industrial space, which would still be the primary visual feature on the Project site. For these reasons, aesthetics impacts would be similar but lessened under Alternative 3.

Air Quality

Under Alternative 3, the extent of construction activities would be reduced compared to the Project. Thus, construction-related air quality emissions would be lessened. As with the Project, Alternative 3 would not exceed the numerical thresholds of significance established by the Mojave Desert Air Quality Management District (MDAQMD); this is the same outcome that would occur under the Project.

Alternative 3 would generate fewer vehicle trips per day due to the reduction in the amount of building space. Accordingly, air pollutant emissions associated with long-term operation of Alternative 3 would be lessened compared to the Project and like the proposed Project, mitigation would not be required.

Long-term operation of Alternative 3 would also have less than significant impacts due to emissions of volatile organic compounds (VOCs), oxides of nitrogen (NO_x), and coarse particulate matter (PM_{10}) and would not violate the MDAQMD regional air quality standards. Because Alternative 3 would generate fewer average daily vehicle trips than would occur under the Project, impacts due to a conflict with the regional air quality standard and the level of contribution to an existing air quality violation would be minimized, but still at a less-than-significant level. As such, Alternative 3 would reduce the Project's impact due to operational air contaminant emissions; however, impacts would still remain at a less-than-significant level and no mitigation would be required.

As with the Project, impacts to nearby sensitive receptors would remain less than significant under Alternative 3. Similar to the Project, emissions under Alternative 3 would be below the MDAQMD thresholds of significance. However, these impacts to sensitive receptors would be slightly reduced under Alternative 3 due to the reduction in daily vehicular trips compared to the Project. Therefore, air quality impacts would be lessened under Alternative 3, and similar to the proposed Project, no mitigation would be required.

Biological Resources

Under Alternative 3, the Project would be constructed and operated as planned on the entire Project site, although the development intensity would be reduced. Compared to the Project, Alternative 3 would develop less of the Project site, resulting in a smaller overall building footprint by approximately 62,205 square feet. However, in accordance with the City's development standards, these areas would not be allowed to be completely unimproved, but instead would be required to be landscaped. As such, any vacant land and potential suitable habitat in these areas would still be disturbed as a result of landscaping activities, reducing any benefits from a biological resources perspective. Therefore, biological resources impacts would be similar under Alternative 3.

Cultural, Tribal Cultural, and Paleontological Resources

Under Alternative 3, the Project would be constructed and operated as planned on the Project site, but with a reduced development intensity. Compared to the Project, Alternative 3 would develop less of the Project site with buildings, parking and loading areas, and other associated improvements, resulting in a smaller overall building footprint on the site that would disturb less land. However, as previously discussed, Alternative 3 would likely not be able to maintain vacant areas on the Project site, but instead would still be required to landscape these locations. As such, the entirety of the Project site would need to be disturbed to various extents, which would result in the same potential to disturb presently unknown/unrecorded cultural, tribal cultural, and paleontological resources as the Project. Therefore, cultural resources impacts would be similar under Alternative 3.

Energy

The level of construction activities would be reduced under Alternative 3 compared to the Project because the Project's building footprint would be reduced by 15%. Thus, construction-related energy usage would be lessened. Alternative 3 would also generate fewer vehicle trips per day due and would have a less building space than the Project as proposed, result in less on-site and mobile energy consumption. Accordingly, energy usage associated with long-term operation of Alternative 3 would be lessened compared to the Project. Therefore, energy impacts would be reduced under Alternative 3.

Greenhouse Gas Emissions

Similar to air quality, the extent of construction activities would be reduced under Alternative 3 compared to the Project. Thus, construction-related GHG emissions would be lessened. Alternative 3 would also generate fewer vehicle trips per day due to the 15% reduction in the amount of building space. Accordingly, GHG emissions associated with long-term operation of Alternative 3 would be lessened compared to the Project. As discussed in Section 7.1, the Project would result in significant and unavoidable impacts with regard to generating GHG emissions. Implementation of mitigation measures under the Project and Alternative 3 would reduce potential operation-related GHG emissions. However, the effectiveness of the mitigation measures and the associated emission reductions cannot be accurately quantified at this time and GHG emissions impacts are inherently cumulative in nature. Therefore, while GHG emissions impacts would be reduced under Alternative 3 due to decreased construction and operational footprint, they would still remain significant and unavoidable.

Hazards and Hazardous Materials

Under Alternative 3, the Project would be constructed and operated as planned on the site, with the exception that the building footprint would be reduced by 15%. Incorporation of MM-HAZ-1 would still be required under Alternative 3, which mandates, among other requirements, the removal and disposal of on-site tires and oil containers from the Project area in accordance with all applicable guidelines, and that a qualified environmental professional shall screen soils in the identified area prior to excavation and grading based on the nature of the potential contamination. As such, under Alternative 3, the cleanup activities required pursuit to MM-HAZ-1 would be initiated, and the Project would still help to remediate the Project site through compliance with MM-HAZ-1. Therefore, hazards and hazardous materials impacts would be similar under Alternative 3.

Hydrology and Water Quality

Under Alternative 1, the new engineered stormwater drainage system would be constructed on the Project site as proposed under the Project. Under existing conditions, no storm drain or treatment facilities are currently found on site; therefore, stormwater is not currently collected or treated on the Project site prior to being discharged off site. However, under Alternative 1, the Project and its on-site stormwater drainage system would be designed to comply with all state, regional, and local regulation related to site stormwater drainage and water quality during both construction and operation of the Project, regardless of the size of the Project. Therefore, hydrology and water quality impacts would be similar under Alternative 3.

Land Use and Planning

Both the Project and Alternative 3 propose an industrial/warehouse use with similar operational characteristics. Given the substantial similarities in uses between the Project and Alternative 3, Alternative 3 would otherwise not conflict with any plans, policies, or ordinances adopted for the purposes of mitigating or avoiding environmental effects. Therefore, land use and planning impacts would be similar under Alternative 3.

Noise

Noise associated with Alternative 3 would occur during short-term construction activities and under long-term operation. The types of construction activities conducted on the Project site would be similar under Alternative 3 would generally cover the same physical area. However, because Alternative 3 would result in construction of less building area on site, it is anticipated that the duration of noise impacts during the building construction and architectural coating phase would slightly decrease under Alternative 3 compared to the Project. Nonetheless, the types of construction equipment used and the types of construction activities conducted on-site would be similar under Alternative 3, and the peak daily noise levels generated during the construction phase would also be similar.

Under long-term operational conditions, noise generated by Alternative 3 would primarily be associated outdoor mechanical equipment, and on-site truck loading, idling, maneuvering, and parking. Alternative 3 would have reduced operational capacity Project, and, as such, would contribute to less on-site operational noise than the Project. However, the increase in operational noise associated with Alternative 3 would still be noticeable to residences impacted by the Project. Therefore, noise impacts would be similar under Alternative 3.

Transportation and Traffic

Vehicle miles traveled (VMT) is largely dependent on the specific land use type of a particular project and the location of that project. While a reduction in a Project's size could reduce the overall VMT associated with a given project, reducing a project's square footage would not necessarily have an effect on a project's average trip length. Thus, while under Alternative 3 the Project's development footprint would be reduced by 15% compared to the Project, the average trip length for passenger vehicle and truck trips associated with the Project would remain virtually constant. In addition, because a reduction in Project size would correlate to a similar reduction in on-site workforce, the Project's VMT per employee would also stay relatively the same under Alternative 3 as the Project's VMT per employee. Therefore, transportation impacts with regard to VMT would be similar under Alternative 3.

With regard to the Project's significant and unavoidable queueing and hazards impacts, many of the intersections that are anticipated to experience queueing issues under the Horizon Year (2040) conditions would experience these issues regardless of implementation of the Project. As such, even with the reduction in building-square footage and corresponding reduction in trip generation, these intersections would continue to experience these issues. Improvement measures would still be required for Alternative 3; however, because some of the affected intersections are outside the City's jurisdiction, these improvements cannot be assumed to be in place prior to occupancy, and these impacts are considered significant and unavoidable. As such, transportation impacts with regard to queueing and hazards impacts would be similar under Alternative 3.

Utilities and Service Systems

Under Alternative 3, the Project would be constructed and operated as planned on the Project site, with the exception that the size of the proposed development would be reduced by 15%. All other on- and off-site improvements proposed as part of the Project are assumed to still be required under Alternative 3. As such, the same wet and dry utilities would be required, with construction and operational characteristics of these on- and off-site improvements being similar to the Project. Therefore, utilities and service systems impacts would be similar under Alternative 3.

Alternative 3 Impact Conclusion

Based on the above, given that Alternative 3 would result in incremental reductions in both construction activity, daily operational trips on Project area roadways, and a reduction in the scale of the proposed buildings, Alternative 3 result in incremental reductions in the severity of impacts related to aesthetics, air quality, energy, GHG emissions, and noise. In the case of air quality and GHG, the reductions in Project-related trips would not be substantial enough as to reduce impacts below a significance level that is less then significant. Impacts associated with energy and noise are less than significant under both the Project and Alternative 3 scenarios, although emissions would be lessened under Alternative 3.

Impacts associated with agriculture and forestry resources, biological resources, cultural, tribal cultural, and paleontological resources, geology and soils, hazards, hazardous materials, and wildfire, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, noise, transportation, and utilities and service systems would generally be the same under Alternative 3 compared to the Project.

All the mitigation measures required for the Project would be necessary for Alternative 3, although no new measures would be required. Additionally, Alternative 3 would meet all Project objectives, albeit to a lesser extent as proposed under the Project because of the approximately 15% reduction in the Project's size. In particular, because of its reduced size, Alternative 3 would produce fewer jobs (Objective 1), would generate less tax revenue (Objective 1), and would not create as much revenue- and employment-generating land use as the Project (Objectives 1 and 3).

7.4 Environmentally Superior Alternative

Section 15126(e)(2) of the State CEQA Guidelines requires an EIR to identify an "environmentally superior alternative." If the No Project/No Development Alternative is the environmentally superior alternative, the EIR must also identify an environmentally superior alternative from among the other Project alternatives.

Each of the three Project alternatives considered herein would lessen at least one environmental impact relative to the Project. As previously addressed, if the No Project/No Development Alternative is the environmentally superior alternative, the EIR analysis shall evaluate another environmentally superior alternative among the remaining alternatives. Table 7-1 provides a comparison of the Project with the Project alternatives based on the environmental topic areas addressed in Chapter 4 of this EIR. Table 7-2 presents how the Project and each of the Project alternatives compare in terms of meeting the Project objectives.

Table 7-1. Project Alternatives Environmental Impacts Comparison

Environmental Issue	Project	No Project/No Development Alternative (Alternative 1)	Other Development Project Alternative (Alternative 2)	Reduced Development Intensity Alternative (Alternative 3)
Aesthetics	Less-than-Significant with Mitigation	Avoided	Similar	Similar but reduced
Air Quality	Less-than-Significant	Avoided	Similar	Similar but reduced
Biological Resources	Less-than-Significant with Mitigation	Avoided	Similar	Similar
Cultural, Tribal Cultural, and Paleontological Resources	Less-than-Significant with Mitigation	Avoided	Similar	Similar
Energy	Less-than-Significant	Avoided	Similar	Lessened
Greenhouse Gas Emissions	Significant and Unavoidable	Avoided	Similar	Lessened, but significant and unavoidable impacts still not avoided
Hazards, Hazardous Materials, and Wildfire	Less-than-Significant with Mitigation	Greater	Similar	Similar
Hydrology and Water Quality	Less-than-Significant	Greater	Similar	Similar
Land Use and Planning	Less-than-Significant	Similar	Similar	Similar
Noise	Less-than-Significant	Avoided	Similar	Similar

Table 7-1. Project Alternatives Environmental Impacts Comparison

Environmental Issue	Project	No Project/No Development Alternative (Alternative 1)	Other Development Project Alternative (Alternative 2)	Reduced Development Intensity Alternative (Alternative 3)
Transportation and Traffic	Significant and Unavoidable	Avoided	Similar	Similar
Utilities and Service Systems	Less-than-Significant	Avoided	Similar	Similar

Based on a comparison of Alternative 2 and Alternative 3, environmental impacts associated with aesthetics, air quality, energy, GHG emissions, and noise would be less under Alternative 3 compared to Alternative 2. Impacts associated with biological resources, cultural, tribal cultural, and paleontological resources, hazards and hazardous materials, hydrology and water quality, transportation, and utilities and services systems would be similar under Alternative 3 compared to Alternative 2. Overall, based on these findings, Alternative 3 would be considered the environmentally superior alternative.

Table 7-2. Comparison of Project Alternatives and Project Objectives

Project Objective	Would the Project or alternative meet the Project Objective?			
	Project	No Project/No Development Alternative (Alternative 1)	Other Development Project Alternative (Alternative 2)	Reduced Intensity Alternative (Alternative 3)
Objective 1: Develop a jobs-producing and tax generating land use near transportation corridors within the housing-rich Victor Valley/High Desert region that is constructed to high standards of quality and provides diverse economic opportunities for those residing and wishing to invest within the City of Hesperia.	Yes	No	Yes	Yes, albeit to a lesser degree than the Project
Objective 2: Concentrate non-residential uses near existing roadways, highways, and freeways in an effort to isolate and reduce any potential environmental impacts related to truck traffic congestion, air emissions, and industrial noise to the greatest extent feasible.	Yes	No	Yes	Yes, albeit to a lesser degree than the Project
Objective 3: Develop a fiscally sound and employment generating land use that maximizes utilization of industrial zoned areas.	Yes	No	Yes	Yes, albeit to a lesser degree than the Project

Table 7-2. Comparison of Project Alternatives and Project Objectives

Project Objective	Would the Project or alternative meet the Project Objective?			
	Project	No Project/No Development Alternative (Alternative 1)	Other Development Project Alternative (Alternative 2)	Reduced Intensity Alternative (Alternative 3)
Objective 4: Create a project that takes advantage of and enhances existing infrastructure, including the proximity to major regional roadways such as I-15 and U.S. Highway 395, railroad service corridors, and other similar infrastructure that will help promote the site and its use as an industrial business park development.	Yes	No	Yes	Yes, albeit to a lesser degree than the Project
Objective 5: Fulfill the existing and growing demand for logistics and warehouse uses in the region.	Yes	No	Yes	Yes

7.5 References Cited

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