Draft Environmental Impact Report

Apple Valley 143 Project

State Clearinghouse No. 2022070019

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AAQS	ambient air quality standards
AB	Assembly Bill
AFY	acre-feet per year
AMSL	above mean sea level
BAAQMD	Bay Area Air Quality Management District
BAP	Based Annual Productions
BMP	best management practice
BUG	backlight, up light, and glare
CAAQS	California Ambient Air Quality Standards
Cal/OSHA	California Occupational Safety and Health Administration
CalSTA	California State Transportation Agency
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CCG	Consulting Group LLC
CCR	California Code of Regulations
CDCA	California Desert Conservation Area
CDFW	California Department of Fish and Wildlife
CDNPA	California Desert Native Plants Act
CDOC	California Department of Conservation
CDWR	California Department of Water Resources
CEC	California Energy Code
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFC	California Fire Code
CH_4	methane
CIBP	Commercial and Industrial Business Park
CIWM	California Integrated Waste Management
CIWMB	California Integrated Waste Management Board
CMA	Congestion Management Agency
CMAQ	Community Multiscale Air Quality
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO_2	carbon dioxide
CPUC	California Public Utilities Commission

Acronym/Abbreviation	Definition
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CTC	California Transportation Commission
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
DIF	Development Impact Fee
DMA	Drainage Management Areas
DOF	Department of Finance
DOT	U.S. Department of Transportation
DPM	diesel particulate matter
DRC	Development Review Committee
DRECP	Desert Renewable Energy Conservation Plan
DTSC	Department of Toxic Substances Control
EDR	Environmental Data Resources Inc.
EIA	Energy Information Administration
EIR	Environmental Impact Report
EISA	Energy Independence and Security Act of 2007
EMFAC	Emissions Factor Model
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
ESCP	Erosion and Sediment Control Plan
EV	electric vehicle
EVSE	electric vehicle supply equipment
FAR	floor area ratio
FEMA	Federal Emergency Management Agency
FESA	federal Endangered Species Act
FHSZ	fire hazard severity zone
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FPA	Free Production Allowance
FRA	Federal Responsibility Area
FTA	Federal Transit Administration
GHG	greenhouse gas
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
GWP	global warming potential
HAP	hazardous air pollutant
HCP	Habitat Conservation Plan
HFC	hydrofluorocarbon
HHDT	heavy-heavy-duty truck
HIA	Health Impact Assessment
HRA	Health Risk Assessment
I	Interstate

Acronym/Abbreviation	Definition
IEPR	Integrated Energy Policy Report
IESNA	Illuminating Engineering Society of North American
IFC	International Fire Code
IPCC	Intergovernmental Panel on Climate Change
IRP	Integrated Resource Planning
IS	Initial Study
ISO	Independent Service Operator
ITE	Institute of Transportation Engineers
ITP	Incidental Take Permit
KOP	key observation point
LCFS	Low Carbon Fuel Standard
LDA	light-duty-auto vehicle
LHDT	light-heavy-duty truck
LID	low-impact development
LOS	level of service
LRA	Local Responsibility Area
LZ	lighting zone
MBTA	Migratory Bird Treaty Act
MDAB	Mojave Desert Air Basin
MDAQMD	Mojave Desert Air Quality Management District
MDPA	Mojave Desert Planning Area
MDV	medium-duty vehicle
MEIR	maximally exposed individual receptor
MGS	Mohave ground squirrel
MHDT	medium-heavy-duty truck
MM	Mitigation Measure
MMT	million metric tons
MPO	Metropolitan Planning Organization
MS4	Municipal Separate Storm Sewer System
MW	megawatt
MWELO	Model Water Efficient Landscape Ordinance
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NABA	North American Butterfly Association
NAHC	Native American Heritage Commission
NF_3	nitrogen trifluoride
NHTSA	National Highway Traffic Safety Administration
NMFS	National Marine Fisheries Service
NO	nitric oxide
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NPDES	National Pollution Discharge Elimination System
NRCS	Natural Resource Conservation Service
O_2	molecular oxygen

Acronym/Abbreviation	Definition
O_3	ozone
OHV	off-highway vehicle
OHWM	ordinary high water mark
OPR	Office of Planning and Research
PCE	passenger car equivalent
PDF	project design feature
PFC	perfluorocarbon
PGM	photochemical grid model
PM_{10}	particulate matter with an aerodynamic diameter equal to or less than 10 microns
$PM_{2.5}$	particulate matter with an aerodynamic diameter equal to or less than 2.5 microns
PPV	peak particle velocity
PRC	Public Resources Code
PSD	Prevention Significant Deterioration
PSY	Production Safe Yield
RCRA	Resource Conservation and Recovery Act
REC	recognized environmental condition
RFS	Renewable Fuel Standard
RMS	root mean square
RPS	Renewables Portfolio Standard
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
RWWTP	Regional Wastewater Treatment Plant
SAA	Streambed Alteration Agreement
SAFE	Safer Affordable Fuel-Efficient
SANBAG	San Bernardino Associated Governments
SB	Senate Bill
SBCFD	San Bernardino County Fire Department
SBCOG	San Bernardino Council of Governments
SBCSD	San Bernardino County Sheriff's 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
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SCRAM	Support Center for Regulatory Atmospheric Modeling
SCS	Sustainable Communities Strategy
SED	socioeconomic data
SF_6	sulfur hexafluoride
SGC	Strategic Growth Council
SGMA	Sustainable Groundwater Management Act
SJVAPCD	San Joaquin Valley Air Pollution Control District

Acronym/Abbreviation	Definition
SLPS	Short-Lived Climate Pollutant Strategy
SMBMI	San Manual Band of Mission Indians
SO_2	sulfur dioxide
SP	service population
SPL	Sound Pressure Level
SRA	State Responsibility Area
SWMP	Stormwater Management Program
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TAZ	traffic analysis zone
TDM	Transportation Demand Management
TDR	Transfer of Development Rights
TIA	Traffic Impact Analysis
TMDL	total maximum daily load
TPA	Transit Priority Area
UNFCCC	United Nations Framework Convention on Climate Change
USACE	United States Army Corp. of Engineers
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UST	underground storage tank
UTR	utility tractor
UWMP	Urban Water Management Plan
VMT	vehicle miles traveled
VOC	volatile organic compound
VVTA	Victor Valley Transit Authority
VVWRA	Victor Valley Wastewater Reclamation Authority
WDR	Waste Discharge Requirement
WQMP	Water Quality Management Plan
WSA	water supply assessment

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1 Executive Summary

1.1 Introduction

This Environmental Impact Report (EIR) has been prepared by the Town of Apple Valley (Town) 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 Apple Valley 143 Project (Project).

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

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

The Town 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 northern part of the Town of Apple Valley (Town), which is located in the Victor Valley/High Desert region in western San Bernardino County. The Town is bordered by the City of Victorville to the west, the City of Hesperia to the southwest, and unincorporated County to the north and east. Locally, the Project site is located at the northeast quadrant of Interstate (I) 15 and Stoddard Wells Road. The Project site is located south of Johnson Road, approximately 0.25 miles west of Grasshopper Road, north of Stoddard Wells Road, and north of I-15. Regional access to the Project site is provided via I-15, immediately adjacent to the northeast of the Project site.

1.3 Project Description

Project Summary

The Project would include construction of three industrial/warehouse buildings and associated improvements on 143 acres of vacant land (see Figure 3-10, Overall Site Plan). Building 1, the southernmost building, would be approximately 615,000 square feet, Building 2, the center building, would be approximately 1,222,500 square

feet, and Building 3, the northernmost building, would be approximately 682,500 square feet. The Project would involve associated improvements, including loading docks, truck, and vehicle parking, and landscape are. The layout of the buildings 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 15% High-Cube Cold Storage Warehousing and 85% High-Cube Fulfillment Center Warehousing split of the total building square footage, was applied to provide a conservative analysis in the event that a small portion of the facility is used for cold storage, Figure 1-1, Project Overview, provides an overview of the Project's location, representative photo of Project site, on-site plan, and conceptual rendering.

The Project would include improvements along Stoddard Wells Road and Johnson Road, 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.

The Project would also involve the off-site construction of Outer I-15 Road on the eastern boundary of the Project Site. This would be a public road once constructed.

The Project would support a variety of activities associated with the three industrial/warehouse buildings, including the ingressing and egressing 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. In addition, the office space would support general internal office activities related to the industrial/warehouse uses.

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 three buildings 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 EIR assume a blend of "high-cube" fulfillment center and cold-storage warehousing. Under this modeling scenario, approximately 85% of all buildings (i.e., 2,140,725 square feet) would support "high-cube" fulfillment center warehouse uses, and 15% of all buildings (i.e., 377,775 square feet) would support "high-cube" cold-storage warehouse uses[1].

Project Construction

Construction is expected to commence in 2023 and would last through 2024. The duration of construction activity was estimated based on consultation with the Project Applicant and past project experience. The construction schedule used in the analysis is assumed to commence in or around October 2023 and last approximately 14 months, ending towards the end of November 2024.[2] This schedule represents a conservative analysis should

[1] It should be noted that the Project's square footage analyzed in the technical reports was 2,518,500 square feet. The Project's size has increased to 2,520,000 square feet since the technical reports were originally prepared (an increase of 1,500 square feet in Building 2). However, this 0.0596% increase in square footage is nominal when taking into consideration the ultimate size of the Project and would not result in significant changes to the analysis performed or new significant impacts not disclosed in this EIR.

[2] The analysis assumes a construction start date of October 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.

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. As discussed below, a development agreement is contemplated with the Project to extend applicable vesting periods for the Project's entitlements, which would allow for construction to start after October 2023 if market conditions or other factors preclude immediate construction.

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 large-format industrial buildings approximately 600,000 to 1,300,000 square feet ± in size within the Regional Commercial – Warehouse Overlay zone to meet the existing and growing demand for large-format logistics and warehouse buildings in the region.

Objective 2. Develop a fiscally sound, jobs-producing, and tax-generating land use in north Apple Valley.

Objective 3. 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 4. Create a project that takes advantage of and enhances existing infrastructure, including the proximity to major regional roadways, railroad service corridors, and other similar infrastructure.

1.5 Discretionary Actions

Consistent with the Town's General Plan and Municipal Code, the Project requires certain entitlements be submitted, reviewed, and approved by the Town. The requested entitlements include:

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 Town Council.
- **Tentative Parcel Map.** Project implementation would require processing of a Tentative Parcel Map to reorganize the Project site into three parcels for each warehouse building.
- **Consider Certification of EIR.** The Planning Commission will certify or reject this EIR, along with appropriate CEQA Findings and the mitigation monitoring and reporting program.

Town Council

- **Development Agreement.** Approve a Development Agreement between the Town and the Project Applicant pursuant to Section 9.04 of the Apple Valley Municipal Code. The Development Agreement would provide sufficient time for the development of the Project by locking in development standards and extending applicable vesting periods for the Project's entitlements and to establish a mechanism whereby the Project

Applicant would be partially reimbursed for costs associated with public improvements constructed that would be used by future developments. Reimbursements would be funded by developers of these future developments. The Development Agreement does not contemplate any additional physical improvements, other than those already identified in the Project description, analysis, and proposed mitigation for the Project. Approval of the Development Agreement is not required for development of the Project.

Ministerial Approvals

Town of Apple Valley Subsequent Implementing Approvals

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

The Town 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.

Other Agency Approvals

In addition to the approvals required by the Town to implement the Project, the Project would also require permits from other agencies. The following permits are anticipated to be required, but this list may not be exhaustive and may be refined throughout the Project planning process.

- California Department of Transportation. An **Encroachment Permit** from the California Department of Transportation (Caltrans) would be required to accommodate the possible improvements to the I-15/Stoddard Wells Road on-/off-ramps.
- California Department of Fish and Wildlife. An **Incidental Take Permit** from the California Department of Fish and Wildlife (CDFW) would be required to remove western Joshua trees that are present on the Project site. A **Lake and Streambed Alteration Agreement** from CDFW would also be required to modify existing drainages that are present on the Project site.
- Regional Water Quality Control Board. A **Waste Discharge Requirements Permit** from the Regional Water Quality Control Board (RWQCB) would be required to modify existing drainages that are present on the Project site.

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 and therefore, those resource areas are not included in Table 1-1.

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
Air Quality			
Would the Project conflict with or obstruct implementation of the applicable air quality plan?	Potentially significant impact	**MM-AQ-1.** The Project shall utilize "Super-Compliant" low-volatile organic compound (VOC) paints which have been reformulated to exceed the regulatory VOC limits put forth by MDAQMD's Rule 1113. Super-Compliant low VOC paints shall be no more than 10 grams per liter (g/L) of VOC. Alternatively, the Project Applicant may utilize tilt-up concrete buildings that do not require the use of architectural coatings. **MM-AQ-2.** The following measures shall be implemented to reduce off-road equipment exhaust during construction: ▪ Require all generators, and all diesel-fueled off-road construction equipment greater than 75 horsepower, to be zero-emissions or equipped with California Air Resources Board (CARB) Tier 4 Final compliant engines (as set forth in Section 2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 of the Code of Federal Regulations) or better by including this requirement in applicable bid documents, purchase orders, and contracts with successful contractors. An exemption from these requirements may be granted by the Town of Apple Valley in the event that the applicant documents that equipment with the required tier is not reasonably available and corresponding reductions in criteria air pollutant emissions are achieved from other construction equipment (for example, another piece of equipment can be replaced with a zero-emission equipment to offset the emissions associated with using a piece of equipment that does not meet Tier 4 Final standards). Before an exemption may be considered by the Town, the applicant shall be required to demonstrate that at least two construction fleet owners/operators in the San Bernadino Region were contacted and that those owners/operators confirmed Tier 4 Final or better equipment could not be located within the San Bernardino Region. To ensure that Tier 4 Final construction equipment or better would be used during the proposed Project's construction, the applicant shall include this requirement in applicable bid documents, purchase orders, and contracts. Successful contractors must demonstrate	Significant and unavoidable impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities. ▪ 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. MM-AQ-3. The Project shall implement the following measures in order to reduce operational off-road equipment, stationary source, and on-road vehicle air pollutant emissions to the extent feasible: ▪ All cargo handling equipment (including yard trucks, hostlers, yard goats, pallet jacks, forklifts, and landscaping equipment) shall be zero-emission vehicles. Each building 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. ▪ All diesel-fueled emergency generators shall be equipped with California Air Resources Board (CARB) Tier 4 Final compliant engines (as set forth in Section 2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 of the Code of Federal Regulations) or better by including this requirement in applicable bid documents, purchase orders, and contracts with successful contractors.	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		▪ Prior to tenant occupancy, the Project Applicant or successor in interest shall provide documentation to the Town of Apple Valley 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. ▪ 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 electric truck charging stations at such time this technology becomes commercially available. ▪ 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. ▪ Include contractual language in tenant lease agreements requiring that any facility operator shall: o For occupants with more than 250 employees, require the establishment of a transportation demand management program to reduce employee commute vehicle emissions; o Place legible, durable, weather-proof signs at truck access gates, loading docks, and truck parking areas that identify applicable 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	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		facilities manager and CARB to report violations. Prior to the issuance of an occupancy permit, the Town of Apple Valley shall conduct a site inspection to ensure that the signs are in place; o 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 CARB-approved courses (such as the free, one-day Course #512); o 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; o 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.	
Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard?	Potentially significant impact	MM-AQ-1 MM-AQ-2 MM-AQ-3	Significant and unavoidable impact
Would the Project expose sensitive receptors to substantial pollutant concentrations?	Potentially significant impact	MM-AQ-3	Significant and unavoidable impact
Would the Project have a cumulative effect on air quality resources?	Potentially significant impact	MM-AQ-1 MM-AQ-2 MM-AQ-3	Significant and unavoidable impact

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 would like the western Joshua tree locations to be buffered by 186 feet to account for the take of seed bank for western Joshua tree and their associated habitat. Therefore, a 186-foot buffer (or radius) was applied to each western Joshua tree location. The direct impacts to this 186-foot buffer were analyzed, and the project would result in 45.2 acres of impacts to the western Joshua trees, their seed bank, and their associated habitat. Mitigation for direct impacts to 45.2 acres of western Joshua trees and their 186-foot buffer will 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 90.4 acres. Mitigation will 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 will 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 will 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 will be established following the completion of a project-specific Property Analysis Record to calculate the costs of in-perpetuity land management. The Property Analysis Record will take into account all management activities required in the Incidental Take Permit to fulfill the requirements of the conservation easement(s), which are currently in review and development. Additionally, no take of western Joshua tree will occur without authorization from CDFW in the form of an Incidental Take Permit pursuant to California Fish and Game Code 2081. The project applicant will adhere to measures and conditions set forth in 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	Less-than-significant impact with mitigation incorporated

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		paid to the Town of Apple Valley for removal or relocation of protected native desert plants under Town of Apple Valley Municipal Code Chapter 9.76, as required, and shall schedule a pre-construction site inspection with the appropriate authority. In addition, a plot plan shall be approved by the appropriate Town of Apple Valley Review Authority (County Certified Plant Expert, Planning Commission, or Town Council) indicating exactly which trees or plants are authorized to be removed. 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 Town of Apple Valley Municipal Code. Protected plants subject to Town of Apple Valley Municipal Code Chapter 9.76 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 plan was prepared by a qualified western Joshua tree and native desert plant expert(s). The plan shall include, but not be limited to, 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. 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-4. 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, compliance inspections, and monitoring activities required by the Incidental Take Permit shall be prepared. **MM-BIO-5. 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	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		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-6. 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-7. 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 Staff Report on Burrowing Owl Mitigation (prepared by the California Department of Fish and Game [now California Department of Fish and Wildlife]) in 2012 or current version. If burrowing owls are detected, the burrowing owl relocation plan shall be implemented in consultation with the Town of Apple Valley. As required by the burrowing owl relocation plan, disturbance to burrows shall be avoided during the nesting season (February 1 through August 31). Buffers will be established around occupied burrows as determined by a qualified biologist. 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 if there is a threat to the	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		surface or subterranean burrow structure by installing one-way doors in burrow entrances. These doors will 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 will be provided following the guidance in the CDFW 2012 Staff Report on Burrowing Owl Mitigation or current version. Where possible, burrows will 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. Should burrowing owl be located during the pre-construction survey, the project would result in the loss of 210.6 acres of suitable habitat for burrowing owl. Mitigation for direct impacts to 210.6 acres shall be fulfilled through conservation of suitable burrowing owl habitat through the purchase of credits at a minimum of 1:1 in-kind habitat replacement of equal or better functions and values to those impacted by the project, for a total of 210.6 acres. **MM-BIO-8. 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 on 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 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 will be determined by the 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	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		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 close proximity to an active nest buffer. No project activities may encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until it is determined the nestlings have fledged and the nest is no longer considered active. **MM-BIO-9. Pre-construction Survey for American Badger and Avoidance.** A pre-construction survey for American badger shall be conducted within 10 days before initiation of site preparation or grading activities to determine the presence/absence of American badger. If discovered during the survey, an American badger mitigation and monitoring plan shall be developed. The mitigation and monitoring plan shall include avoidance and minimization measures to reduce potential impacts, as well as compensatory mitigation to offset direct or indirect impacts. The plan will be developed in consultation with the California Department of Fish and Wildlife. At a minimum, the plan shall: ▪ Identify pre-construction survey methods for American badger ▪ 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 zone for both active and natal burrows **MM-BIO-10. Pre-construction Survey for Desert Kit Fox and Avoidance.** A pre-construction survey for desert kit fox shall be conducted within 10 days before initiation of site preparation or grading activities to determine the presence/absence of desert kit fox. If desert kit fox is detected, the desert kit fox relocation and mitigation plan shall be implemented. As required by the desert kit fox relocation and mitigation plan, if an active non-natal desert kit fox den is detected, a 200-foot no disturbance buffer will be established around the active den, unless otherwise authorized by	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		the California Department of Fish and Wildlife. Where required buffering will not be feasible, passive relocation, as outlined in the desert kit fox relocation and mitigation plan, is allowed with concurrence from the County of San Bernardino, California Department of Fish and Wildlife, and U.S. Fish and Wildlife Service. If an active natal desert kit fox den is detected, an initial 200-foot no disturbance buffer will be established around the natal den, and this buffer will be maintained until the den can be verified to not host pups. Construction activities will not be permitted in this area until the den has been vacated. Once the den is vacated, and if in danger by construction, it can be collapsed, if deemed necessary by a qualified biologist. A report to evaluate the success of the relocation efforts and any subsequent re-occupation, if applicable, will be provided (including a comprehensive summary, tables, maps, etc.) at the end of the construction period Data will be readily available to the California Department of Fish and Wildlife upon request. If an injured, sick, or dead desert kit fox is detected on any area associated with the project, the designated California Department of Fish and Wildlife personnel at both the Ontario office and the Wildlife Investigation Lab will be notified as described within the desert kit fox relocation and mitigation plan. **MM-BIO-11. Delineation of Property Boundaries.** Before beginning activities that would 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-12. Hazardous Waste.** The 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-13. Herbicides.** The 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	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		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-14. Lighting.** Lighting for construction activities and operations within 50 feet of the outside edge of the impact footprint containing habitat for special-status wildlife will be directed away from natural areas. **MM-BIO-15. Trash and Debris.** The following avoidance and minimization measures shall be implemented during project construction. Fully covered trash receptacles that are animal-proof will 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 will be removed at least once a week from the project site. 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-16. Invasive Plant Management.** In order 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 Cal-IPC California Invasive Plant Inventory (http://www.cal-ipc.org/ip/inventory/index.php). Post-construction, the 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-3** **MM-BIO-4** **MM-BIO-5** **MM-BIO-6** **MM-BIO-11** **MM-BIO-12** **MM-BIO-13**	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 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-3 MM-BIO-4 MM-BIO-5 MM-BIO-6 MM-BIO-11 MM-BIO-12	Less-than-significant impact with mitigation incorporated
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-14	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	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-11 **MM-BIO-12** **MM-BIO-13** **MM-BIO-14** **MM-BIO-15** **MM-BIO-16** **MM-BIO-17. Aquatic Resources Mitigation.** The off-site improvement areas support aquatic resources that are considered jurisdictional to the Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Wildlife (CDFW). Prior to construction activity, the applicant shall coordinate with the Lahontan RWQCB (Region 6) and CDFW (Inland Deserts Region 6) to assure conformance with applicable and relevant discretionary permitting requirements. The project shall mitigate to ensure no-net-loss of state waters at a minimum of 1:1 with re-establishment credits (0.12-acre RWQCB/CDFW) for impacts on aquatic resources as a part of an overall strategy to accomplish no net loss, or at a higher ratio if re-establishment credits are not available. Mitigation shall be completed through 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 shall be prepared in accordance with State Water Resources Control Board guidelines and approved by the agencies in accordance with the proposed program permits. The habitat mitigation and monitoring plan will include but is not limited to 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.	

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
Cultural, Tribal, and Paleontological Resources			
Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to §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 In-Call Archaeological Construction Monitoring.** In consideration of the general sensitivity of the proposed 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 SCCIC with the results of the cultural 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	Less-than-significant impact with mitigation incorporated

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		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 (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. **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 immediately notified of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the county coroner has determined the appropriate treatment and disposition of the human remains. If the county coroner determines that the remains are, or are believed to be, Native American, he or she shall follow all required protocols according to California Public Resources Code, Section 5097.98.	
Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?	Potentially significant impact	MM-CUL-1 MM-CUL-2 MM-CUL-3 MM-CUL-4	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	Less-than-significant impact with mitigation incorporated
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:			

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
(a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	Potentially significant impact	MM-CUL-1 MM-CUL-2 MM-CUL-3 MM-CUL-4	Less-than-significant impact with mitigation incorporated
(b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	Potentially significant impact	MM-CUL-1 MM-CUL-2 MM-CUL-3 MM-CUL-4	Less-than-significant impact with mitigation incorporated
Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Potentially significant impact	**MM-CUL-5 Paleontological Resources Impact Mitigation Program.** Prior to commencement of any grading activity on-site, the applicant shall retain a qualified paleontologist per the Society of Vertebrate Paleontology (SVP) (2010) guidelines. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the project. The PRIMP shall be consistent with the SVP (2010) guidelines and should outline requirements for preconstruction meeting attendance and worker environmental awareness training, where monitoring is required within the proposed Project site based on construction plans and/or geotechnical reports, procedures for adequate paleontological monitoring and discoveries treatment, and paleontological methods (including sediment sampling for microvertebrate fossils), reporting, and collections management. The qualified paleontologist shall attend the preconstruction	Less-than-significant impact with mitigation incorporated

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		meeting and a qualified paleontological monitor shall be on-site during all rough grading and other significant ground-disturbing activities (including augering) in previously undisturbed, fine-grained Pleistocene alluvial deposits. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor will temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery will be roped off with a 50-foot radius buffer. Once documentation and collection of the find is completed, the monitor will remove the rope and allow grading to recommence in the area of the find. Salvaged fossils deemed to be significant shall be donated to an accredited repository with retrievable storage such as the San Bernardino County Museum, Natural History Museum of Los Angeles County, or the Western Science Center. Costs for preparing the fossils for accessioning into the accredited repository and any associated curation fees shall be paid by the project proponent.	
Would the Project have a cumulative effect on cultural, tribal cultural, or paleontological resources?	Potentially significant impact	MM-CUL-1 MM-CUL-2 MM-CUL-3 MM-CUL-4 MM-CUL-5	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 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.	Significant and unavoidable impact

Table 1-1. Summary of Project Impacts

Environmental Topic	Impact?	Mitigation Measures	Level of Significance After Mitigation
		▪ 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. **MM-GHG-2.** In order to reduce the amount of waste disposed at landfills, the Project would implement a 75% waste diversion program. 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. **MM-GHG-3.** 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). 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.	
Would the Project have a cumulative effect on greenhouse gas emissions?	Potentially significant impact	**MM-AQ-2** **MM-AQ-3** **MM-GHG-1** **MM-GHG-2** **MM-GHG-3**	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 debris 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 through reasonably foreseeable upset	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
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 intersection #3. Since the Town does not have jurisdiction over this intersection, improvements cannot be assumed to be in place prior to Project's occupancy.	Significant and unavoidable impact
Would the Project result in cumulatively considerable transportation impacts?	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 intersection #3. Since the Town does not have jurisdiction over this intersection, 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.

- **Air Quality.** The Project would exceed the numerical thresholds of significance established by the Mojave Desert Air Quality Management District for emissions of oxides of nitrogen, and particulate matter with an aerodynamic diameter less than or equal to 10 microns. As such, the Project would potentially result in health effects associated with those pollutants. Although mitigation measures have been recommended to minimize operational-related air quality impacts (MM-AQ-1, MM-AQ-2, and MM-AQ-3), no feasible mitigation measures or Project design features beyond those already identified exist that would reduce these emissions to levels that are less than significant. Therefore, even with the incorporation of mitigation, long-term impacts associated with a cumulatively considerable net increase of criteria pollutants for which the Project region is non-attainment would be significant and unavoidable, as would their potential health effects. On this basis, the Project is considered to potentially conflict with the Federal Particulate Matter Attainment Plan and Ozone Attainment Plan for the Mojave Desert Air Basin.
- **Greenhouse Gas Emissions.** Construction and operation of the Project would result in the generation of approximately 33,932 metric tons of carbon dioxide (CO_2) equivalent, which would exceed the numerical greenhouse gas threshold established by the South Coast Air Quality Management District of 3,000 metric tons of CO_2 equivalent 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 measures MM-AQ-2, MM-AQ-3, 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.** An intersection in the vicinity of the Project site is expected to 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 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, this intersection is not within the Town's jurisdiction, but rather within the jurisdiction of other agencies, such as the California Department of Transportation. Since the Town 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 buildings, 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 property's C-R zoning irrespective of the warehouse overlay.

The Regional Commercial land use category allows retail uses that serve not only the residents and businesses of Apple Valley, but also of the surrounding region. Permitted uses in this designation include auto malls, regional malls, business parks, factory stores and outlets, entertainment commercial, hotels and motels, restaurants, institutional and public uses. The minimum size for a Regional Commercial project site is 10 acres.

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/site coverage as the Project. Land uses that are expressly not allowed in the C-R 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 and other local truck routes), it is assumed that the Project constructed under Alternative 2 would consist of auto malls, regional malls, business parks, factory stores and outlets, entertainment commercial, or other similar type commercial land use of similar size as the Project. Such an alternative could take the form of many smaller buildings instead of three larger buildings.

Reduced Development Intensity Alternative (Alternative 3)

Presently, the only approach to reducing the Project's operational-related air quality and greenhouse gas emission 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 Town 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 2,142,000 square feet, compared to the Project's 2,520,000 square feet. Since the building footprint would be reduced by 378,000 square feet (approximately 8.7 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 and 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 July 1, 2022 through August 1, 2022; comments received during a public scoping meeting held on July 19, 2022, at Apple Valley Town Hall; and agency and public written comment received in response to the NOP.

A summary of these written comment letters are provided in Table 1-2. 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			
City of Victorville	July 21, 2022	▪ Requests a Traffic Impact Analysis be prepared for the Project and provides specific guidance	Section 4.12, Transportation
U.S. Fish and Wildlife Service	July 29, 2022	▪ Provides guidance on survey protocols, mitigation measures, and information pertaining to desert tortoises, common ravens, and migratory birds	Section 4.3, Biological Resources
California Department of Fish and Wildlife	August 1, 2022	▪ Recommendations for procedures to assess potential impacts to biological resources and recommendation of mitigation measures if necessary.	Section 4.3, Biological 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
		▪ Recommendations for surveys and discussion of impacts and mitigation for burrowing owl (*Athene cunicularia*), desert tortoise (*Gopherus agassizii*), Mohave Ground Squirrel (*Xerospermophilus mohavensis*), and western Joshua tree (*Yucca brevifolia*)	
Private Organizations and Members of the Public			
Southwest Regional Council of Carpenters	July 18, 2022	▪ Request for local hire provisions to reduce potential impacts relating to traffic, health hazards relating to COVID-19, air quality, and greenhouse gas emissions	Section 4.2, Air Quality; Section 4.6, Greenhouse Gas Emissions; Section 4.12, Transportation
CARE CA	August 1, 2022	▪ Provides recommendations for analysis of the Project since an end user has not been identified	Section 3, Project Description; Section 4.2, Air Quality; Section 4.6, Greenhouse Gas Emissions; Section 4.12, Transportation
Richard Bunck	August 1, 2022	▪ Concerns regarding truck traffic	Section 4.12, Transportation
Comments Received at the Scoping Meeting			
Richard Bunck	July 19, 2022	▪ Preserving the "wild west" culture of Apple Valley	Section 4.1, Aesthetics; Section 4.4, Cultural, Tribal Cultural, and Paleontological 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 Town, 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.

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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 Apple Valley 143 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 Town of Apple Valley (Town). 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 Town 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 Town 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 Town 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 Town'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 Town 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 would cause a significant effect on the environment if the Town 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 Permit, Tentative Parcel Map, Development Agreement, and all other governmental discretionary and ministerial actions related to the Project.

This EIR is an informational document intended for use by Town 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.

2.4 Summary of Project Analyzed in this Environmental Impact Report

The Project includes the construction and operation of 3 industrial/warehouse buildings totaling approximately 2,520,000 square feet on approximately 143 acres. Building 1, the southernmost building, would be approximately 615,000 square feet, Building 2, the center building, would be approximately 1,222,500 square feet, and Building 3, the northernmost building, would be approximately 682,500 square feet. The Project would involve associated improvements, including loading docks, truck and vehicle parking, and landscaped areas.

The Project would also include several off-site utility and public street improvements, including improvements along Stoddard Wells Road and Johnson Road, including frontage landscaping and pedestrian improvements, as well as installation of or upsizing of water and sewer lines in the immediate vicinity of the Project site. The Project would also involve the off-site construction of Outer I-15 Road on the eastern boundary of the Project Site. This would be a public road once constructed.

2.4.1 Requested Approvals

The following discretionary and ministerial actions under the jurisdiction of the Town 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

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 Town Council.
- **Tentative Parcel Map.** Project implementation would require processing of a Tentative Parcel Map to reorganize the Project site into three parcels for each warehouse building.
- **Consider Certification of EIR.** The Planning Commission will certify or reject this EIR, along with appropriate CEQA Findings and the mitigation monitoring and reporting program.

Town Council

- **Development Agreement.** Approve a Development Agreement between the Town and the Project Applicant pursuant to Section 9.04 of the Apple Valley Municipal Code. The Development Agreement would provide sufficient time for the development of the Project by locking in development standards and extending applicable vesting periods for the Project's entitlements and to establish a mechanism whereby the Project Applicant would be partially reimbursed for costs associated with public improvements constructed that would be used by future developments. Reimbursements would be funded by developers of these future developments. The Development Agreement does not contemplate any additional physical improvements, other than those already identified in the Project description, analysis, and proposed mitigation for the Project. Approval of the Development Agreement is not required for development of the Project.

Ministerial Approvals

Town of Apple Valley Subsequent Implementing Approvals

- Approvals for water and sewer 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 Town of Apple Valley.

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 Town concluded that the Project could potentially have direct or indirect adverse effects on the environment. Accordingly, the Town 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 July 1, 2022, through August 1, 2022; comments received during a public scoping meeting held on July 19, 2022, at Apple Valley Town Hall; and agency and public written comment received in response to the NOP.

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			
City of Victorville	July 21, 2022	▪ Requests a Traffic Impact Analysis be prepared for the Project and provides specific guidance	Section 4.12, Transportation
U.S. Fish and Wildlife Service	July 29, 2022	▪ Provides guidance on survey protocols, mitigation measures, and information pertaining to desert tortoises, common ravens, and migratory birds	Section 4.3, Biological Resources
California Department of Fish and Wildlife	August 1, 2022	▪ Recommendations for procedures to assess potential impacts to biological resources and recommendation of mitigation measures if necessary. ▪ Recommendations for surveys and discussion of impacts and mitigation for burrowing owl (*Athene cunicularia*), desert tortoise (*Gopherus agassizii*), Mohave Ground Squirrel (*Xerospermophilus mohavensis*), and western Joshua tree (*Yucca brevifolia*)	Section 4.3, Biological Resources
Private Organizations and Members of the Public			
Southwest Regional Council of Carpenters	July 18, 2022	▪ Request for local hire provisions to reduce potential impacts relating to traffic, health hazards relating to COVID-19, air quality, and greenhouse gas emissions	Section 4.2, Air Quality; Section 4.6, Greenhouse Gas Emissions; Section 4.12, Transportation
CARE CA	August 1, 2022	▪ Provides recommendations for analysis of the Project since an end user has not been identified	Section 3, Project Description; Section 4.2, Air Quality; Section 4.6, Greenhouse Gas Emissions; Section 4.12, Transportation
Richard Bunck	August 1, 2022	▪ Concerns regarding truck traffic	Section 4.12, Transportation
Comments Received at the Scoping Meeting			
Richard Bunck	July 19, 2022	▪ Preserving the “wild west” culture of Apple Valley	Section 4.1, Aesthetics; Section 4.4, Cultural, Tribal Cultural, and Paleontological 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 (with regard to the physical division of an established community)
- Mineral Resources
- Population and Housing
- Public Services (with regard to schools, parks, and other 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 Town 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
- Land Use and Planning
- Noise
- Public Services
- 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 – Land Use and Planning
  - Section 4.10 – Noise
  - Section 4.11 – Public Services
  - Section 4.12 – Transportation

  - Section 4.13 – 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 Town.

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:

- Town of Apple Valley General Plan (2009)
- Apple Valley Municipal Code (Code of Ordinances) (2022 [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 locations:

Town of Apple Valley General Plan

https://www.applevalley.org/services/planning-division/2009-general-plan

Apple Valley Code of Ordinances

https://library.municode.com/ca/apple_valley/codes/code_of_ordinances?nodeId=15357

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 Greenhouse Gas Emission Estimates, Appendix B-1
- Health Risk Assessments, Appendix B-2
- Biological Resources Technical Report, Appendix C
- Cultural Resources Technical Report, Appendix D
- Geotechnical Report, Appendix E
- Phase I Environmental Site Assessment, Appendix F
- Preliminary Drainage Report, Appendix G-1
- Preliminary Water Quality Management Plan, Appendix G-2
- Noise Attachments, Appendix H
- Technical Attachments for Transportation Analysis, Appendix I
- Water Supply Assessment, Appendix J

2.9 Review of the Draft Environmental Impact Report

Upon completion of this Draft EIR, the Town 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 Town 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:

Apple Valley Town Hall, Planning Department
14955 Dale Evans Parkway
Apple Valley, California 92307

San Bernardino County Library
14901 Dale Evans Parkway
Apple Valley, California 92307

Online:

https://www.applevalley.org/services/planning-division/environmental

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:

Daniel Alcayaga, Planning Manager
Town of Apple Valley
14955 Dale Evans Parkway
Apple Valley, California 92307
Phone: 760.240.7000 Ext. 7200
Email: dalcayaga@applevalley.org

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 Town of Apple Valley's Planning Commission, at which the Project, the Final EIR, and requested entitlements are considered for recommendation to the Apple Valley Town 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 Apple Valley 143 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.

As discussed in detail below, the Project involves the development of three industrial/warehouse buildings totaling 2,520,000[1] square feet on an approximately 143-acre site located within the northeast quadrant of Interstate (I-) 15 and Stoddard Wells Road in the Town of Apple Valley (Town), California. Construction of the Project is anticipated to commence in October 2023 and concluding towards the end of November 2024,[2] lasting approximately 14 months. A tenant for the proposed industrial warehouse building has not yet been identified, but the Project would operate as a warehouse and/or distribution facility.

3.1 Project Location

The approximately 143-acre Project site is located in the northern part of the Town of Apple Valley (Town), which is within the Victor Valley Region of San Bernardino County (Figure 3-1, Regional Map; Figure 3-2, Vicinity Map, Figures 3-3 A-C, Project Site Aerial). The Project site is located on the northeast quadrant of I-15 and Stoddard Wells Road. The Project site is located south of Johnson Road (unpaved), approximately 0.25 miles west of Grasshopper Road (unpaved), north of Stoddard Wells Road, and east of I-15.

The Project also includes an approximately 7.9-mile off-site utilities alignment within Town rights-of-way for a proposed water line. This alignment is depicted on Figure 3-2 and includes the following roadways: approximately 1.7 linear miles in Stoddard Wells Road, approximately 2.3 linear miles in Johnson Road, approximately 1.7 linear miles in Outer I-15 Road, approximately 0.67 mile in Falchion Road, and approximately 1.5 miles in Apple Valley Road.

The Project site consists of Assessor's Parcel Numbers (APNs) 047-221-105, 047-221-106, 047-221-115, 047-222-206, and 047-222-211. Specifically, the Project site is located in Sections 13 and 14, Township 6N, Ranges 3W and 4W, as depicted on the U.S. Geological Survey Apple Valley North and Victorville, California 7.5-minute topographic quadrangle maps.

Regional access to the Project site is provided via I-15, immediately adjacent to the northeast of the Project site. Local access to the Project is provided via I-15 and Stoddard Wells Road.

1 It should be noted that the Project's square footage analyzed in the technical reports was 2,518,500 square feet. The Project's size has increased to 2,520,000 square feet since the technical reports were originally prepared (an increase of 1,500 square feet in Building 2). However, this 0.0596% increase in square footage is nominal when taking into consideration the ultimate size of the Project and would not result in significant changes to the analysis performed or new significant impacts not disclosed in this EIR.

2 The analysis assumes a construction start date of October 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.

3.2 Environmental Setting

Town of Apple Valley

The Town is approximately 72 square miles in the Victor Valley region of San Bernardino County. The Town is located within the Mojave Desert, which is a region containing desert plains, dry lakebeds, and scattered mountains. The Town of Apple Valley is located primarily on alluvial slopes of the Mojave River floodplain, at the southern edge of the Mojave Desert. Elevations in the Town range from approximately 2,800 feet above sea level near the Mojave River, to approximately 3,200 feet above sea level at the northeast corner of Town. The topography gradually inclines towards the Juniper Flats foothills of the San Bernardino Mountains to the south, as well as to the scattered knolls and mountains to the north and east of the Town. Turtle and Black Mountains are located to the north of the planning area, Fairview Mountain to the northeast and the Granite Mountains to the southeast. Generally, the Town is a rural community with a broad mix of land uses, including housing, commercial, office, industrial, agriculture, and public-serving uses. The majority of the Town contains generally rural residential uses. Commercial uses follow Highway 18, Bear Valley Road, and areas along I-15. Industrial uses are located in the northern portion of the Town and along I-15.

The Town is bordered by the City of Victorville to the west, the City of Hesperia to the southwest, and unincorporated County to the north and east. Two highways provide direct access to the Town: I-15 runs north–south on the west side of the Town; and Highway 18 runs east-west through the center of the Town (Town of Apple Valley 2009).

Existing Project Site

The approximately 143-acre, irregularly-shaped Project site consists of vacant, undeveloped land. The Project site is bordered to the west by I-15, which runs northeast-southwest, and to the southwest by another parcel, which gives the site its roughly trapezoidal shape.

Photos of the Project site and off-site utilities alignment are included in Figures 3-4A through 3-4G, Existing Conditions. Ground surface cover of the Project site consists of low to moderate densities of native brush and shrub growth, with occasional juniper and Joshua trees located throughout the site. The site has been 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 off-site utilities alignment is located within public rights-of-way comprised of developed asphalt roadways primarily surrounded by undeveloped areas with vegetation compositions similar to the Project site. Figures 3-4A through 3-4G, Existing Conditions, provide representative photographs of the Project site.

The Project site's surface elevation ranges between approximately 2,920 and 3,000 feet above mean sea level. The Project site's local topographic gradient is approximately 3% downward towards the south (Figure 3-5, Topographic Map).

According to the Town's General Plan, the land use and zoning designations for the Project site are Regional Commercial (C-R) (Town of Apple Valley 2015; Town of Apple Valley 2021) (see Figure 3-6, Existing General Plan Land Use Designations, and Figure 3-7, Existing Zoning Designations). Additionally, the Project site is located within the Warehouse Distribution Regional Commercial (C-R) Overlay.

Land uses surrounding the Project site primarily consist of vacant land. Specific land uses located in the immediate vicinity of the Project site include the following:

- North: Johnson Road and vacant land

- **East:** vacant land and Grasshopper Road
- **South:** Stoddard Wells Road and a planned travel center
- **West**: I-15

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 3-8, Project Development Setting, depicts existing development within the vicinity of the Project site.

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 regional research and consultation with the Town staff during the traffic scoping process for the Project. The list consists of the proposed travel center and RV park, known as the Apple Valley I-15 Travel Center project, located adjacent to the Project site to the southwest (see Figure 3-9, Cumulative Project Location).

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 Town 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),[3] resulting in high numbers of residents commuting out of the region for work. 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 large-format industrial buildings approximately 600,000 to 1,300,000 square feet ± in size within the Regional Commercial – Warehouse Overlay zone to meet the existing and growing demand for large-format logistics and warehouse buildings in the region.

Objective 2. Develop a fiscally sound, jobs-producing, and tax-generating land use in north Apple Valley.

Objective 3. Concentrate nonresidential uses near existing roadways, highways, and freeways in an effort to isolate and reduce any potential environmental impacts related to truck

[3] 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 2021, the Town had a jobs/housing ratio of 1.07, which is below regional targets ranging from 1.25–1.50 (SCAG 2021; APA 2003).

traffic congestion, air emissions, industrial noise, and biological resources to the greatest extent feasible.

Objective 4. Create a project that takes advantage of and enhances existing infrastructure, including the proximity to major regional roadways, railroad service corridors, and other similar infrastructure.

3.4 Project Characteristics

3.4.1 Project Components

The Project would include construction of three industrial/warehouse buildings and associated improvements on 143 acres of vacant land (see Figure 3-10, Overall Site Plan, and Figures 3-11A-C). Building 1, the southernmost building, would be approximately 615,000 square feet (see Figure 3-11A), Building 2, the center building, would be approximately 1,222,500 square feet (see Figure 3-11B), and Building 3, the northernmost building, would be approximately 682,500 square feet (see Figure 3-11C). In total, the Project would provide 2,520,000 square feet of industrial/warehouse space and associated improvements, including loading docks, tractor-trailer stalls, passenger vehicle parking spaces, and landscape area. The layout of the buildings 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 15% High-Cube Cold Storage Warehousing and 85% High-Cube Fulfillment Center Warehousing split of the total building square footage, was applied to provide a conservative analysis in the event that a small portion of the facility is used for cold storage.

Buildings 1 and 3 would have a maximum building height of 50 feet, measured from the finished floor to the top of building parapets, and Building 2 would have a maximum building height of 52 feet. Building 1 would have a floor area ratio (FAR) of 0.451, Building 2 would have a FAR of 0.391, and Building 3 would have a FAR of 0.420.

The Project would include improvements along Stoddard Wells Road and Johnson Road, 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. The Project would also involve the off-site construction of Outer I-15 Road on the eastern boundary of the Project Site. This would be a public road once constructed.

To account for the maximum potential disturbance associated with all on-site and off-site improvements, a maximum disturbance footprint has been developed. 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 3-1 provides a summary of these improvements.

Table 3-1. Project Construction Phases by Improvement Area

Improvement Area	Project Components
Project Site	Three industrial warehouse buildings totaling 2,520,000 square feet and associated on-site roadways, trailer/automobile parking, and landscaping
Off-Site Street and Utility Improvements	▪ Construction of Outer I-15 Road ▪ Construction of a water main within the rights-of-way of Johnson Road, Stoddard Wells Road, Outer I-15 Road, Falchion Road, and Apple Valley Road ▪ Possible connections for utilities and other roadway and pedestrian improvements (e.g., road repaving or installation of sidewalks along building frontages)

Note: See Figure 3-10 and 3-11A-C, Site Plan.

Site Access, Circulation, and Parking

Realignment of Outer I-15 Road

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 involves the realignment of Outer I-15 Road. Outer I-15 Road is depicted on the Town's General Plan Circulation Element as a secondary road with an 88-foot right-of-way from Stoddard Wells Road to Dale Evans parkway and runs parallel to I-15. It is currently only depicted on the Town's General Plan Circulation Element and has not yet been constructed. The Project would realign the portion of Outer I-15 Road north of Stoddard Wells Road to Johnson Road from its current location adjacent to I-15 to the eastern side of Project site's eastern boundary, extending north beyond the Project site approximately 2,000 feet to where it would resume its current alignment.

The portion of Outer I-15 Road along the Project site's frontage from Stoddard Wells Road to the Johnson Road would be constructed as part of the Project to its full right-of-way. A traffic signal would be installed at the intersection of Stoddard Wells and Outer I-15 Road.

Site Access

Access to the Project site would be provided by two driveways on Stoddard Wells Road, with primary access being a proposed signalized intersection at the southeast corner of the site that would form the southern leg of Outer I-15 Road. In addition to the proposed signalized intersection, the Project site would be served by 13 driveways (Figure 3-12, Vehicular Circulation and Access Plan):

Building 1

- Driveway A via Stoddard Wells Road – 50 feet wide, right-in/right-out (trucks and passenger cars) driveway with stop sign
- Driveway B via internal drive aisle – 55 feet wide, full access (trucks only) driveway with gate
- Driveway C via Outer I-15 Road – 36 feet wide, full access (passenger cars only) driveway with stop sign
- Driveway D via Outer I-15 Road – 57 feet wide, full access (trucks only) driveway with gate

Building 2

- Driveway E via Outer I-15 Road – 50 feet wide, full access (trucks only) driveway with gate
- Driveway F via Outer I-15 Road – 36 feet wide, full access (passenger cars only) driveway with stop sign
- Driveway G via Outer I-15 Road – 36 feet wide, full access (passenger cars only) driveway with stop sign
- Driveway H via Outer I-15 Road – 50 feet wide, full access (trucks only) driveway with gate

Building 3

- Driveway I via Outer I-15 Road – 50 feet wide, full access (trucks only) driveway with gate
- Driveway J via Outer I-15 Road – 36 feet wide, full access (passenger cars only) driveway with stop sign
- Driveway K via Outer I-15 Road – 50 feet wide, full access (trucks only) driveway with gate
- Driveway L via internal drive aisle – 36 feet wide, full access (passenger cars only) driveway with stop sign

- Driveway M via internal drive aisle – 36 feet wide, full access (passenger cars only) driveway with stop sign

Paved passenger vehicle parking areas would be provided within areas east of all three buildings along Outer I-15 Road, within an area at the westernmost point of the project site southwest of Building 2, and within an area west of Building 3. Tractor-trailer stalls and loading docks would be located to the north and south of all three buildings, with additional tractor-trailer stalls located west of Building 2. In total, the Project would provide approximately 481 loading dock positions, approximately 759 tractor-trailer stalls, and approximately 1,332 passenger vehicle parking spaces. Parking areas would include designated areas for electric vehicles and these spaces would be equipped with automobile electric vehicle (EV) charging stations with Level 2 or faster chargers.

The Project would also involve improvements to Stoddard Wells Road. Stoddard Wells Road would be constructed to its ultimate half-width along the Project site's southern boundary.

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 (see Figure 3-13A and Figure 3-13B, Conceptual Utility Plan). These utilities are described in detail below.

Domestic Water

Domestic water service would be provided by Liberty Utilities. The Project would receive water via an existing 12-inch main tie-in within Stoddard Wells Road. The water main would be extended within the new segment of Outer I-15 Road that would be constructed as part of the Project. Lateral water connections would be made to the existing and proposed water mains.

In addition, the Project would involve the installation of approximately 7.9 miles of an off-site 16-inch water main to provide an additional water source in the event of an emergency. This alignment is depicted on Figure 3-2 and includes the following roadways: approximately 1.7 linear miles in Stoddard Wells Road, approximately 2.3 linear miles in Johnson Road, approximately 1.7 linear miles in Outer I-15 Road, approximately 0.67 mile in Falchion Road, and approximately 1.5 miles in Apple Valley Road. The water main would be constructed within the rights-of-way in the aforementioned roadways. However, because the design of these improvements has not yet commenced and is not scheduled to commence until after the Project has been approved, the precise layout of this Project component cannot be identified with certainty. Thus, for the purposes of this environmental analysis, it is assumed that the installation of this pipeline would occur within the entirety of the rights-of-way of the aforementioned roadways.

Sanitary Sewer

Sanitary sewer service would be provided by Liberty Utilities. An existing 21-inch diameter sanitary sewer line is located within Stoddard Wells Road. The Project would connect to this existing line and proposes to construct a sanitary sewer line within the new segment of Outer I-15 Road.

Storm Drainage

A new engineered stormwater drainage system would be constructed on the Project site to collect and treat on-site stormwater (see Figure 3-11A-B, Building Specific Site Plans and Figure 3-13A, Conceptual Utility Plan). Post-development, the Project's stormwater system involves capturing, treating, and infiltrating stormwater onsite and conveying flows that exceed the capacity of the stormwater system off-site across Stoddard Wells Road.

On-Site Capture, Treatment, and Infiltration of Stormwater

Stormwater flows would fall throughout the Project site onto the buildings' roofs, paved areas, landscaped surfaces, and aboveground stormwater detention basins. Stormwater flowing onto the buildings' roofs would flow on the roof structure towards roof drains and downspouts that would drain to paved areas. These flows, along with flows falling onto paved surfaces, would flow towards a series of gutters and catch basins. Catch basins would include best management practice (BMP) features that would treat stormwater and filter trash and debris and separate oils from water. Catch basins would be connected via underground storm drains to a series of aboveground and underground detention basins throughout the Project site. These basins would feature amended soils and bases to allow for stormwater to infiltrate and recharge the underlying groundwater basin. The on-site stormwater drainage system would capture and attenuate stormwater consistent with Town and County stormwater requirements, including requirements in the *San Bernardino County Hydrology Manual* and *Mojave Watershed Technical Guidance*. Consistent with these requirements, the stormwater system would treat flows collected under a 2-year design storm and would attenuate flows for a 100-year design storm. For storms above the 2-year design storm, during which the proposed infiltration basins reach their capacity, excess flows would be routed via an underground storm drain line that would extend under Stoddard Wells Road and daylight within Bell Mountain Wash, south of the Project site. A rip-rap feature would be installed where this storm drain line terminates to reduce the velocity of flows. 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. Existing electric power lines and gas posts are located northwest of Building 3.

Architecture

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

In an effort to ensure that current and future development within the Town is designed and constructed to conform to existing visual character and quality of the surrounding built environment, the Town of Apple Valley Development Code (Title 9 of the Town'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 Town are reviewed for compliance with all applicable provisions set forth by the Development Code. As part of the Town's development review process, the Project's architectural plans are reviewed by Town staff and the Planning Commission to determine whether Project design conforms to the Development Code and promotes the visual character and quality of the surrounding area.

Landscaping and Lighting Improvements

As depicted in Figure 3-15, Conceptual Landscape Plan, approximately 894,000 square feet of 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 Stoddard Wells Road, Outer I-15 Road, and I-15. Landscaping along the site's frontages would include a mixture of trees, shrubs, and groundcover. Proposed trees include 24-inch box blue palo verde, 24-inch box desert willow, 24-inch box crape myrtle, 24-inch box Coulter pine, and 24-inch box raywood ash. Approximately 17 western Joshua trees, 4 Cholla trees and 2 branched pencil cholla trees currently on the Project site would be incorporated into the Project's landscape plan. The relocation of these plants would be done in accordance with the Joshua Tree Preservation, Protection, and Relocation Plan and Desert Native Plant Relocation Plan for the Apple Valley 143 Project, included as Attachment B to the Biological Resources Technical Report (Appendix D). These plants are not currently shown in the Project's landscape plan but would be incorporated prior to approval of the final landscape plan.

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 9.47.050 of the Town's Municipal Code, which contains landscape standards for industrial developments (Town of Apple Valley 2022).

Project lighting would feature a mix of pole-mounted and wall-mounted lighting fixtures. Consistent with Section 9.47.090 of the Town's Municipal Code, lighting shall be used only for the functional requirements of safety, security, and identification and light standards shall blend architecturally with buildings, pedestrian areas, and other hardscape elements (Town of Apple Valley 2022).

Applicant Proposed Sustainability Features and Measures

The Project has been designed to include a number of Applicant Proposed Measures (APMs) to minimize the Project's environmental impacts. These APMs are included within the Project and have been identified as required to reduce the Project's environmental impacts with regard to air quality, greenhouse gas emissions, and energy. To ensure that these APMs are implemented during construction and operation, they will be tracked within the Project's Mitigation Monitoring and Reporting Program. measures.

APM-1 The Project shall implement the following measures in order to reduce operational mobile source air pollutant emissions to the extent feasible:

- Only haul trucks meeting California Air Resources Board (CARB) model year 2010 engine emission standards shall be used for the on-road transport of materials to and from the Project site.

APM-2 The Project shall implement the following measures in order to reduce construction air pollutant emissions to the extent feasible:

- Require all generators, and all diesel-fueled off-road construction equipment greater than 75 horsepower, to be zero-emissions or equipped with CARB Tier IV-compliant engines (as set forth in Section 2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 of the Code of Federal Regulations) or better by including this requirement in applicable bid documents, purchase orders, and contracts with successful contractors. After either (1) the

completion of grading or, (2) the completion of an electrical hookup at the site, whichever is first, require all generators and all diesel-fueled off-road construction equipment, to be zero-emissions or equipped with CARB Tier IV-compliant engines (as set forth in Section 2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 of the Code of Federal Regulations) or better by including this requirement in applicable bid documents, purchase orders, and contracts with successful contractors. An exemption from these requirements may be granted by the Town in the event that the applicant documents that equipment with the required tier is not reasonably available and corresponding reductions in criteria air pollutant emissions are achieved from other construction equipment.[4] Before an exemption may be considered by the Town, the applicant shall be required to demonstrate that at least two construction fleet owners/operators in the San Bernadino Region were contacted and that those owners/operators confirmed Tier 4 Final or better equipment could not be located within the San Bernardino Region. To ensure that Tier 4 Final construction equipment or better would be used during the proposed Project's construction, the applicant shall include this requirement in applicable bid documents, purchase orders, and contracts. Successful contractors must demonstrate the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities.

- On days when the hourly average wind speed for the Town of Apple Valley exceeds 20 miles per hour, additional dust control measures shall be implemented, such as increased surface watering. Grading and excavation shall be prohibited when sustained wind speed exceeds 30 miles per hour.
- Use paints, architectural coatings, and industrial maintenance coatings for all interior painting that have volatile organic compound levels of less than 10 grams per liter (g/L).

APM-3 Prior to tenant occupancy, the Project Applicant or successor in interest shall provide documentation to the Town of Apple Valley demonstrating that the occupants of the Project site have been provided documentation that:

- Recommends the use of electric or alternatively fueled sweepers with high efficiency particulate air (HEPA) filters; and
- Recommends the use of water-based or low-VOC cleaning.

APM-4 The Project shall be designed to:

- Include the application of surface treatments (such as PURETi Coat or PlusTi) on impervious ground surfaces that lessen impervious surface-related radiative forcing.
- Include HVAC and/or HEPA air filtration systems within in all warehouse facilities.

APM-5 The Project shall provide rooftop solar array that has the capacity to provide a minimum of 2,000 AMPS (which is the maximum peak power amount of the project). However, the rooftop solar system will not be designed or constructed to exceed the annual energy consumption of the Project facilities.

[4] For example, if a Tier 4 Final piece of equipment is not reasonably available at the time of construction and a lower tier equipment is used instead (e.g., Tier 4 interim), another piece of equipment could be upgraded from a Tier 4 Final to a higher tier (i.e., Tier 5) or replaced with an alternative-fueled (not diesel-fueled) equipment to offset the emissions associated with using a piece of equipment that does not meet Tier 4 Final standards.

APM-6 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.

APM-7 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

APM-8 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.

Operational Characteristics

Tenants for the Project have not been identified for the three industrial warehouse buildings. Notwithstanding, based on the Project Applicant's experience developing, owning, and operating similar warehouse buildings, business operations would be expected to be conducted within the enclosed buildings, with the exception of the ingress and egress 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.

Because an end user of the three buildings 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 EIR 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 EIR assume a blend of "high-cube" fulfillment center and cold-storage warehousing. Under this modeling scenario, approximately 85% of all buildings (i.e.,

2,140,725 square feet) would support "high-cube" fulfillment center warehouse uses, and 15% of all buildings (i.e., 377,775 square feet) would support "high-cube" cold-storage warehouse uses[5].

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 in 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 and to establish a mechanism whereby the Project Applicant would be partially reimbursed for costs associated with constructed public improvements that would be used by future developments. Reimbursements would be funded by developers of these future developments.

3.4.2 Project Construction

Based on information provided by the Project Applicant, it is assumed that construction of the Project would commence in or around October 2023 and concluding in November 2024[6], lasting approximately 14 months. The analysis contained herein is based on the following assumptions (duration of phases is approximate):

- Site Preparation: 1 month (October 2023)
- Mass Grading: 1.5 months (October 2023 – December 2023)
- Building Construction: 8 months (December 2023 – September 2024)
- Architectural Coating: 2.5 months (June 2024 – September 2024)
- Fine Grading: 0.5 months (August 2024 – September 2024)
- Concrete Laydown: 3 months (September 2024 –November 2024)

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

Construction activities would generally occur across six phases: site preparation (e.g., vegetation clearing, grubbing, tree removal, discing), 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 Project would involve the import of approximately 50,000 cubic yards of earthwork materials to balance the site during the grading phase.

The six phases of construction are described in detail below.

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5 It should be noted that the Project's square footage analyzed in the technical reports was 2,518,500 square feet. The Project's size has increased to 2,520,000 square feet since the technical reports were originally prepared (an increase of 1,500 square feet in Building 2). However, this 0.0596% increase in square footage is nominal when taking into consideration the ultimate size of the Project and would not result in significant changes to the analysis performed or new significant impacts not disclosed in this EIR.

6 The analysis assumes a construction start date of October 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 GHG emissions, because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

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, 17 western Joshua trees that have been identified as transplantable trees and, 4 Cholla trees and 2 branched pencil cholla 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.

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.

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 proposed 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. Traffic control devices would be installed, including a traffic signal at the intersection of Stoddard Wells Road and Outer I-15 Road (see Figure 3-10 and 3-11A-C, Site Plan).

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.

Off-Site Street and Utility Improvements

Architectural coatings would not be applied for this phase/area. Off-site landscaping is not proposed.

3.5 Standard Requirements and Conditions of Approval

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

- Town of Apple Valley, Planning Division
- Town of Apple Valley, Building and Safety Division
- Town of Apple Valley, Department of Public Works
- Town of Apple Valley, Engineering Department
- Apple Valley Fire Protection District

This review of the Project by the Town 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 Apple Valley Planning Commission and Apple Valley Town Council. These conditions will be considered by the Planning Commission and Town 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

3.6.1 Town of Apple Valley

The Town has primary approval responsibility for the Project. As such, the Town is serving as the lead agency for this EIR, pursuant to CEQA Guidelines Section 15050.

The following discretionary and ministerial actions under the jurisdiction of either the Town of Apple Valley 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

Planning Commission

- **Project Review.** A review by the Planning Commission is held in order to review the Project, including all requested entitlements.
- **Tentative Parcel Map.** Project implementation would require processing of a Tentative Parcel Map to reorganize the Project site into three parcels for each warehouse building.

- **Consider Certification of EIR.** The Planning Commission will certify or reject this EIR, along with appropriate CEQA Findings and the mitigation monitoring and reporting program.

Town Council

- **Development Agreement.** Approve a Development Agreement between the Town and the Project Applicant pursuant to Section 9.04 of the Apple Valley Municipal Code. The Development Agreement would provide sufficient time for the development of the Project by locking in development standards and extending applicable vesting periods for the Project's entitlements and to establish a mechanism whereby the Project Applicant would be partially reimbursed for costs associated with public improvements constructed that would be used by future developments. Reimbursements would be funded by developers of these future developments. The Development Agreement does not contemplate any additional physical improvements, other than those already identified in the Project description, analysis, and proposed mitigation for the Project. Approval of the Development Agreement is not required for development of the Project.

Ministerial Approvals

Town of Apple Valley Subsequent Implementing Approvals

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

3.6.2 Other Agency Approvals

In addition to the approvals required by the Town to implement the Project, the Project would also require permits from other agencies. The following permits are anticipated to be required, but this list may not be exhaustive and may be refined throughout the Project planning process.

- **California Department of Transportation.** An **Encroachment Permit** from the California Department of Transportation (Caltrans) would be required to accommodate the possible improvements to the I-15/Stoddard Wells Road on-/off-ramps.
- **California Department of Fish and Wildlife.** An **Incidental Take Permit** from the California Department of Fish and Wildlife (CDFW) would be required to remove western Joshua trees that are present on the Project site. A **Lake and Streambed Alteration Agreement** from CDFW would also be required to modify existing drainages that are present on the Project site.
- **Regional Water Quality Control Board.** A **Waste Discharge Requirements Permit** from the Regional Water Quality Control Board (RWQCB) would be required to modify existing drainages that are present on the Project site.

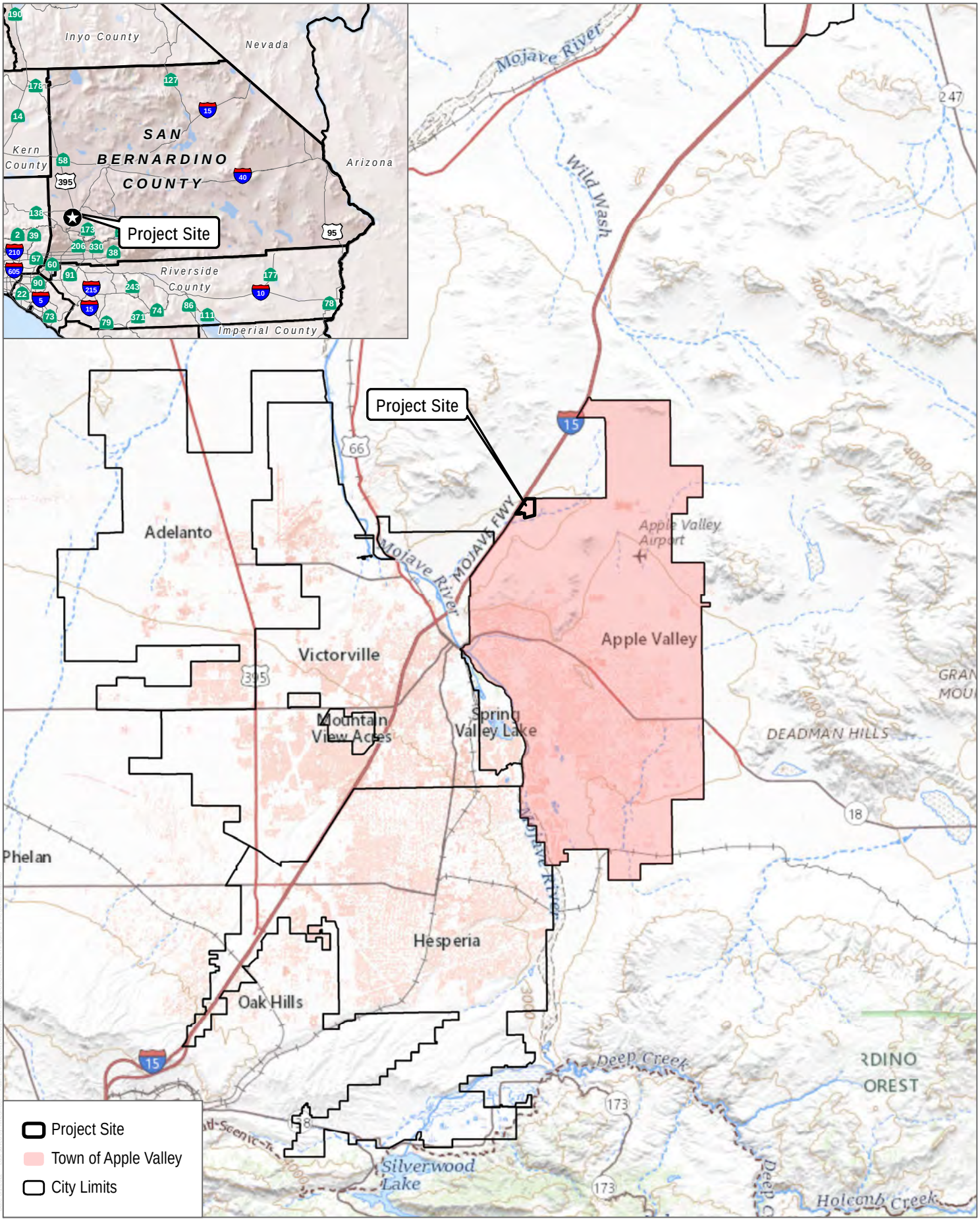
3.7 References

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SOURCE: USGS Topo 2020

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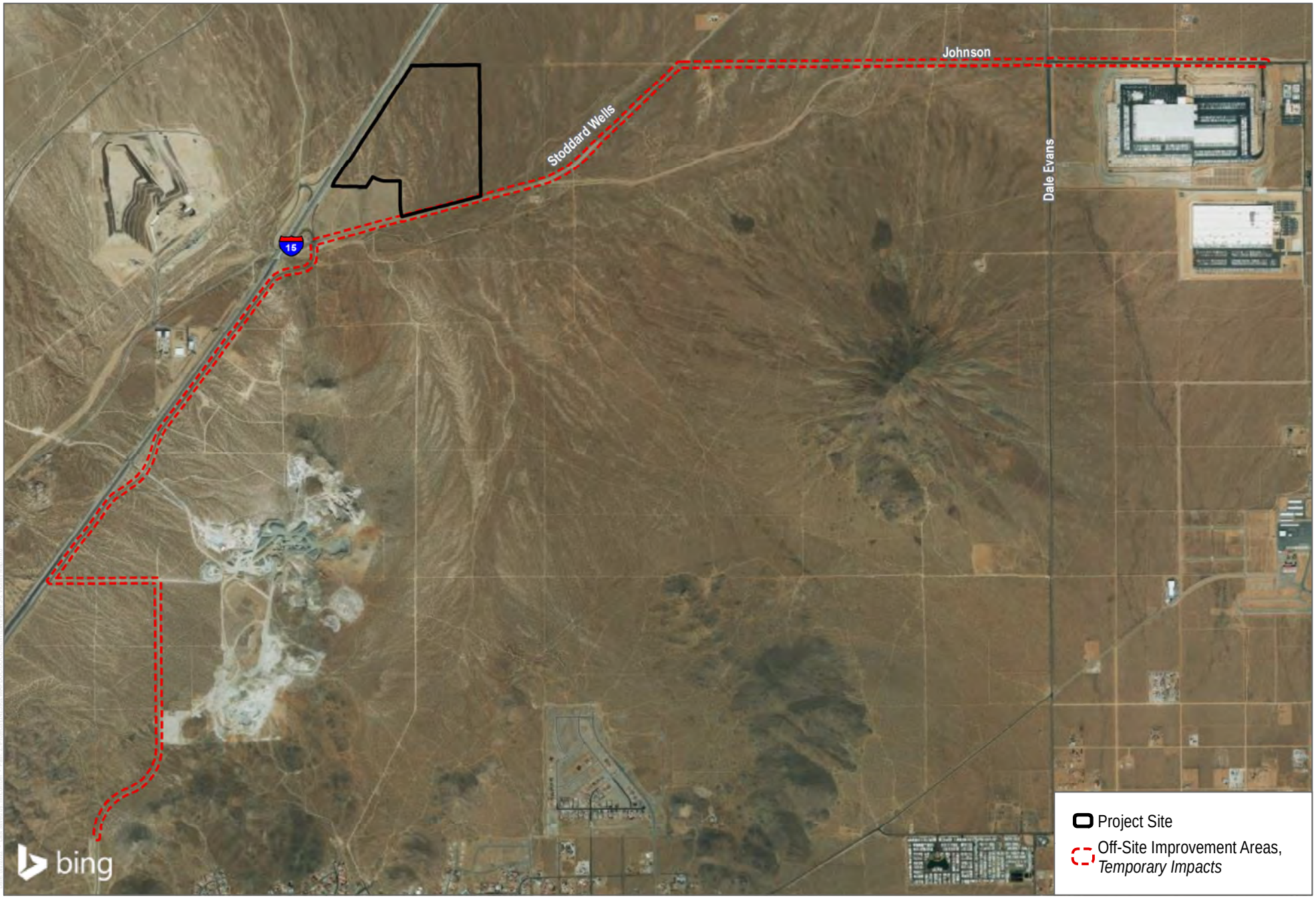
0 2 4 Miles

FIGURE 3-1

Regional Map

Apple Valley 143 Project

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

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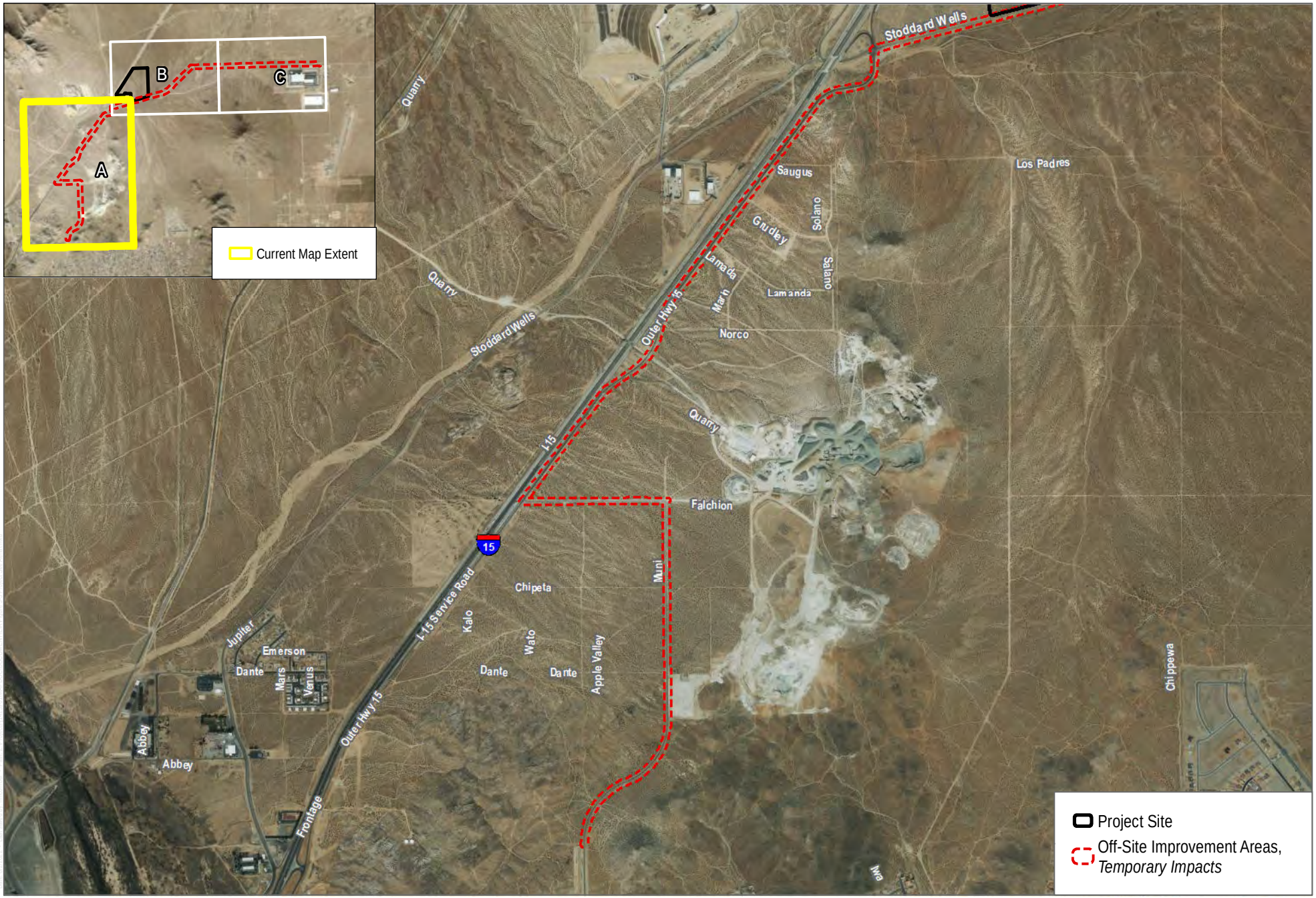
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FIGURE 3-2

Vicinity Map

Apple Valley 143 Project

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

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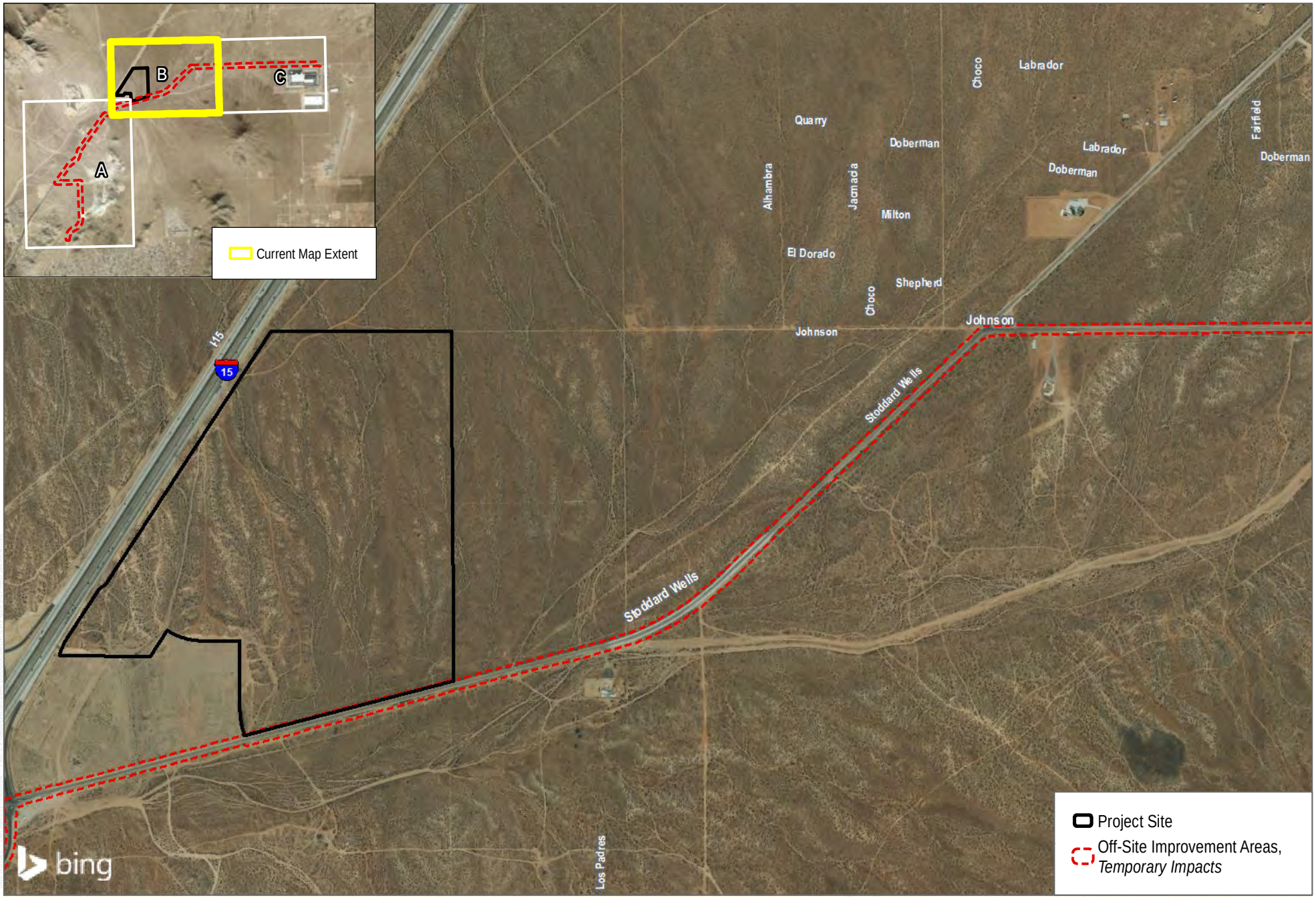
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FIGURE 3-3 A

Project Site Aerial

Apple Valley 143 Project

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

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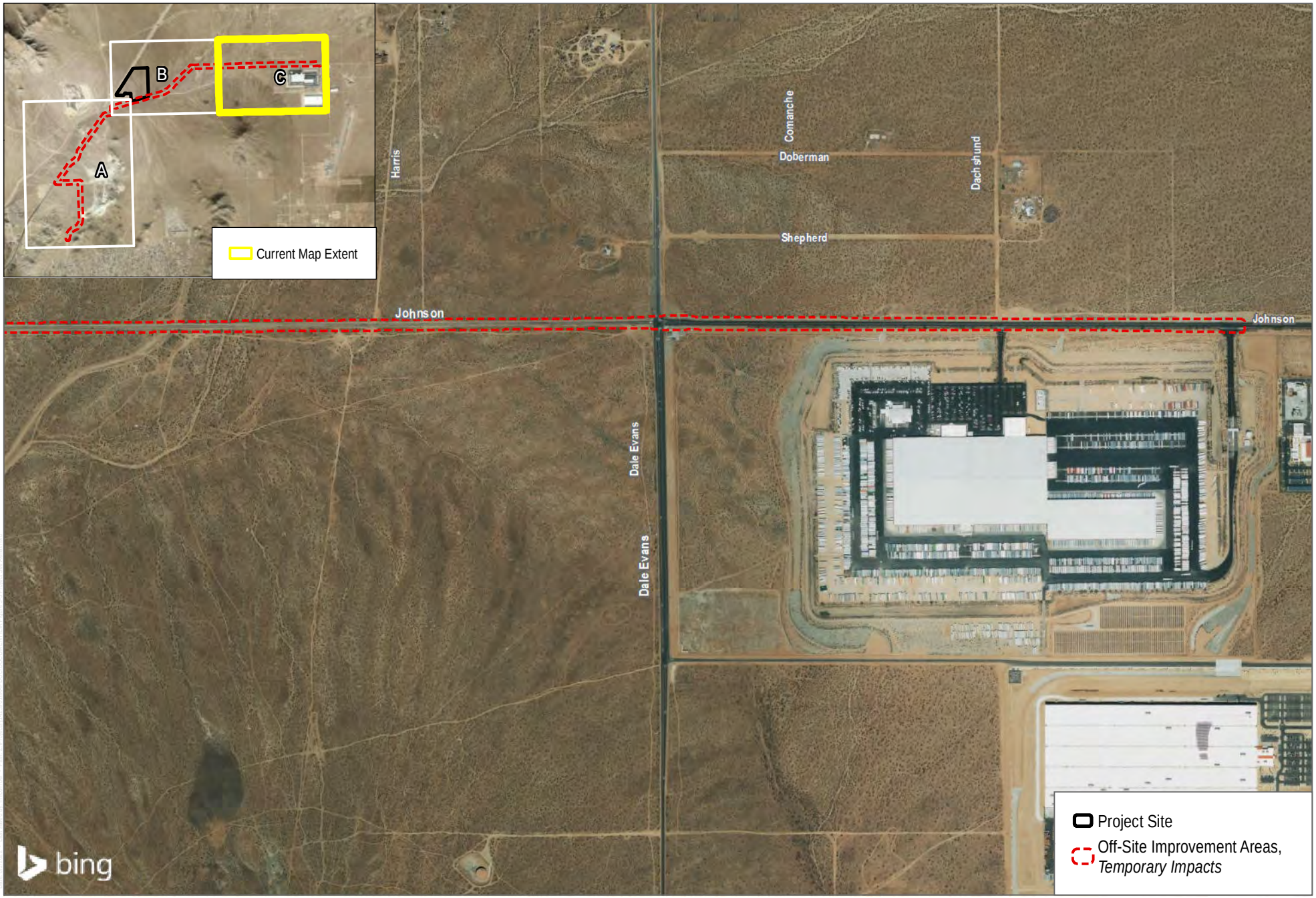
0 500 1,000 Feet

FIGURE 3-3 B

Project Site Aerial

Apple Valley 143 Project

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

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0 500 1,000 Feet

FIGURE 3-3 C

Project Site Aerial

Apple Valley 143 Project

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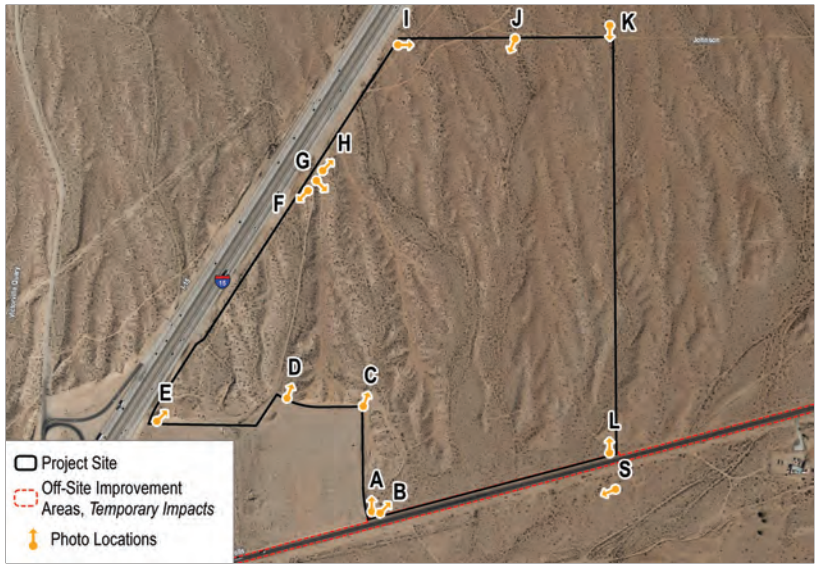


Photo Key



Photo A.



Photo B.



Photo C.

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FIGURE 3-4A

Existing Conditions

Apple Valley 143 Project

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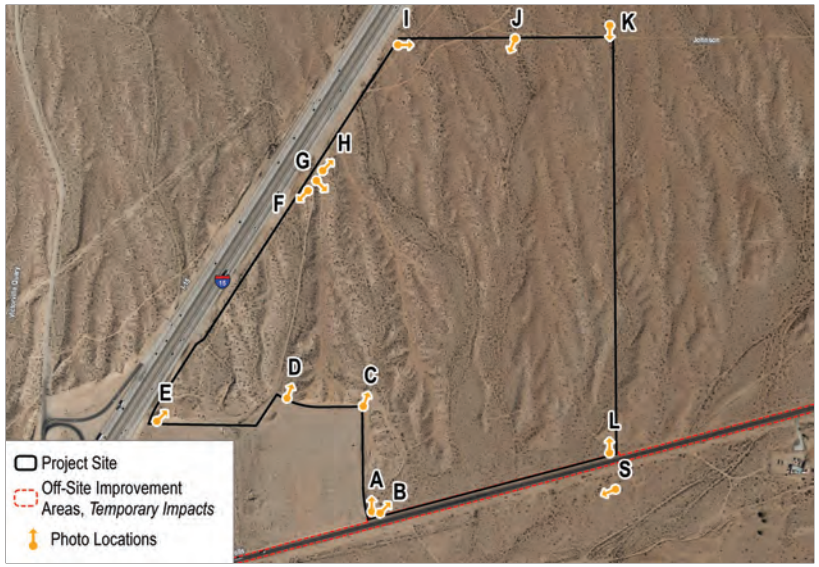


Photo Key



Photo D.



Photo E.



Photo F.

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FIGURE 3-4B

Existing Conditions

Apple Valley 143 Project

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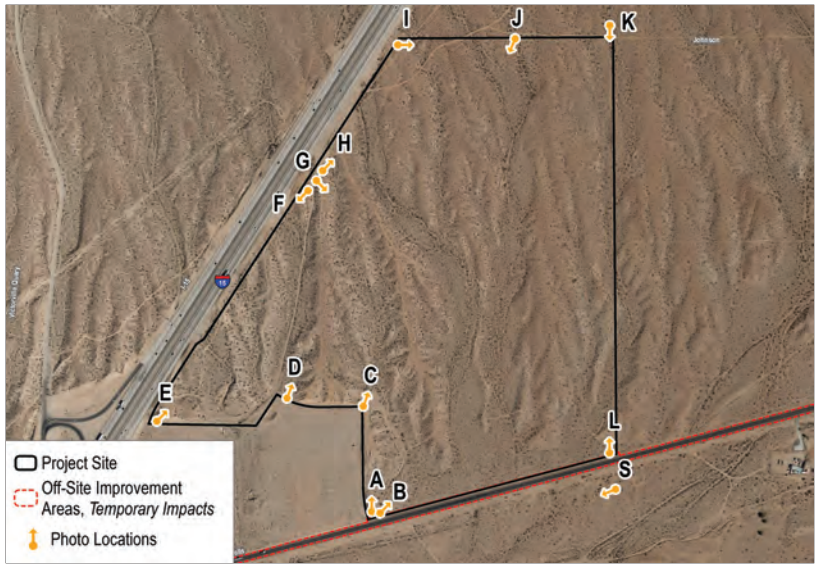


Photo Key



Photo G.



Photo H.



Photo I.

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FIGURE 3-4C

Existing Conditions

Apple Valley 143 Project

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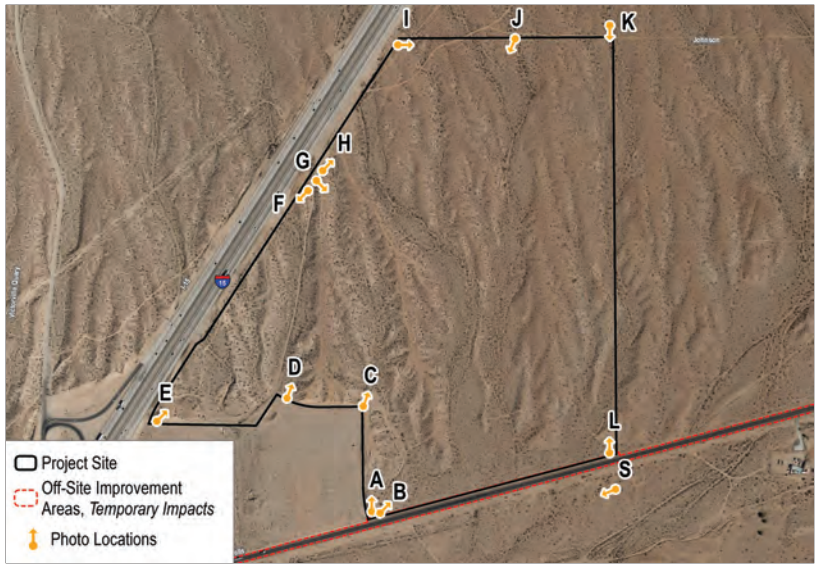


Photo Key



Photo J.



Photo K.



Photo L.

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FIGURE 3-4D

Existing Conditions

Apple Valley 143 Project

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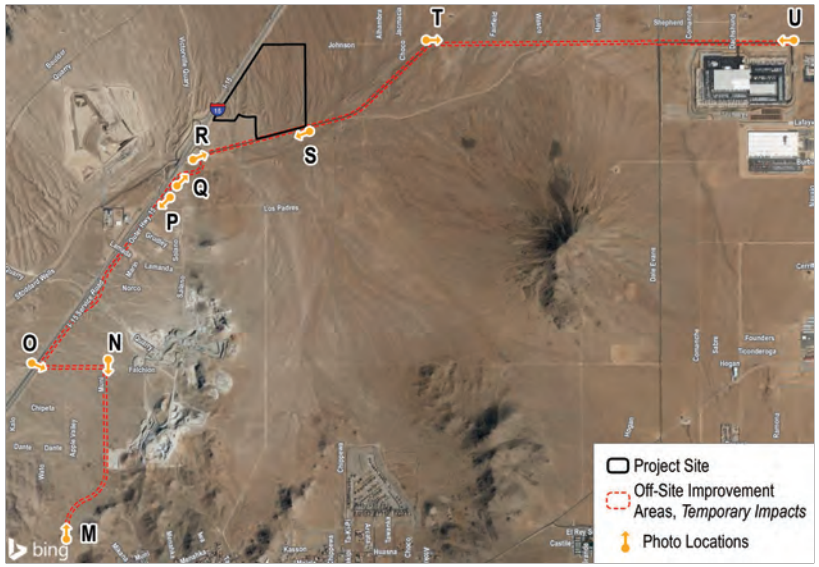


Photo Key



Photo M.



Photo N.



Photo O.

Path: Z:\Projects\14-023601\MAP\DOC\DOCUMENTER

DUDEK

FIGURE 3-4E

Existing Conditions

Apple Valley 143 Project

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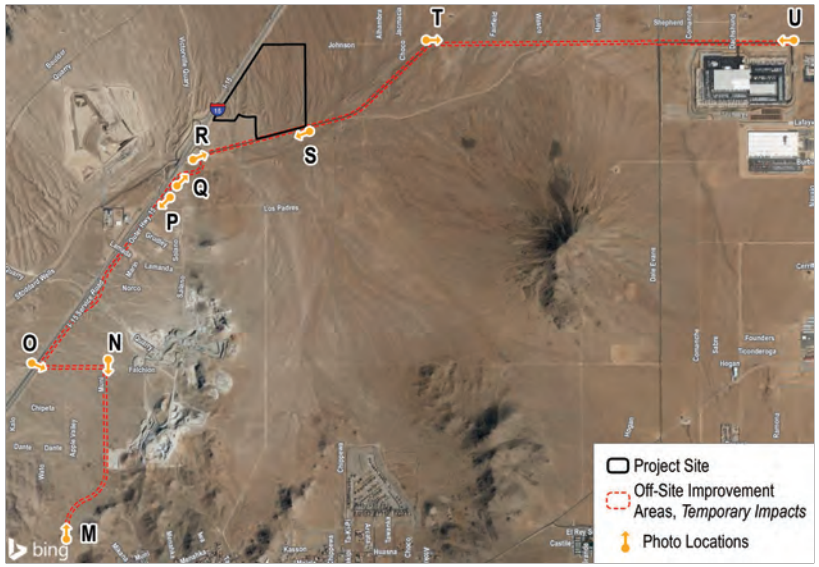


Photo Key



Photo P.



Photo Q.



Photo R.

Path: Z:\Projects\U423601\MAP\DOC\DOCUMENTER

DUDEK

FIGURE 3-4F

Existing Conditions

Apple Valley 143 Project

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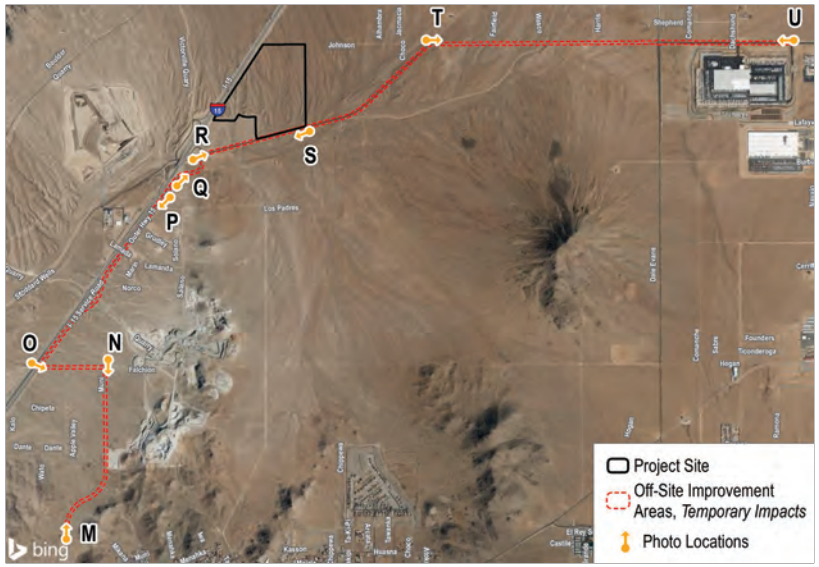


Photo Key



Photo S.



Photo T.



Photo U.

Path: Z:\Projects\U-4230\MAPDOC\DOCUMENTER

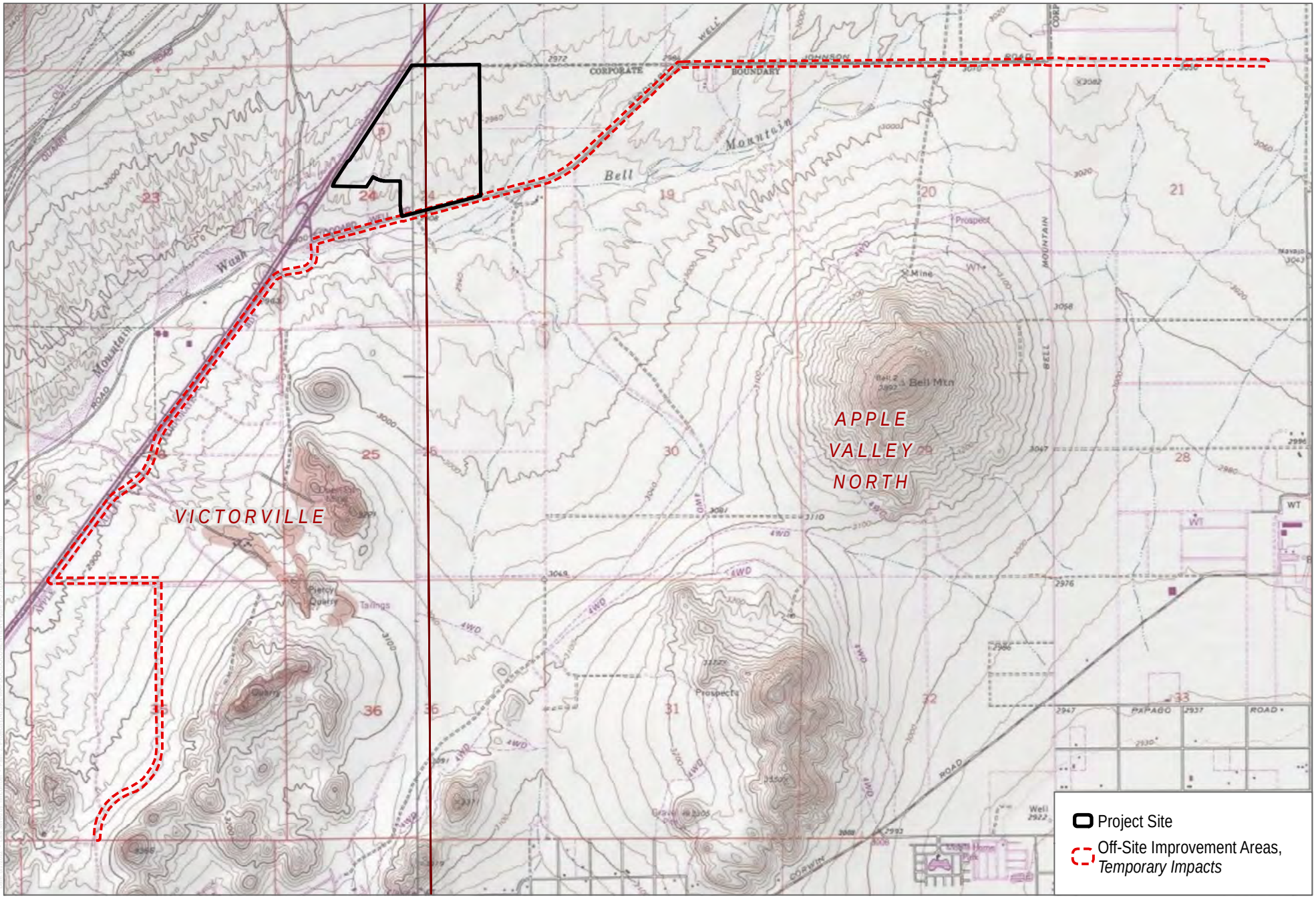
DUDEK

FIGURE 3-4G

Existing Conditions

Apple Valley 143 Project

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SOURCE: USGS 7.5 Minute Series Victorville and Apple Valley North Quadrangle
Township 6N; Range 3W and 4W; Sections 19, 20, 21, 23, 24, and 26

DUDEK

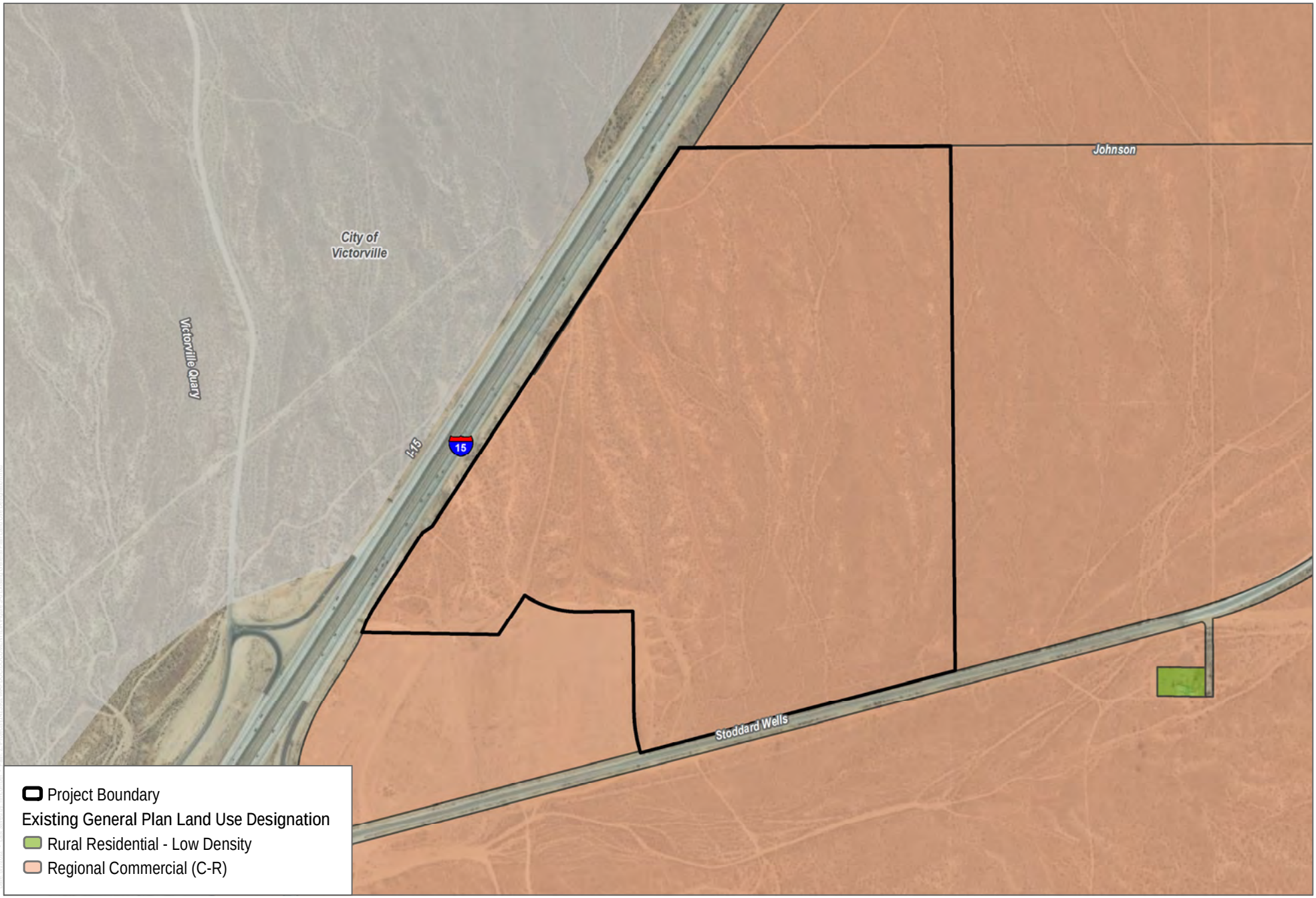
0 1,350 2,700 Feet

FIGURE 3-5

Topographic Map

Apple Valley 143 Project

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SOURCE: Bing Maps 2021; San Bernardino County 2012; Town of Apple Valley 2015

DUDEK

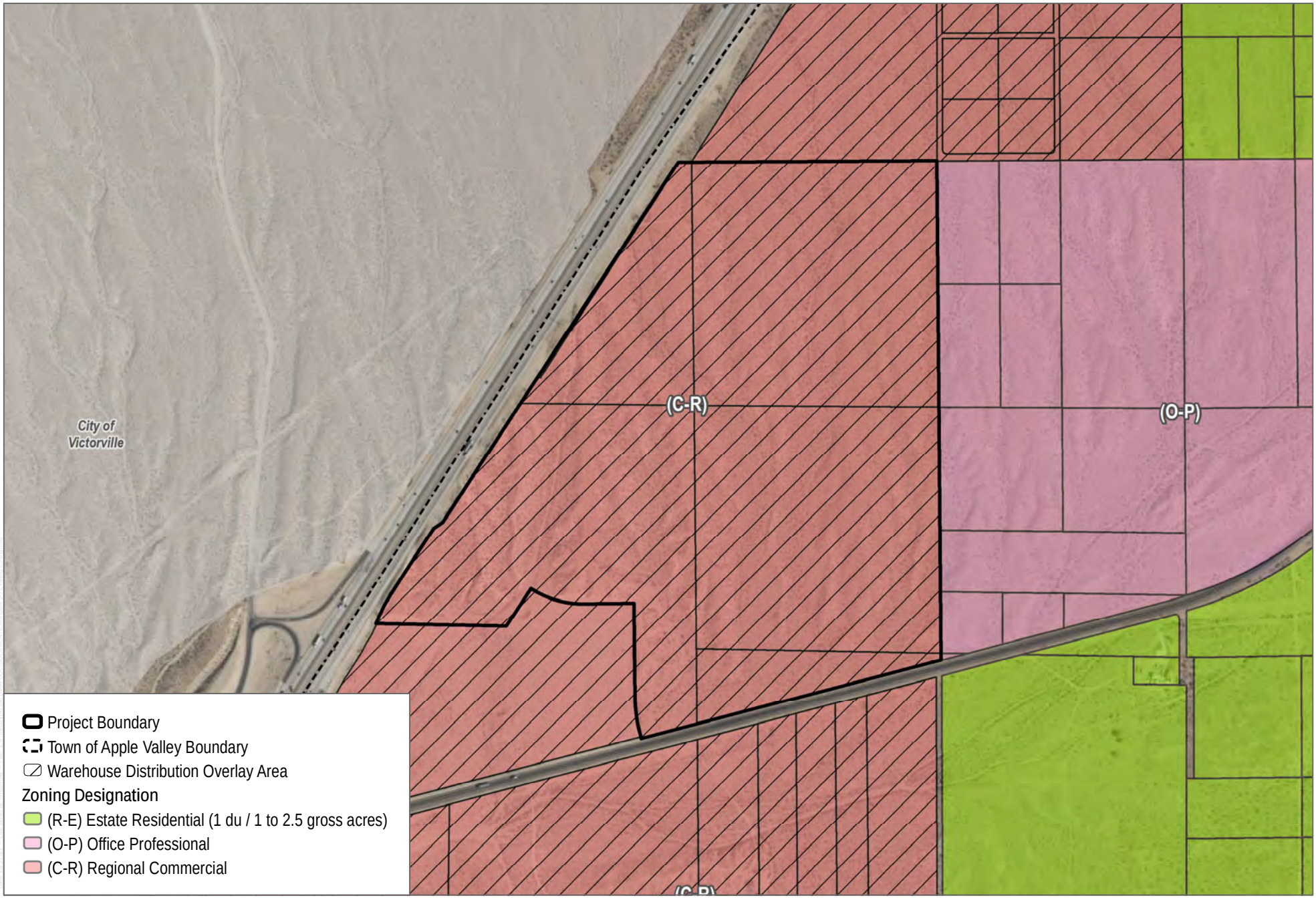
0 337.5 675 Feet

FIGURE 3-6

Existing General Plan Land Use Designations

Apple Valley 143 Project

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SOURCE: Bing Maps 2021; San Bernardino County 2012; Town of Apple Valley 2015, 2021

DUDEK

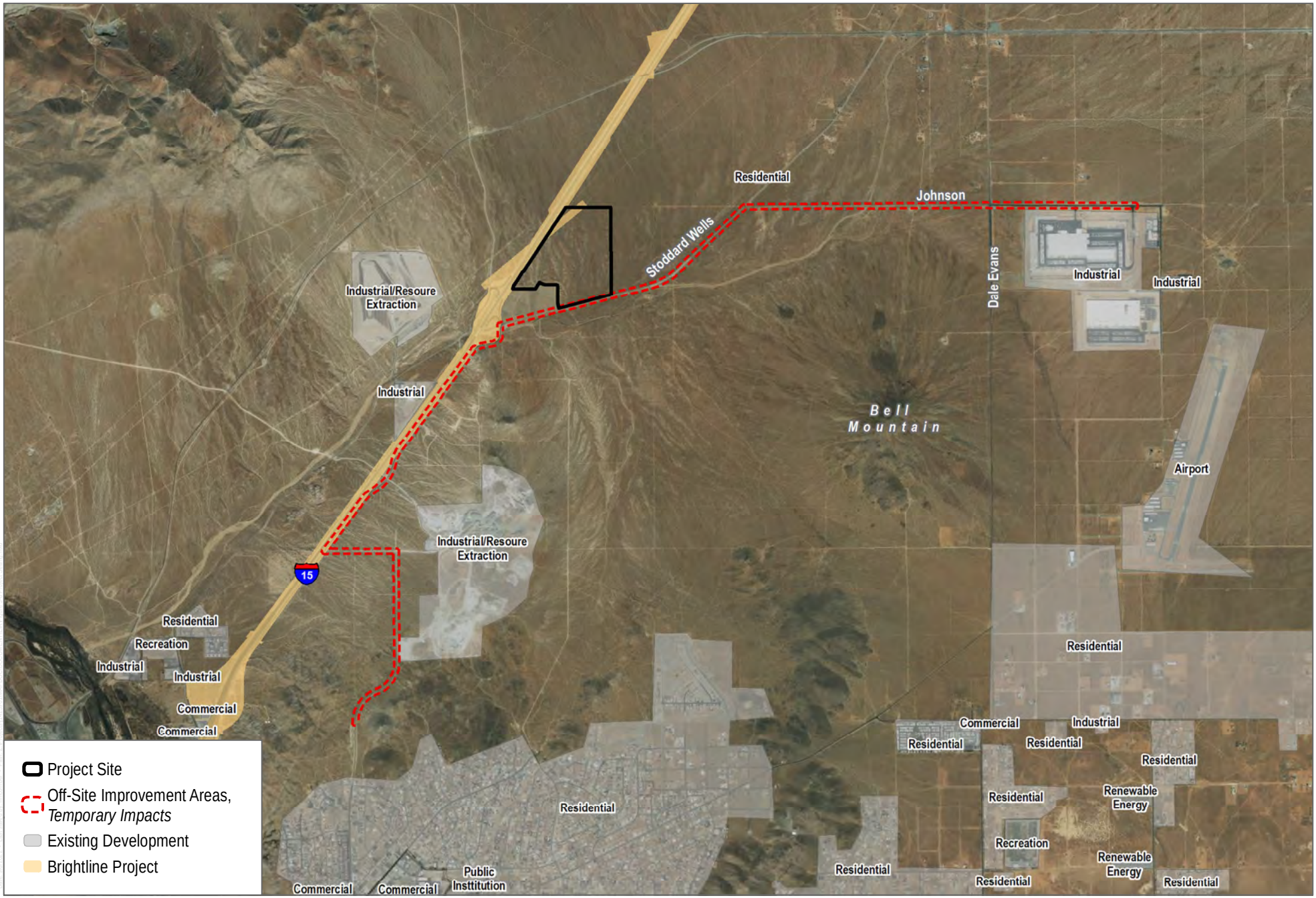
0 355 710 Feet

FIGURE 3-7

Existing Zoning Designations

Apple Valley 143 Project

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

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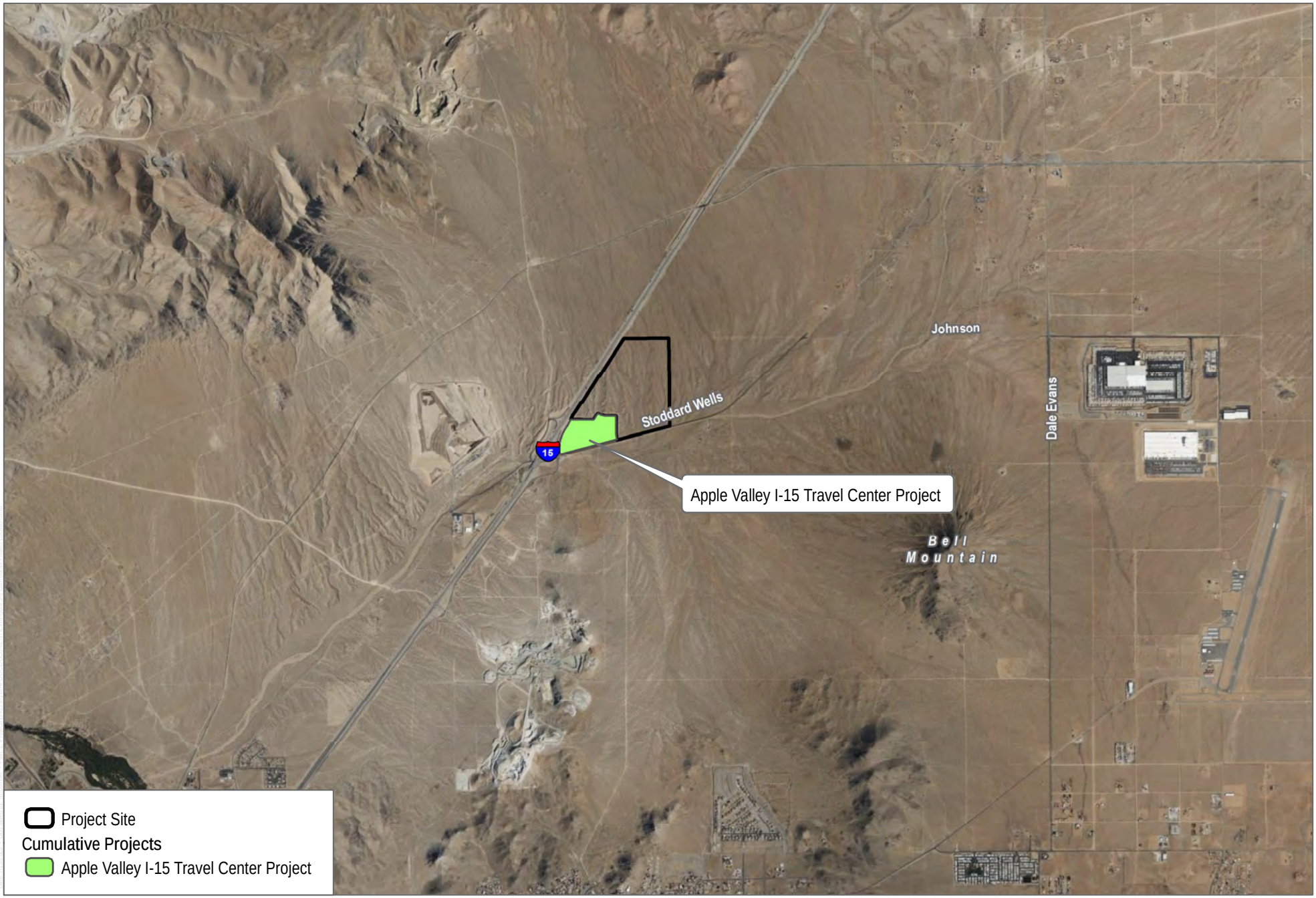
0 2,000 4,000 Feet

FIGURE 3-8

Project Development Setting

Apple Valley 143 Project

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

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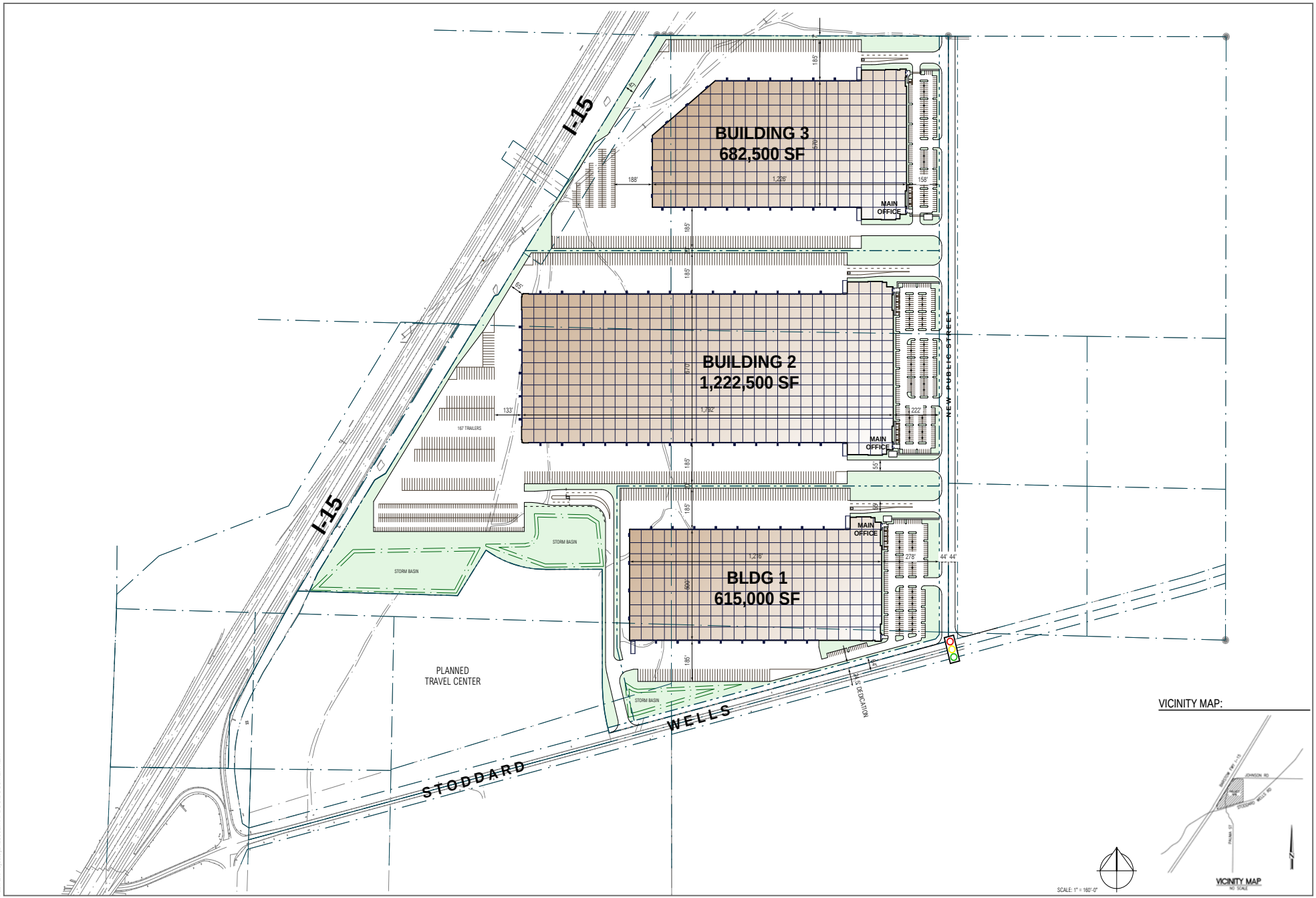
0 2,000 4,000 Feet

FIGURE 3-9

Cumulative Projects

Apple Valley 143 Project

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SOURCE: RGA, 2023

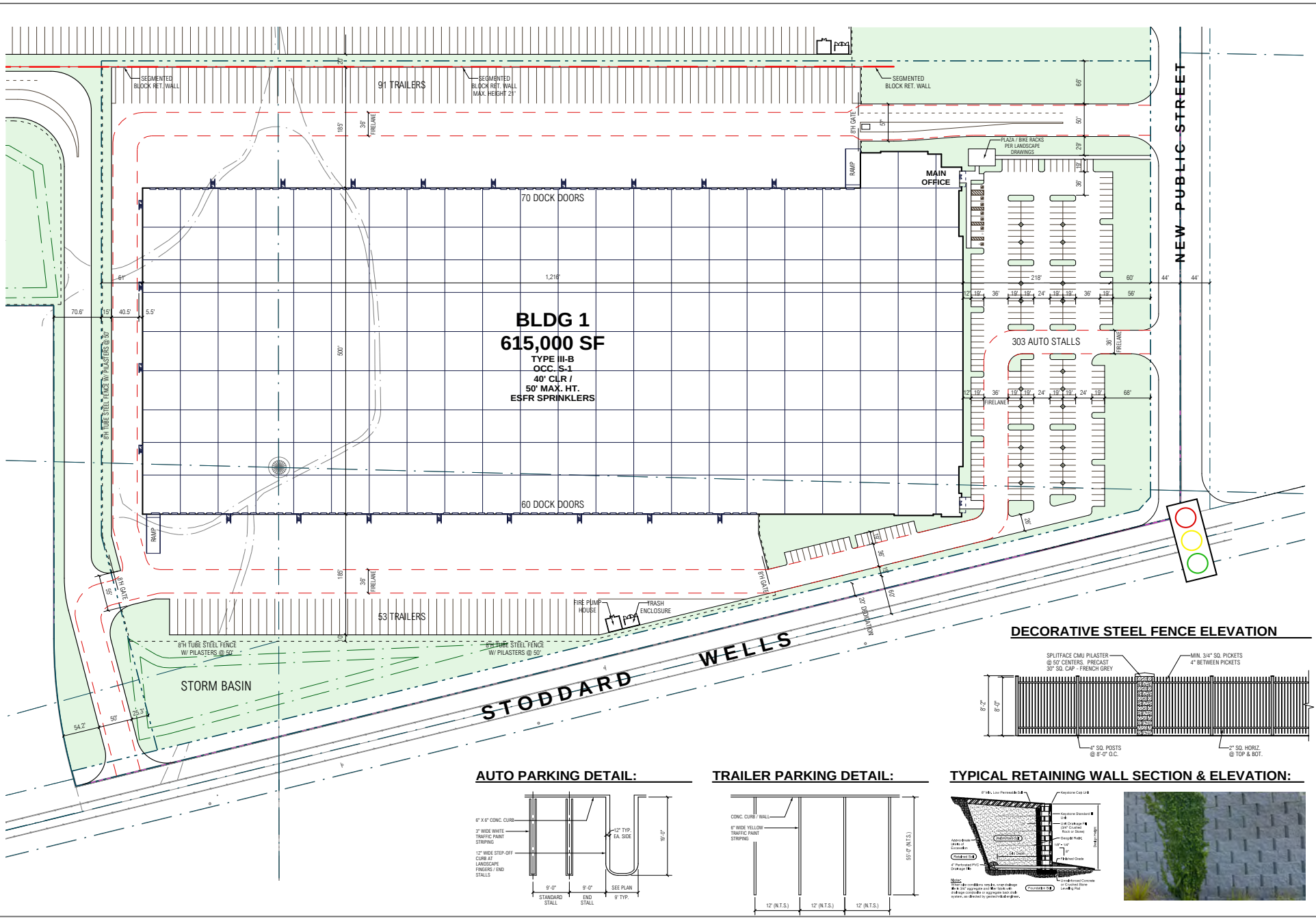
FIGURE 3-10

Overall Site Plan

Apple Valley 143 Project

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DECORATIVE STEEL FENCE ELEVATION

AUTO PARKING DETAIL:

TRAILER PARKING DETAIL:

TYPICAL RETAINING WALL SECTION & ELEVATION:

SOURCE: RGA, 2023

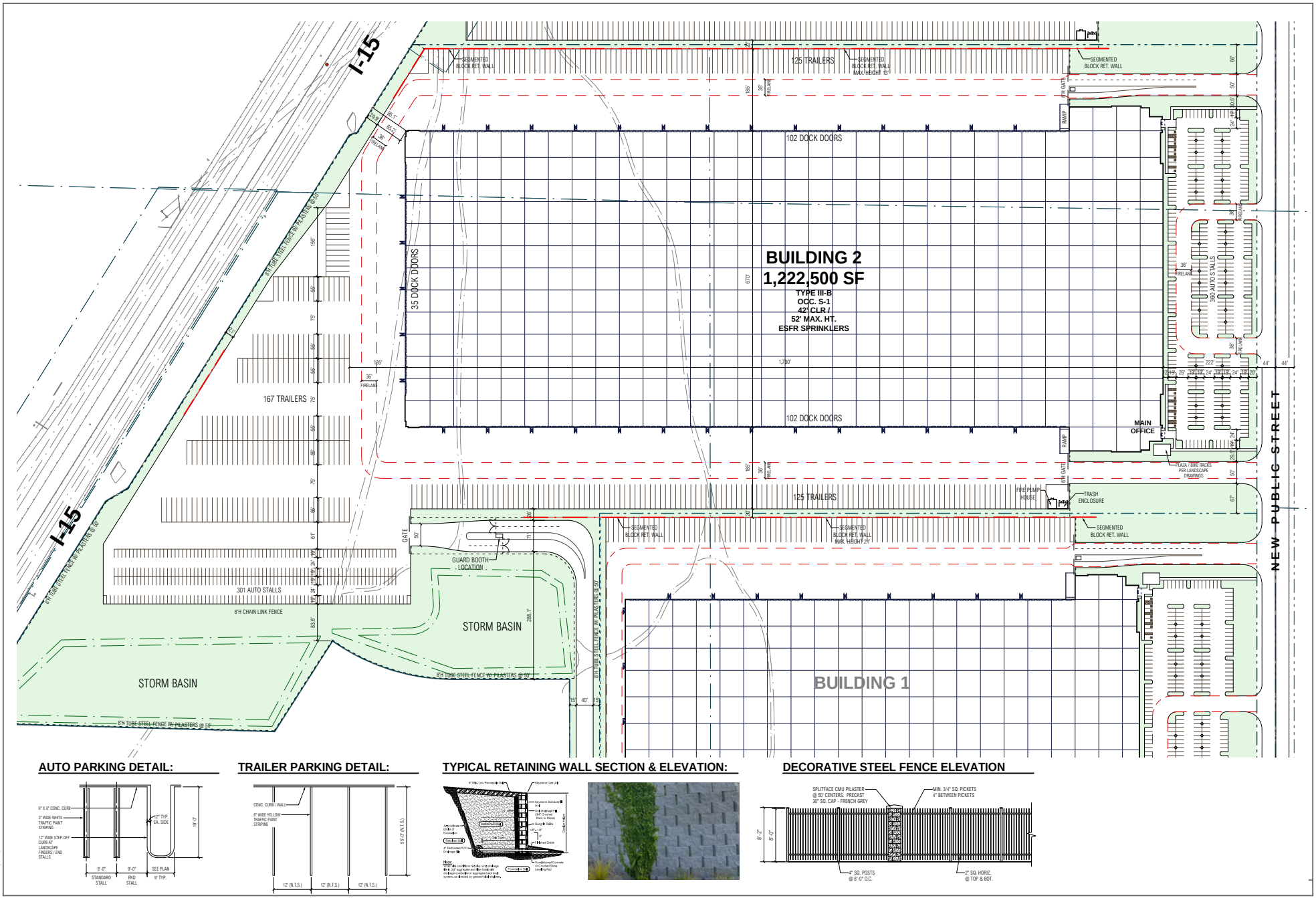
FIGURE 3-11A

Site Plan - Building 1

Apple Valley 143 Project

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AUTO PARKING DETAIL:

TRAILER PARKING DETAIL:

TYPICAL RETAINING WALL SECTION & ELEVATION:

DECORATIVE STEEL FENCE ELEVATION

SOURCE: RGA, 2023

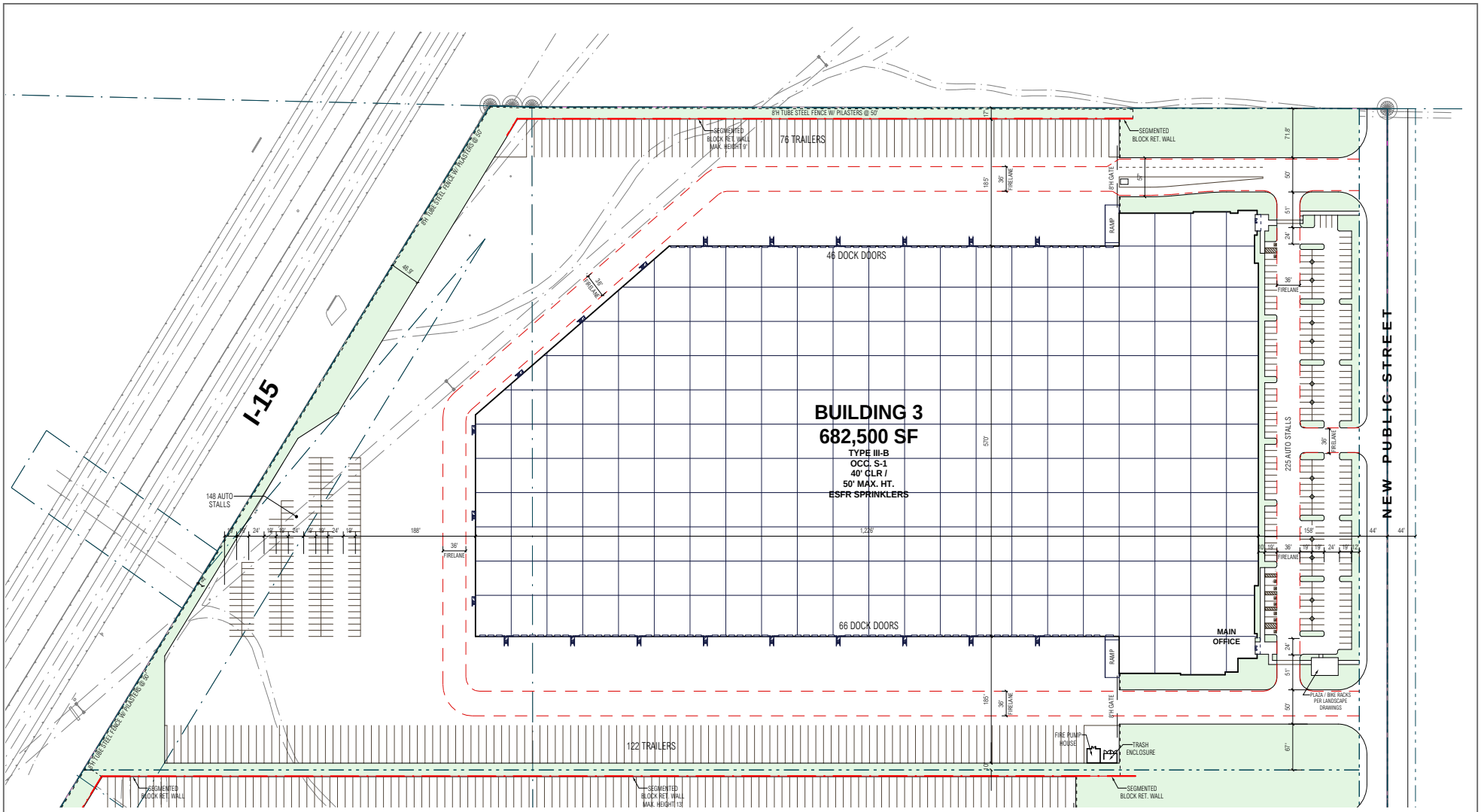
FIGURE 3-11B

Site Plan - Building 2

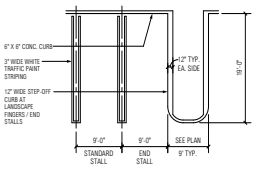
Apple Valley 143 Project

DUDEK

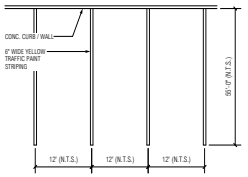
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AUTO PARKING DETAIL:



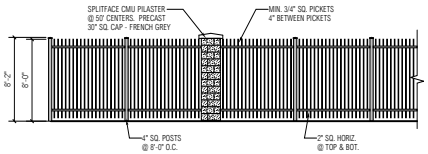
TRAILER PARKING DETAIL:



TYPICAL RETAINING WALL SECTION & ELEVATION:



DECORATIVE STEEL FENCE ELEVATION



SOURCE: RGA, 2023

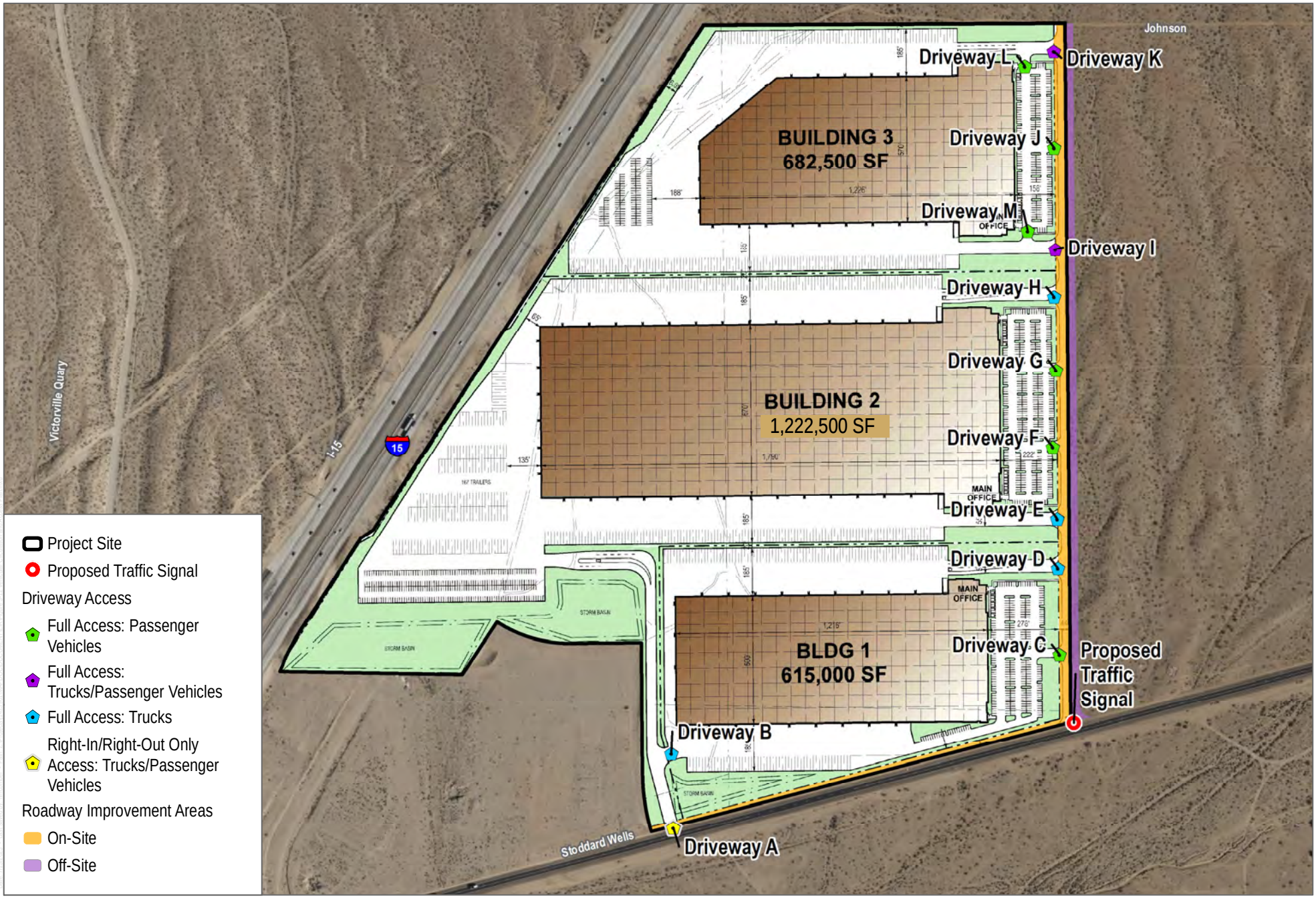
FIGURE 3-11C

Site Plan - Building 3

Apple Valley 143 Project

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

DUDEK

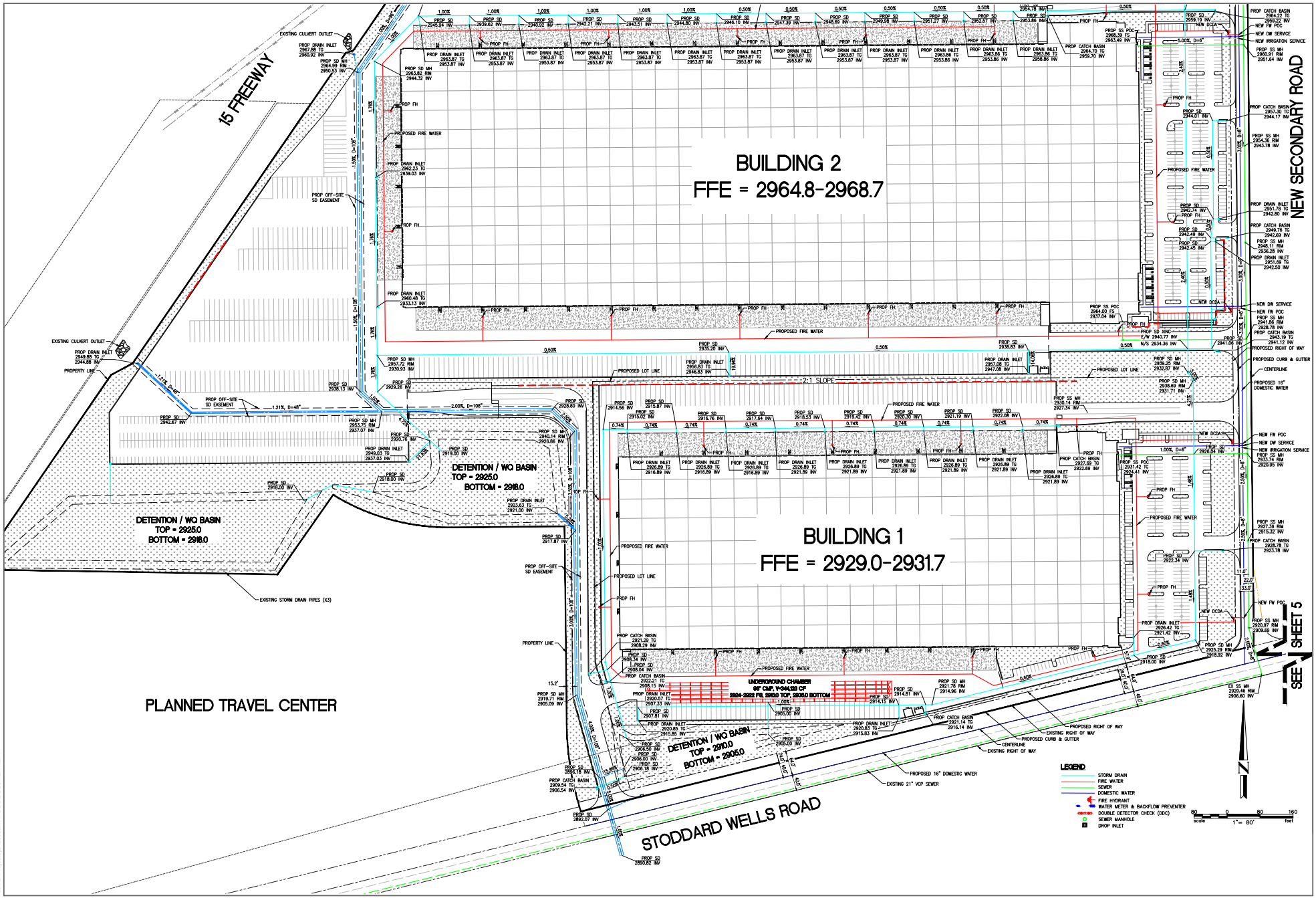
0 250 500 Feet

FIGURE 3-12

Vehicular Circulation and Access Plan

Apple Valley 143 Project

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SOURCE: Westland, 2023

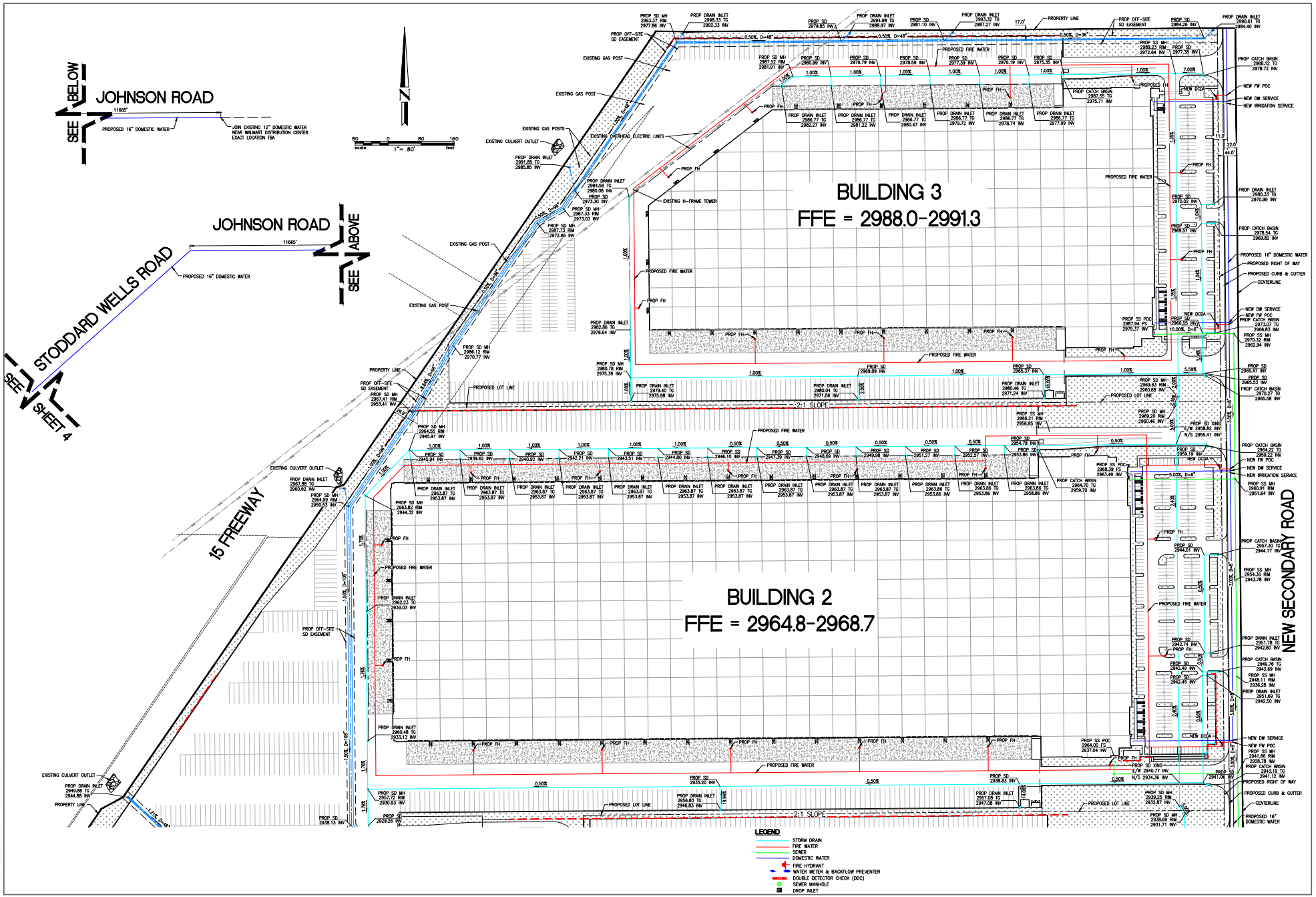
FIGURE 3-13A

Conceptual Utility Plan - Buildings 1 & 2

Apple Valley 143 Project

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SOURCE: Westland, 2023

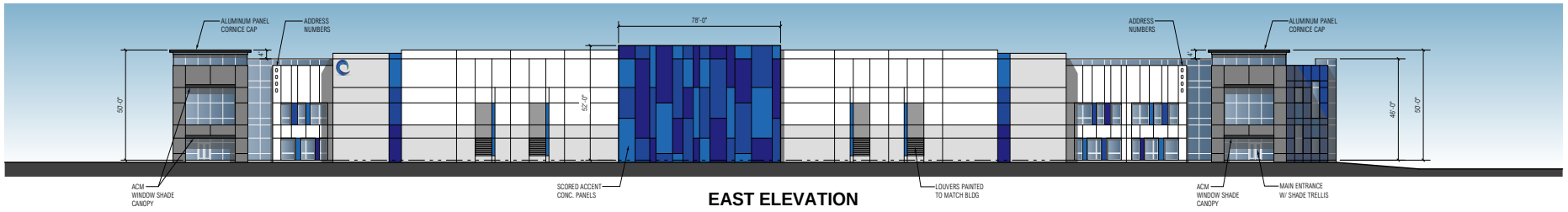
FIGURE 3-13B

Conceptual Utility Plan - Buildings 2 & 3

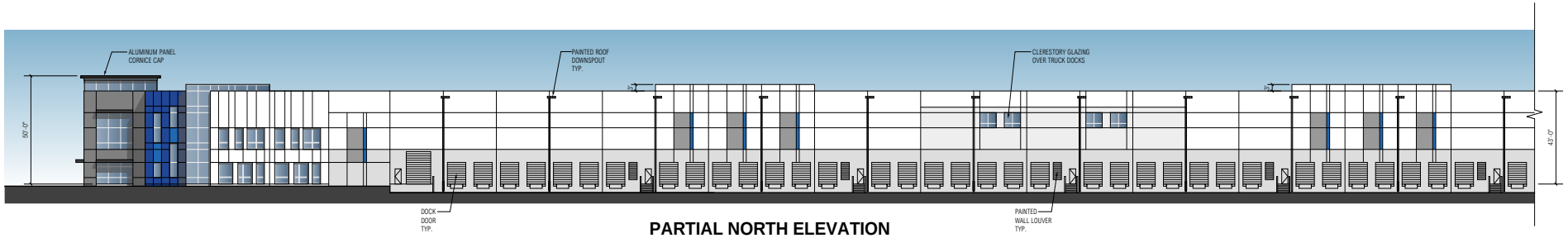
Apple Valley 143 Project

DUDEK

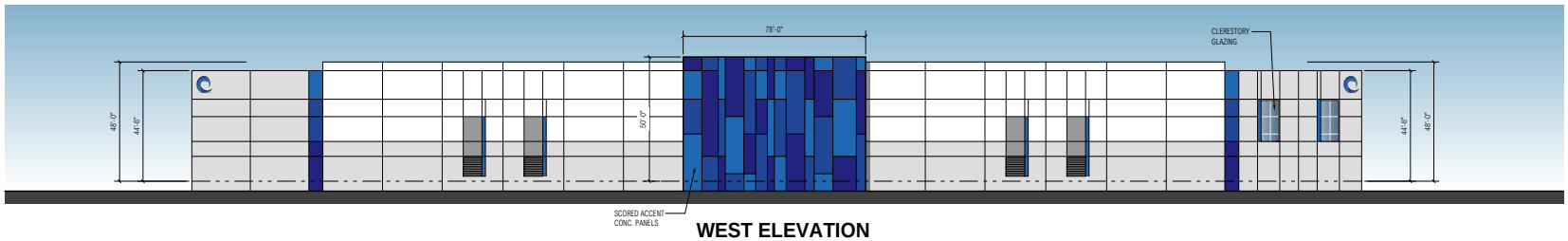
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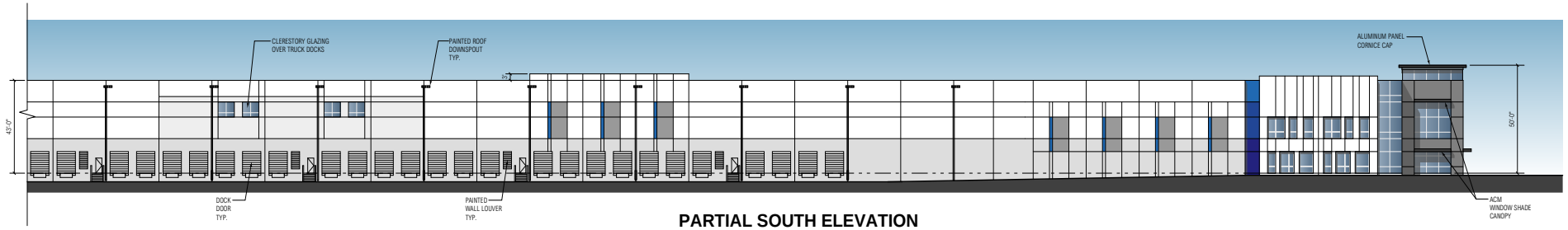
EAST ELEVATION



PARTIAL NORTH ELEVATION



WEST ELEVATION



PARTIAL SOUTH ELEVATION



OVERALL SOUTH ELEVATION

SOURCE: RGA, 2023

FIGURE 3-14A

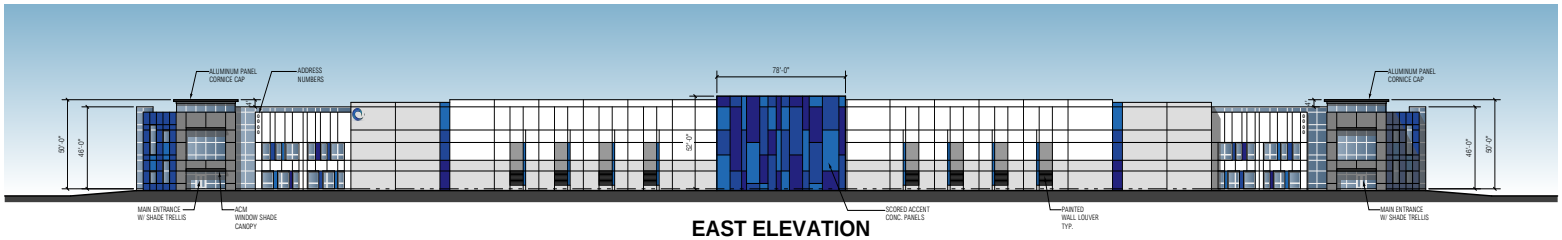
Conceptual Elevations - Building 1

Apple Valley 143 Project

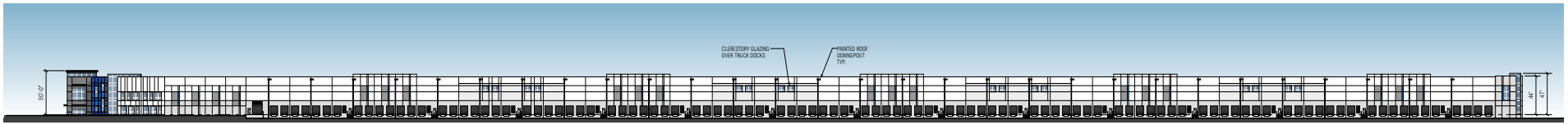
DUDEK

Path: Z:\Projects\142901\MAP\DOCDOCUMENTER

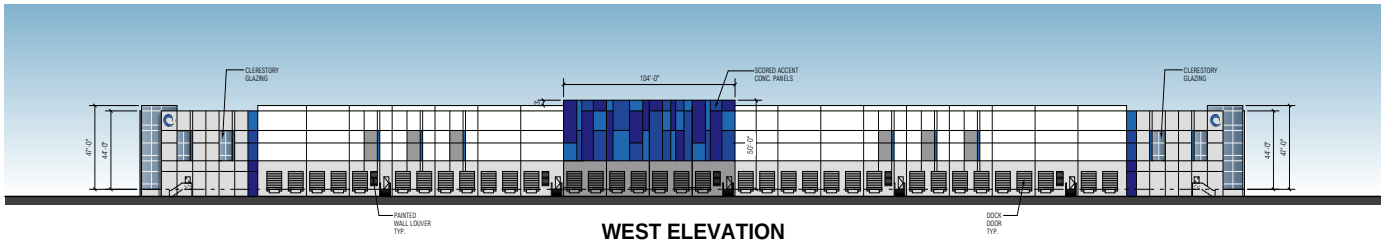
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EAST ELEVATION



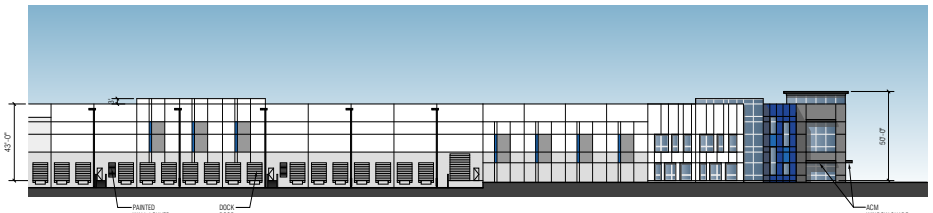
OVERALL NORTH ELEVATION



WEST ELEVATION



OVERALL SOUTH ELEVATION



PARTIAL SOUTH ELEVATION



PARTIAL NORTH ELEVATION

SOURCE: RGA, 2023

FIGURE 3-14B

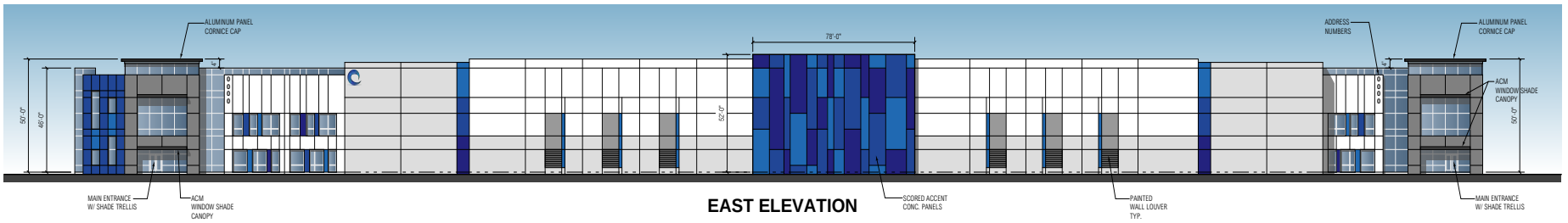
Conceptual Elevations - Building 2

Apple Valley 143 Project

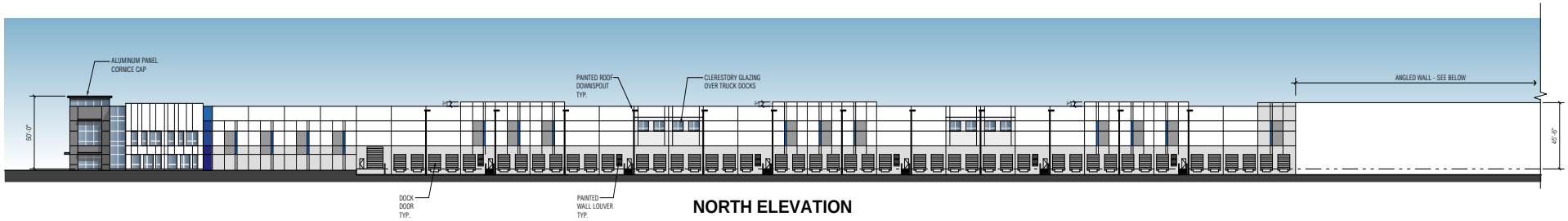
DUDEK

Path: Z:\Projects\142901\MAP\DOCDOCUMENTER

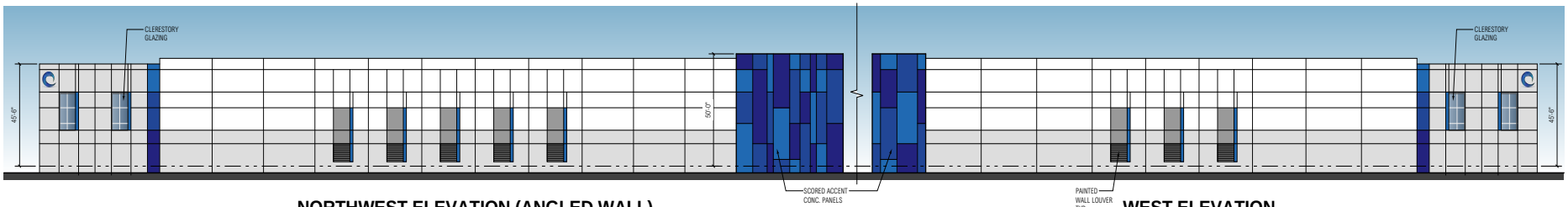
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EAST ELEVATION

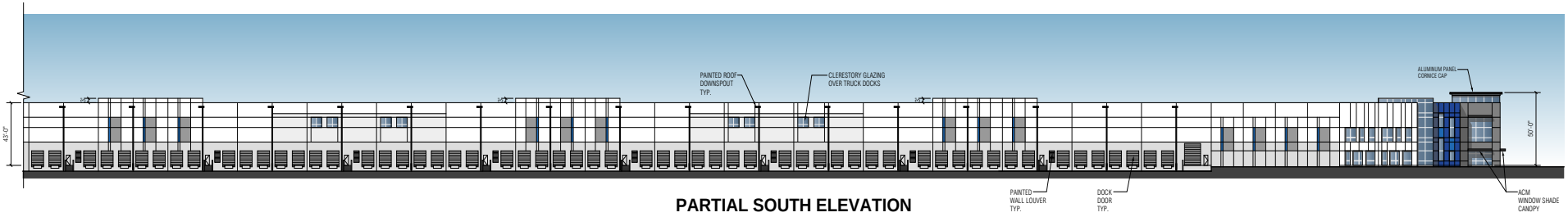


NORTH ELEVATION



NORTHWEST ELEVATION (ANGLED WALL)

WEST ELEVATION



PARTIAL SOUTH ELEVATION

SOURCE: RGA, 2023

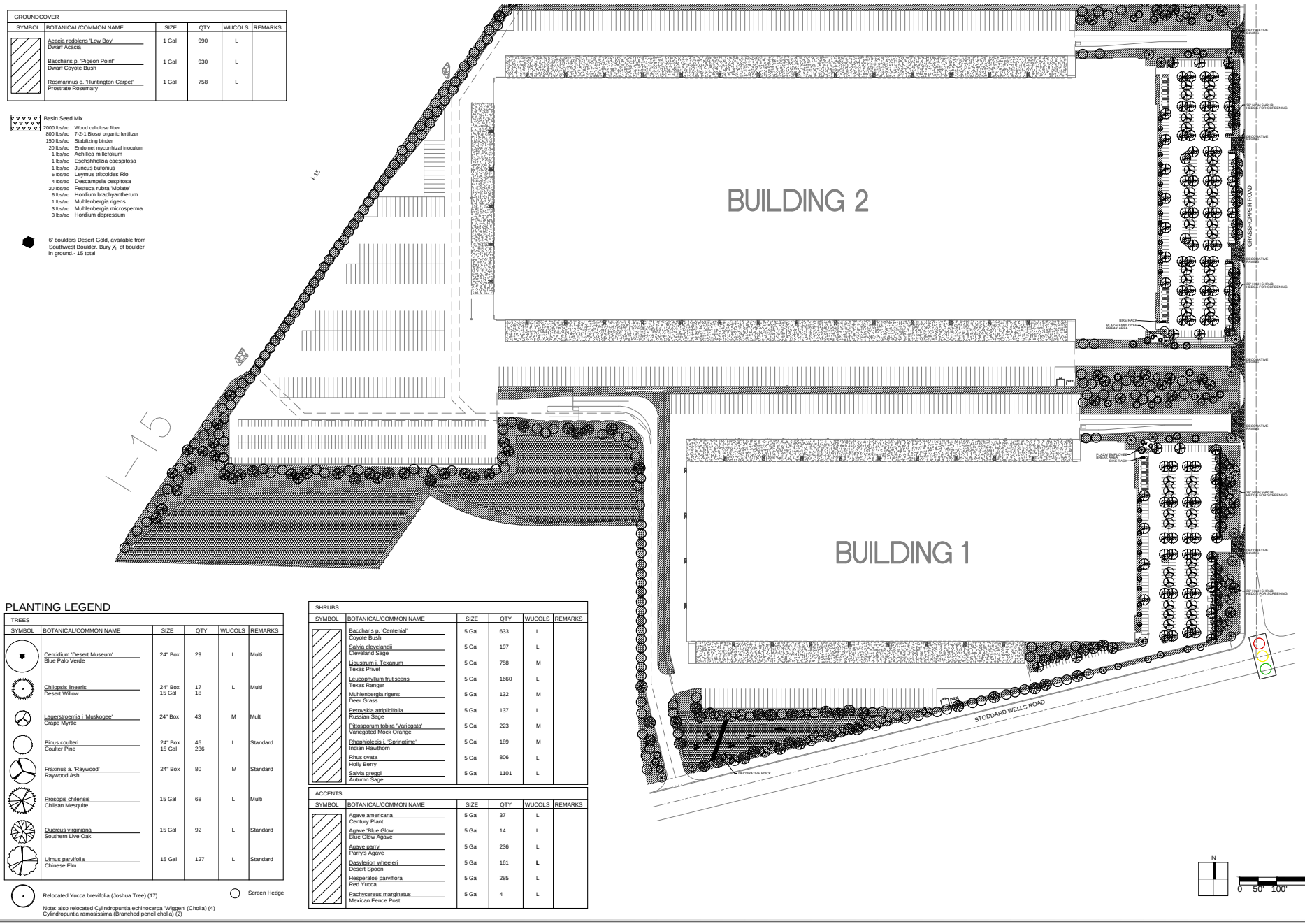
FIGURE 3-14C

Conceptual Elevations - Building 3

Apple Valley 143 Project

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SOURCE: Hunter Landscape, 2023

FIGURE 3-15

Conceptual Landscape Plan

Apple Valley 143 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 Apple Valley 143 Project (Project). The Town of Apple Valley (Town) circulated a Notice of Preparation (NOP) beginning on July 1, 2022, with the public review period ending on August 1, 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 4.13 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 and Hazardous Materials
- Section 4.8 – Hydrology and Water Quality
- Section 4.9 – Land Use and Planning
- Section 4.10 – Noise
- Section 4.11 – Public Services
- Section 4.12 – Transportation
- Section 4.13 – 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, hazards and hazardous materials, hydrology and water quality, noise, transportation, and water supply impacts, 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 Town.

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 Apple Valley 143 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 approximately 143-acre Project site is located in the northern part of the Town, which is within the Victor Valley Region of San Bernardino County (Figure 3-1, Regional Map). The Project site is located in the northwestern part of the Town of Apple Valley (Town) in the Victor Valley/High Desert 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 west, San Bernardino Mountains and San Gabriel to the south, 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., Bell Mountain Wash and Desert Knolls Wash) and surrounding open space, habitat areas, and recreation areas.

The Town of Apple Valley is located primarily on alluvial slopes of the Mojave River floodplain, at the southern edge of the Mojave Desert. Elevations in the Town range from approximately 2,800 feet above sea level near the Mojave River, to approximately 3,200 feet above sea level at the northeast corner of Town. The topography gradually inclines towards the Juniper Flats foothills of the San Bernardino Mountains to the south, as well as to the scattered knolls and mountains to the north and east of the Town. Turtle and Black Mountains are located to the north of the planning area, Fairview Mountain to the northeast and the Granite Mountains to the southeast. From these elevated topographical features, panoramic vistas exist across Apple Valley. Viewsheds in the area also comprise of the Mojave River that include areas of riparian forest and the bluffs and terraces of the floodplain. The low-lying terrain surrounding the Town allows unobstructed views in all direction, creating a sense of openness and spaciousness that is enhanced by the muted colors of the desert landscape (Town of Apple Valley 2009).

Project Setting

The Project site is located on the northeast quadrant of I-15 and Stoddard Wells Road. The Project site is located south of Johnson Road, approximately 0.25 miles west of Grasshopper Road, north of Stoddard Wells Road, and east of I-15. Highway I-15 and State Highway 18 are the major highways of the Town. I-15 is located immediately adjacent to the Project site's western boundary and State Highway 18 is located near the center of the Town and runs generally southeast to northwest through the Town. Apple Valley has developed most densely along major roadways in Town, including State Highway 18 and Bear Valley Road. Although the majority of the I-15 area is undeveloped, transportation-related and trucking-related land uses (e.g., truck yards, convenience stations, and warehouses) associated with this highway are located intermittently along highway frontages and are interspersed by parcels of undeveloped land.

More specifically, the irregularly 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 3-4A through 3-4G, 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 bound by Johnson Road to the north, Grasshopper Road to the east, Stoddard Wells Road to the south, and I-15 to the west. Surrounding land uses and elements that form the visual environment in the Project area are described as follows:

- **North:** Johnson Road is an east-west, two lane roadway that consists of vacant land on both sides of the road. The vacant land is covered by flat desert terrain similar in vegetation to the Project site.
- **East:** Grasshopper Road and vacant land. The vacant land is covered by flat desert terrain similar in vegetation which stretches on the Project site and to the north.
- **South:** Stoddard Wells Road is a northeast-southwest, two-lane roadway that also consists of vacant land on both sides. A travel center is also planned for development to the south of the Project site.
- **West:** I-15 is a north-south, six lane divided highway that borders the Project site's western boundary.

Scenic Vistas

Scenic vistas are typically broad views of scenic resources such as landforms and waterways that are visible from publicly accessible viewpoints.

The Town of Apple Valley's General Plan EIR identified scenic vistas as natural visual resources that provide the planning area with special character include uninterrupted expanses of 'wide skies' and panoramic vistas of distant mountains. Natural visual resources identified within the Town's General Plan EIR include characteristic views of the Mojave River floodplain bluffs and terraces, areas of riparian forest flora, the Turtle Mountains, the Fairview Mountains, the Sidewinder Mountains, the Black Mountains, the San Bernardino and San Gabriel Mountain ranges, along with neighboring hillsides and the natural desert environment (Town of Apple Valley 2009).

Relative to the Project site, undisturbed areas of the natural desert environment and sprawling valley surround the Project site; the Mojave River is located approximately five miles to the west of the Project site; the Turtle Mountains are located approximately five miles to the north, the Fairview Mountains are located approximately six miles to the southeast, the Sidewinder Mountains are located approximately ten miles to the east, the Black Mountains are located approximately seven miles to the northeast and the foothills and elevated terrain within the San Gabriel and San Bernardino Mountains are located between approximately 13 miles to the southwest and approximately 20 miles to the southeast, respectively. Since the Project site and the surrounding area contain most of the natural desert landscape of the Town, the area holds significant scenic value that could comprise a scenic vista. Although scattered development such as commercial uses (i.e. Walmart Distribution Center, Big Lots Distribution Center, Solar Energy Company, and interstate highways) exists in the area, scenic resources identified by the Town's General Plan are visible in the vicinity of the Project site.

Several washes and natural water courses traverse the Town and are identified in the Town's General Plan. These include the Bell Mountain Wash and the Desert Knolls Wash. The nearest wash area to the Project site is the Bell Mountain Wash, which flows at an angle in a general southeast to southwest direction, approximately 1,500 feet south of the Project site beyond Stoddard Wells Road. Given that this watercourse is below the grade of the general topography and consists of intervening vegetation, views of these water course are not available from the Project site.

Scenic Routes

There are no officially designated scenic roads or highways within the Town. 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 26 miles southeast of the Project site in the San Bernardino National Forest. There are no eligible scenic highways located within Town limits. Route 247 is the eligible scenic highway that is closest to the Project site, located approximately 16 miles east of the Project site, near the Sidewinder Mountains. 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 vehicular headlights and streetlights along I-15.

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 vacant land and scattered residential 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. Views from public vantage points were analyzed and photographed in the field to document the existing visual environment (Figures 3-4A through 3-4G).

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 groups in the Project area are further described below.

Viewer Groups

Motorists

I-15

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

Stoddard Wells Road

Motorists traveling on Stoddard Wells Road are provided views of the eastern and southern portions of the Project site from the south. Figure 3-4A, Photos A and B, and Figure 3-4D, Photo L, provide views of the Project site from Stoddard Wells Road.

Local Roads and Surrounding Commercial/Light Industrial Areas

Views of the Project site from local dirt roads (i.e., Johnson Road and Grasshopper Road) are visible to motorists traveling through the vicinity of the Project site. Views to the Project site from these areas include views of flat desert terrain with moderate vegetation cover (see Figures 3-4C and 3-4D).

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

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

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

Title 24, Part 11 – California Green Building Standards Code

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

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

IESNA Recommended Practices

Illuminating Engineering Society of North American (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

Town of Apple Valley General Plan

The Town'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 1. The Town shall respect its desert environment.

Policy 1.D. Areas of biological or aesthetic significance shall be protected from development.

Open Space and Conservation Element

Goal 1. The Town will conserve and protect natural resources in perpetuity.

Policy 1.B. Encourage the preservation, integrity, function, productivity and long-term viability of environmentally sensitive habitats, wildlife corridors, and significant geological features within the Town.

Goal 2. The Town shall encourage the preservation of significant native trees, native vegetation, landforms and wildlife habitat.

Policy 2.C. The Town will encourage the planting and preservation of native species of trees and plants to enhance the environment.

Policy 2.D. The Town shall provide specific parameters for development within and adjacent to natural hillsides.

Goal 4. The Town shall continue to emphasize the maintenance of, and access to, open space areas within the Town and vicinity.

Policy 4.A. The Town shall continue to monitor and manage designated open space areas and maintain improved recreational open space.

Biological Resources Element

Goal 1. Establish a pattern of community development that supports a functional, productive, and balanced relationship between the manmade environment and the natural environment.

Policy 1.B. The Town shall promote the use of native vegetation for landscaping to enhance and create viable habitat for local species.

Town of Apple Valley Municipal Code

The Town provides landscaping guidelines and regulations through Chapter 9.47 Industrial Development Standards (Section 9.47.050 Landscaping) and Chapter 9.75 Water Conservation/Landscaping Regulations (Section 9.75.050 Water Conserving Landscape Design Standards) of the Municipal Code. The purpose of these chapters

is to provide water conservation and landscape development standards and guidelines that will promote the general welfare of the Town'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.

The Town of Apple Valley has established sign regulation in Chapter 9.74 Signs and Advertising Displays of the Municipal Code. Section 9.74.110 General Design Criteria and Standards allows for high quality, efficient signage within the Town. As such, the Project would be required to adhere to this regulation.

Section 9.47.090 Lighting which contains general performance standards related to light and glare for industrial development in Town. As such, the Project would be required to adhere to this regulation.

Regional Commercial (C-R) Zone Development Standards

Table 4.1-1. Town of Apple Valley Development Standards for C-R Zone

Town of Apple Valley Development Standards for CIBP Zone
Minimum Lot Size: 8.1 acres **Minimum Width:** N/A **Minimum Depth:** N/A
Maximum Floor Area Ratio: 1.0
Maximum Building Height (For all other locations): 100 feet
Minimum Front Setback from local streets: 35 feet **Minimum Front Setback from major or secondary streets:** 45 feet **Minimum rear setback:** 30 feet; Setbacks for buildings located adjacent to a residential use or district shall be twenty-five (25) feet and rear and street side setbacks shall be as specified for that district, where applicable. **Minimum side setback:** 30 feet; Setbacks for buildings located adjacent to a residential use or district shall be twenty-five (25) feet and rear and street side setbacks shall be as specified for that district, where applicable. **Minimum street side and rear setback:** 30 feet; Setbacks for buildings located adjacent to a residential use or district shall be twenty-five (25) feet and rear and street side setbacks shall be as specified for that district, where applicable.
Accessory Structures: Allowed; Accessory Structures shall meet all of the setback requirements of the zoning district in which they are located.
Wall and Fences (Within Clear Site Triangle): 30 in **Wall and Fences (Solid Wall or Fences within front or street side setback):** 42 in Open fencing constructed of wrought iron or other decorative metal and incorporating decorative features may be constructed either in conjunction with a solid wall(s) or fence(s) where the solid portion of the wall or fence is not more than two (2) feet in height, with the wrought iron or other decorative fencing extending not more than four (4) feet about the solid wall or fence (where the maximum overall height of the combined materials does not exceed six (6) feet) from the highest adjoining grade. **Wall and Fences (Open fences within front or street side setback):** 72 in Open fencing constructed of wrought iron or other decorative metal and incorporating decorative features may be constructed either in conjunction with a solid wall(s) or fence(s) where the solid portion of the wall or fence is not more than two (2) feet in height, with the wrought iron or other decorative fencing extending not more than four (4) feet about the solid wall or fence (where the maximum overall height of the combined materials does not exceed six (6) feet) from the highest adjoining grade. **Wall and Fences (all other locations on site):** 72 in Walls over a height of seventy-two (72) inches are not allowed in any Office Professional District.
Outdoor Storage: Allowed

Table 4.1-1. Town of Apple Valley Development Standards for C-R Zone

Town of Apple Valley Development Standards for CIBP Zone
Outdoor storage of materials and equipment shall not be permitted within the O-P, Office Professional, District. Outdoor storage of materials and equipment shall not be permitted in the Commercial Districts except when it is clearly incidental to the permitted use on the site and in compliance with the provisions of this chapter. Such storage shall be located in the rear of the site and shall be completely screened from view from any roadway by a solid wall or opaque fence at least six (6) feet in height but not to exceed ten (10) feet in height. Said opaque fence or solid wall shall be constructed of or finished with materials that are similar to or compatible with those of the primary building on the site. Items that are being stored outdoors shall not be stacked to a height exceeding the height of the required wall or opaque fence. When on-site barriers are necessary for security, open fencing shall be used. High voltage electrification is not permitted. The incidental exterior storage of hay, packaged feed and related bulk feed products when associated with a Feed and Tack business is permitted and may be located anywhere on site to the rear of the leading edge of the building on said site or behind the required street side-yard setback area. Said stored hay, packaged feed and related bulk feed products need not be screened from view and may be stacked to a height not to exceed ten (10) feet.
Storage on Undeveloped Lots: Building materials for use on the same or adjacent parcel or building site may be stored on the parcel building site during the time that a valid building permit is in effect.
Storage of Building Materials: Allowed
Minimum Total Landscape Area: 10% Areas not utilized for structures, walkways, parking and driveways shall be landscaped. A minimum ten (10)-foot landscape strip is required along street frontages. This may include landscaping within the right-of-way. In the Mixed-Use district, 10% landscaping requirement applies for parking and project perimeter only. Additional landscaped open space is required for residential component of the project (see Section 9.36 for open space requirements).
Maximum Floor Area Ratio (F.A.R): 1.0

Source: Town of Apple Valley 2022.
Note: C-R = Regional Commercial

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.
E. Result in cumulatively considerable impacts with regard to aesthetic and visual considerations.

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, The Project site and surrounding area contain undisturbed natural desert landscape with panoramic views of mountains in all directions. Although scattered light industrial/commercial uses (i.e. Walmart Distribution Center, Big Lots Distribution Center, Solar Energy Company, and interstate highways) exist in the area, the Project site and vicinity provide scenic views of the surrounding landscape. 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 are located between 5 and 20 miles away from the Project site, the Project would not result in any physical modifications to scenic resources that comprise a scenic vista.

A project could also have a potential indirect impact on a scenic vista if it results in a significant loss of viewing opportunities from publicly available viewpoints. Due to the relatively flat topography of the Project area, views of the Turtle Mountains, Black Mountains, Fairview Mountains, Sidewinder Mountains and 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 buildings would result in some obstruction of these views where they are currently available from publicly accessible areas when viewed across the Project site. However, the presence of existing development, major roadways, and other man-made elements) lowers viewer expectations of unobstructed views and precludes the significance of views of the mountains from the Project vicinity. While views of these features would be restored as viewers move throughout the Project area, higher quality, less-obstructed views are available in the greater Project area as viewers move throughout and outside of the Town (particularly for motorists traveling on I-15). Therefore, impacts associated with scenic vistas 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 Town boundaries. The nearest eligible scenic highway, Route 247, is located approximately 16 miles east of the Project site (Caltrans 2019). Due to distance and intervening terrain, vegetation and development, the eligible scenic highways are not visible from the Project site, nor is the Project site visible from this highway. 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 Town's population in July 2021 was approximately 76,224 people (U.S. Census 2021). However, the Town is bordered by the City of Barstow to the

north, City of Victorville to the west, Hesperia to the south, and the unincorporated San Bernardino County land to the east. The combined population of the Town of Apple Valley 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 Town is designed and constructed to conform to existing the visual character and quality, the Town of Apple Valley Development Code (Title 9 of the Town'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 reduces the potential for conflicting visual elements. More specific to the Project site, Chapter 9.47 (Industrial Design Standards) of the Town's Municipal Code sets forth development standards for industrial development. The design specifications for the Project will be reviewed by the Town for compliance with all applicable provisions set forth by the Town's Development Code. As part of the Town's development review process, the Project's architectural plans are reviewed by Town staff and the Planning Commission to determine whether Project design conforms to the Development Code 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 C-R Zone (Title 9 Development Code).

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

Town of Apple Valley Development Standards for C-R Zone	Project Design
Minimum Lot Size: 8.1 acres **Minimum Width:** N/A **Minimum Depth:** N/A	***Consistent.*** All three building sites are consistent with these standards, as detailed below: <u>Building 1 Site</u> ▪ Lot Size: 14.12 acres (615,000 sf) ▪ Width: Approximately 500 feet ▪ Depth: Approximately 1,216 feet <u>Building 2 Site</u> ▪ Lot Size: 28.03 acres (1,222,500 sf) ▪ Width: Approximately 670 feet ▪ Depth: Approximately 1,790 feet <u>Building 3 Site</u> ▪ Lot Size: 15.67 acres (682,500 sf) ▪ Width: Approximately 570 feet Depth: Approximately 1,226 feet
Maximum Floor Area Ratio: 1.0	***Consistent.*** The floor area ratio for all three buildings is 0.4194.
Maximum Building Height (For all other locations): 100 feet	***Consistent.*** The maximum building height for all three buildings would be 55 feet.
Minimum Front Setback from local streets: 35 feet **Minimum Front Setback from major or secondary streets:** 45 feet **Minimum rear setback:** 30 feet; Setbacks for buildings located adjacent to a residential use or district shall be twenty-five (25) feet and rear and street side setbacks shall be as specified for that district, where applicable.	***Consistent.*** After accounting for parking, landscape, and drive aisles, setbacks would range from approximately 60 feet to 200 feet.

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

Town of Apple Valley Development Standards for C-R Zone	Project Design
Minimum side setback: 30 feet; Setbacks for buildings located adjacent to a residential use or district shall be twenty-five (25) feet and rear and street side setbacks shall be as specified for that district, where applicable. **Minimum street side and rear setback:** 30 feet; Setbacks for buildings located adjacent to a residential use or district shall be twenty-five (25) feet and rear and street side setbacks shall be as specified for that district, where applicable.	
Accessory Structures: Allowed; Accessory Structures shall meet all of the setback requirements of the zoning district in which they are located.	***Not Applicable.*** No accessory structures are proposed as part of the Project.
Wall and Fences (Within Clear Site Triangle): 30 in **Wall and Fences (Solid Wall or Fences within front or street side setback):** 42 in Open fencing constructed of wrought iron or other decorative metal and incorporating decorative features may be constructed either in conjunction with a solid wall(s) or fence(s) where the solid portion of the wall or fence is not more than two (2) feet in height, with the wrought iron or other decorative fencing extending not more than four (4) feet about the solid wall or fence (where the maximum overall height of the combined materials does not exceed six (6) feet) from the highest adjoining grade. **Wall and Fences (Open fences within front or street side setback):** 72 in Open fencing constructed of wrought iron or other decorative metal and incorporating decorative features may be constructed either in conjunction with a solid wall(s) or fence(s) where the solid portion of the wall or fence is not more than two (2) feet in height, with the wrought iron or other decorative fencing extending not more than four (4) feet about the solid wall or fence (where the maximum overall height of the combined materials does not exceed six (6) feet) from the highest adjoining grade. **Wall and Fences (all other locations on site):** 72 in Walls over a height of seventy-two (72) inches are not allowed in any Office Professional District.	***Consistent.***
Outdoor Storage: Allowed Outdoor storage of materials and equipment shall not be permitted within the O-P, Office Professional, District. Outdoor storage of materials and equipment shall not be permitted in the Commercial Districts except when it is clearly incidental to the permitted use on the site and in compliance with the provisions of this chapter. Such storage shall be located in the rear of the site and shall	***Consistent.*** While the Project does not involve retail sales or merchandise displays and work areas would primarily be located within the warehouse buildings, outdoor equipment such as yard trucks and pallets may be stored within the truck courts. These areas would be confined to the rear of the buildings and enclosed with fencing and vegetative screening.

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

Town of Apple Valley Development Standards for C-R Zone	Project Design
be completely screened from view from any roadway by a solid wall or opaque fence at least six (6) feet in height but not to exceed ten (10) feet in height. Said opaque fence or solid wall shall be constructed of or finished with materials that are similar to or compatible with those of the primary building on the site. Items that are being stored outdoors shall not be stacked to a height exceeding the height of the required wall or opaque fence. When on-site barriers are necessary for security, open fencing shall be used. High voltage electrification is not permitted. The incidental exterior storage of hay, packaged feed and related bulk feed products when associated with a Feed and Tack business is permitted and may be located anywhere on site to the rear of the leading edge of the building on said site or behind the required street side-yard setback area. Said stored hay, packaged feed and related bulk feed products need not be screened from view and may be stacked to a height not to exceed ten (10) feet.	
Storage on Undeveloped Lots: Building materials for use on the same or adjacent parcel or building site may be stored on the parcel building site during the time that a valid building permit is in effect.	***Not Applicable.*** Building materials for the proposed project would be confined to the Project area.
Storage of Building Materials: Allowed	***Consistent.*** While the Project does not involve retail sales or merchandise displays and work areas would primarily be located within the warehouse buildings, outdoor equipment such as yard trucks and pallets may be stored within the truck courts. These areas would be confined to the rear of the buildings and enclosed with fencing and vegetative screening.
Minimum Total Landscape Area: 10% Areas not utilized for structures, walkways, parking and driveways shall be landscaped. A minimum ten (10)-foot landscape strip is required along street frontages. This may include landscaping within the right-of-way. In the Mixed-Use district, 10% landscaping requirement applies for parking and project perimeter only. Additional landscaped open space is required for residential component of the project (see Section 9.36 for open space requirements).	***Consistent.*** The total landscape area is 14.68% for the Project.
Maximum Floor Area Ratio (F.A.R): 1.0	***Consistent.*** The total floor area ratio is 0.4194 for the proposed Project.

As provided in Table 4.1-2, the Project would be consistent with the development standards of the C-R 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. Title 9 Development Code provides in-depth information regarding design standards and guidelines for industrial development. In accordance with the Development Code 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.

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 3-14A and 3-14C, Conceptual Elevations, in Chapter 3).

The visual setting surrounding the Project site currently consists of a natural desert landscape with scattered development. Development in the area includes light industrial/commercial uses, such as Walmart Distribution Center, Big Lots Distribution Center, Solar Energy Company, public roadways and landscaping, major interstate highways, and scattered residential uses. 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 industrial buildings that would feature of contemporary architecture landscaping, and streetscape improvements that would achieve development goals set forth in the General Plan. 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, compliance with the Town's Development Code and general plan guidelines and implementation of site-specific landscaping would ensure that 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 Town 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 Town, 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 3-14A and 3-14C, Conceptual Elevations, 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. The Project would comply with Section 9.47.090, Lighting, of the Town's Municipal Code, which contains general performance standards related to light and glare for lighting uses associated with industrial development in Town. 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 Town standards for safety and proper roadway illumination, consistent with other streetlights throughout the Town. In addition, as part of the final engineering and site plan check phase, a photometric plan will be prepared by Town planning staff prior to finalization of site plans. During this process, Town 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 buildings would incorporate a variety of building materials. As depicted on Figures 3-14A and 3-14C, Conceptual 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 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 Town of Apple Valley, and thus, would be designed and constructed according to the design guidelines and standards outlined in the Town's Development Code and General Plan for industrial development. These guidelines and standards aim to protect the Town's high desert setting and panoramic mountain views while facilitating economic growth. All related projects located within the Town 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 Development Code. In addition, the Project's proposed building colors shall be reviewed to incorporate the colors and tones that match or complement the natural desert environment such that color contrasts with the surrounding cumulative environment would be minimized. 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 Town's Development Code and general plan to which the Project must adhere.

Related development in the Town 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 Town 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 with mitigation incorporated.

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 not result in a cumulatively considerable impact to aesthetic and visual considerations. Project impacts would be **less than significant**.

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4.2 Air Quality

This section describes the existing air quality conditions of the Apple Valley 143 Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential air quality impacts, and identifies mitigation measures (MMs) 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 November 2022 (Appendix B-1).
- Health Risk Assessment, prepared by Dudek in November 2022 (Appendix B-2).
- Apple Valley 143 Transportation Impact Analysis, prepared by Dudek in November 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

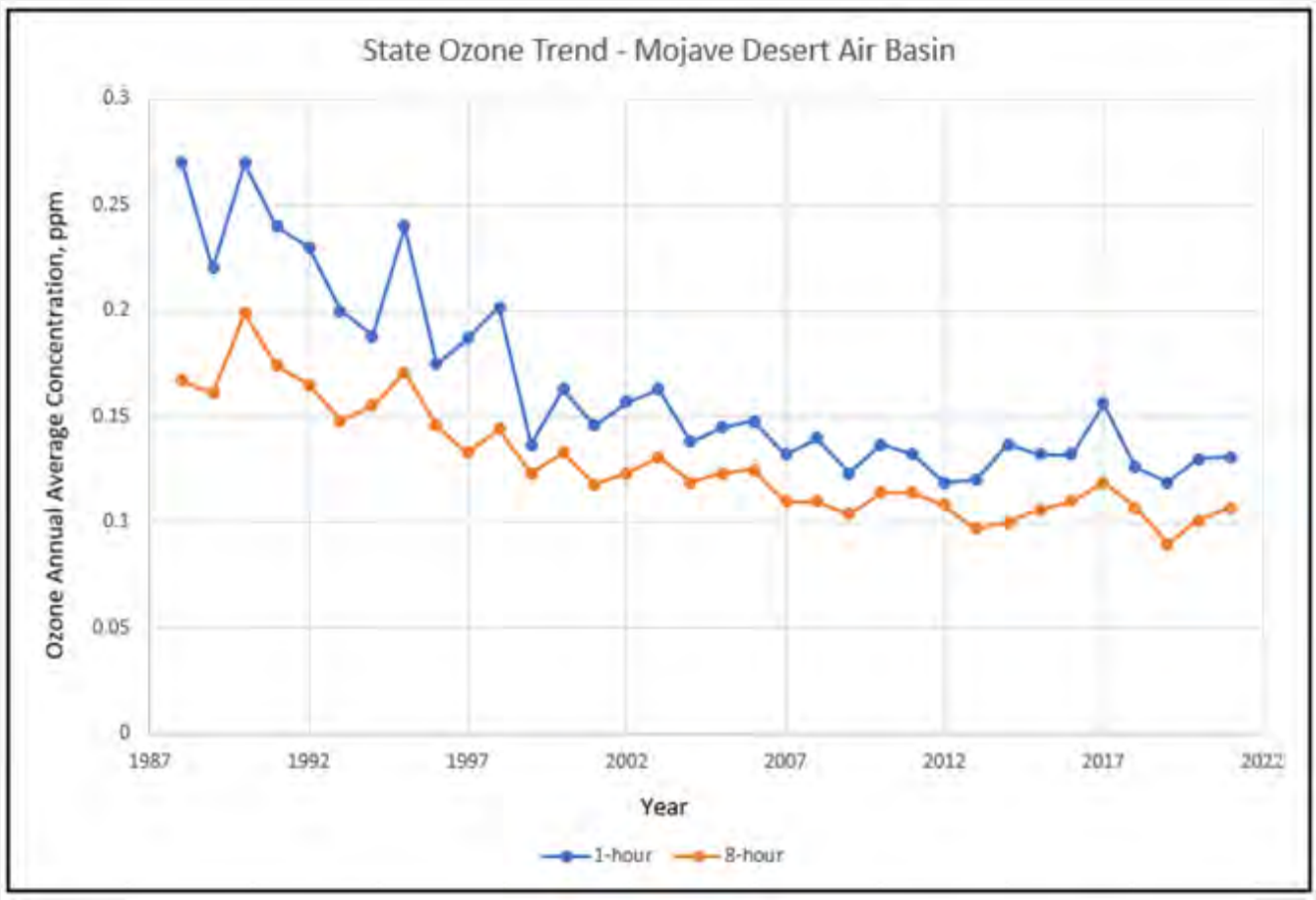
[2] The descriptions of the criteria air pollutants and associated health effects are based on the U.S. Environmental Protection Agency's "Criteria Air Pollutants" (EPA 2021a), as well as the California Air Resources Board's "Glossary" (CARB 2021a)

[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.

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



Source: CARB 2022a, 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.

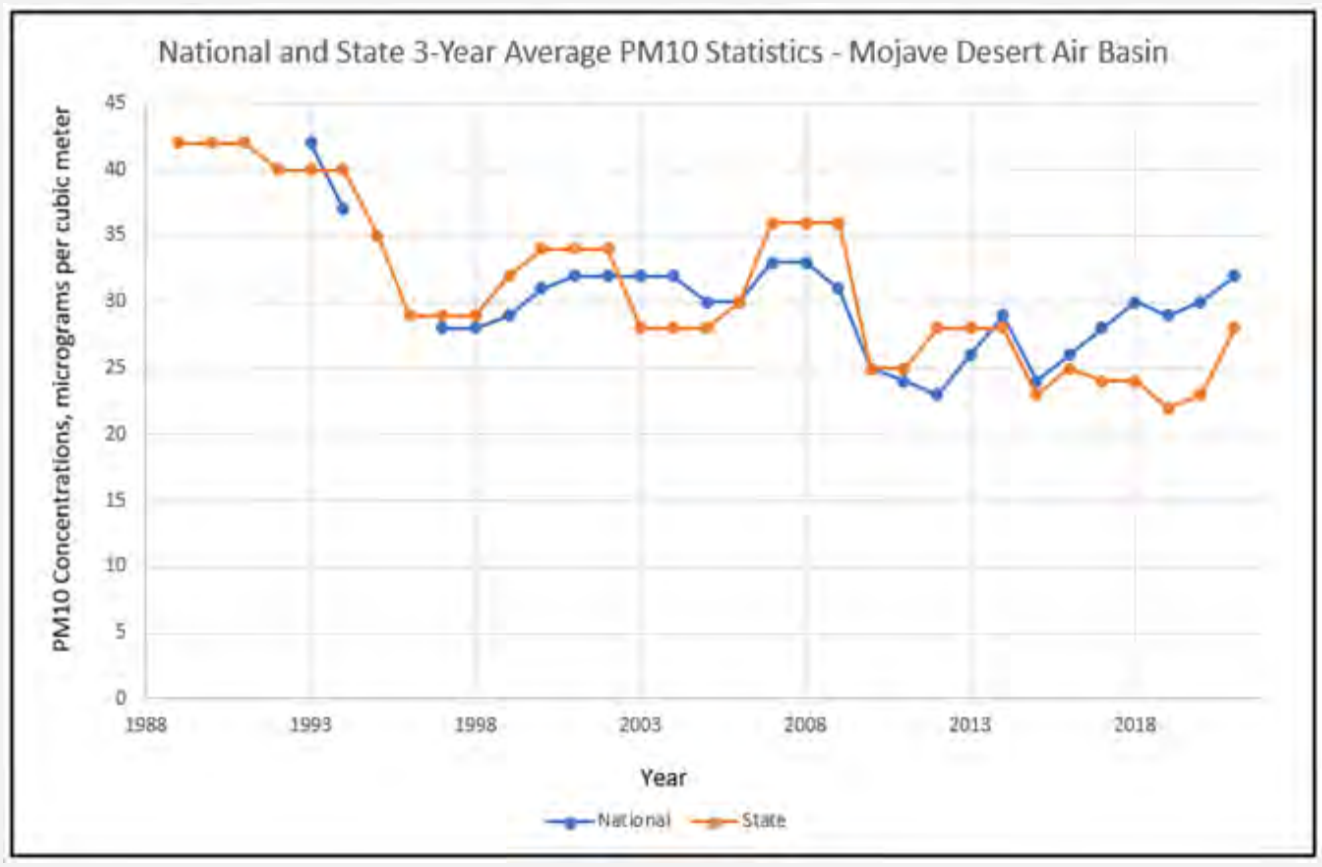
Adverse Health Effects: $PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma 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 PM_{10} Statistics – Mojave Desert Air Basin



Source: CARB 2022a, 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

Table 4.2-1. Mojave Desert Air Basin Attainment Classification

Pollutant	Designation/Classification[a]	
	Federal Standards	State Standards
$PM_{2.5}$	Unclassifiable/attainment	Attainment[d]
Lead	Unclassifiable/attainment	Attainment
Hydrogen sulfide	No federal standard	Unclassified[e]
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 presented 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 experience concentrations in attainment of the NAAQS (MDAQMD 2008).

Regarding 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 SCAB, 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 2019 to 2021 are presented in Table 4.2-2. The Victorville monitoring station, located at 14306 Park Avenue, Victorville, California, is the nearest air quality monitoring station to the Project site, and is located approximately 7.2 miles southwest 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, NO_2, CO, SO_2, PM_{10}, and $PM_{2.5}$ from the Victorville monitoring station are provided in Table 4.2-2. 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		
					2019	2020	2021	2019	2020	2021
Ozone (O_3)										
Victorville	ppm	Maximum 1-hour concentration	State	0.09	0.104	0.112	0.112	3	4	8
	ppm	Maximum 8-hour concentration	State	0.070	0.082	0.095	0.098	34	38	35
			Federal	0.070	0.081	0.094	0.098	29	35	34
Nitrogen Dioxide (NO_2)										
Victorville	ppm		State	0.18	0.056	0.059	0.056	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		
					2019	2020	2021	2019	2020	2021
		Maximum 1-hour concentration	Federal	0.100	0.056	0.059	0.056	0	0	0
	ppm	Annual concentration	State	0.030	0.011	0.012	0.012	0	0	0
			Federal	0.053	0.011	0.012	0.012	0	0	0
Carbon Monoxide (CO)										
Victorville	ppm	Maximum 1-hour concentration	State	20	1.2	1.6	1.5	0	0	0
			Federal	35	1.2	1.6	1.5	0	0	0
	ppm	Maximum 8-hour concentration	State	9.0	1.1	1.4	1.0	0	0	0
			Federal	9	1.1	1.4	1.0	0	0	0
Sulfur Dioxide (SO_2)										
Victorville	ppm	Maximum 1-hour concentration	Federal	0.075	0.004	0.004	0.003	0	0	0
	ppm	Maximum 24-hour concentration	Federal	0.14	0.003	0.002	0.002	0	0	0
	ppm	Annual concentration	Federal	0.030	0.001	0.001		0	0	0
Coarse Particulate Matter (PM_{10})[a]										
Victorville	µg/ m^3	Maximum 24-hour concentration	State	50	—	—	—	—	—	—
			Federal	150	170.0	261.4	591.6	1.9 (2)	1.9 (2)	1.0 (1)
	µg/ m^3	Annual concentration	State	20	—	—	—	—	—	—
Fine Particulate Matter ($PM_{2.5}$)[a]										
Victorville	µg/ m^3	Maximum 24-hour concentration	Federal	35	17.8	48.4	87.1	0.0 (0)	4.0 (4)	1.0 (1)
	µg/ m^3	Annual concentration	State	12	7.0	10.4	10.3	0	0	0
			Federal	12.0	7.0	9.7	10.2	0	0	0

Sources: CARB 2022b; EPA 2022.

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

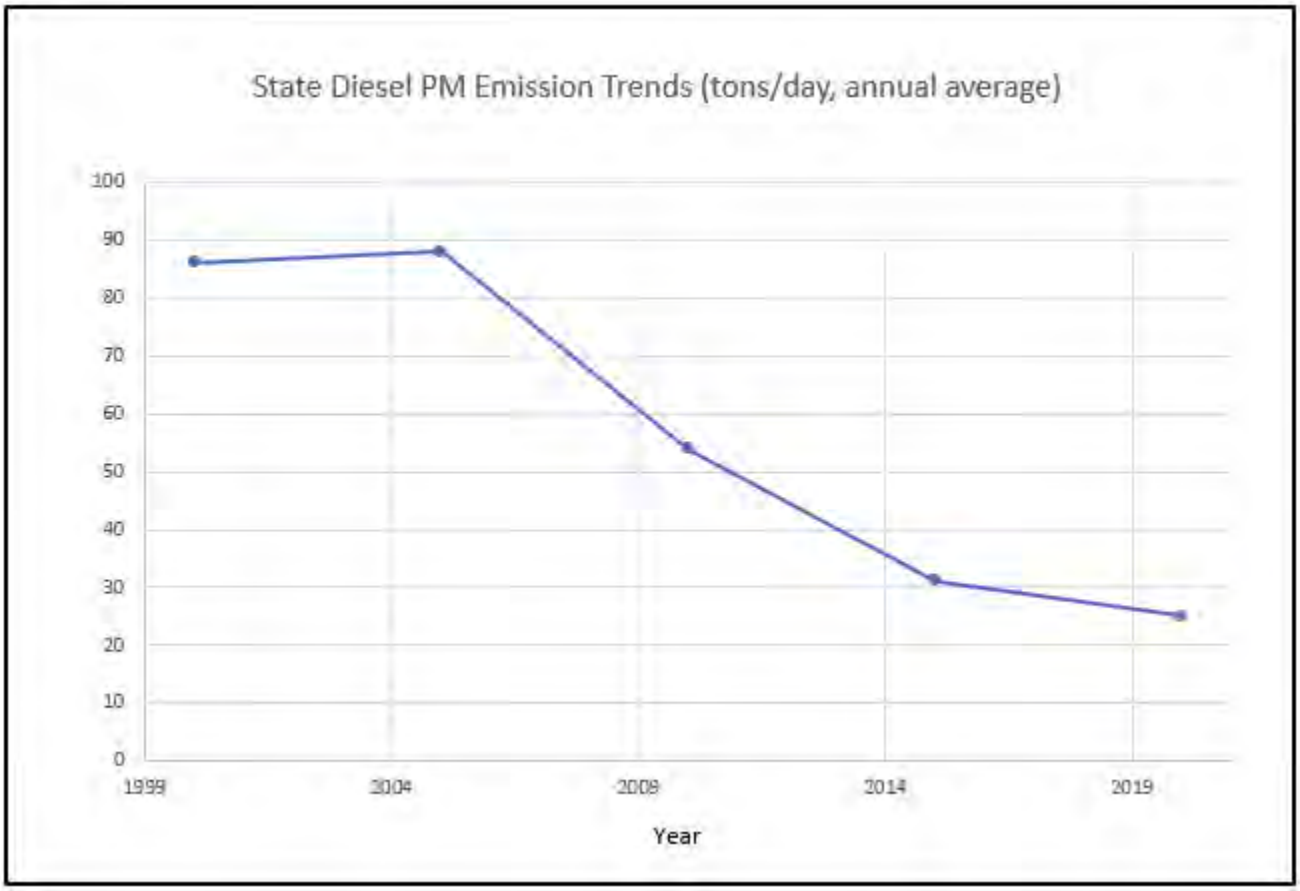
The state Air Toxics Program was established in 1983 under AB 1807 (Tanner). The California TAC list identifies more than 200 pollutants, of which carcinogenic and noncarcinogenic toxicity criteria have been established for a subset of these pollutants pursuant to the California Health and Safety Code. 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 2022c).

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.

Figure 4.2-3. Statewide Diesel Particulate Matter Trends



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

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.

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 PM10 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 PM10 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 SOx 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).

Town of Apple Valley General Plan

The Town of Apple Valley General Plan contains the following goals and policies applicable to air quality and the Project (Town of Apple Valley 2009):

Air Quality Element

Goal. To preserve and enhance local and regional air quality.

Policy 1.A. The Town shall cooperate with the MDAQMD to assure compliance with air quality standards.

Policy 1.B. The Town shall proactively regulate local pollutant emitters by coordinating and cooperating with local, regional and federal efforts to monitor, manage and decrease the levels of major pollutants affecting the Town and region, with particular emphasis on PM10 and ozone emissions, as well as other emissions associated with diesel-fueled equipment and motor vehicles.

Policy 1.C. The Town shall coordinate land use planning efforts to assure that sensitive receptors are reasonably separated from polluting point sources including mineral extraction operations.

Policy 1.D. All proposals for development activities within the Town shall be reviewed for their potential to adversely impact local and regional air quality and shall be required to mitigate any significant impacts.

Policy 1.E. The use of clean and/or renewable alternative energy sources for transportation, heating and cooling, and construction shall be encouraged by the Town.

Policy 1.F. The Town shall support, encourage, and facilitate the development of projects that enhance the use of alternative modes of transportation, including pedestrian-oriented retail and activity centers, dedicated bicycle paths and lanes, and community-wide multi-use trails.

Policy 1.G. Future residential, commercial, and industrial development and remodeling projects, shall strive to exceed Title 24 standards by 15% and/or achieve LEED certification or similar performance standards for buildings.

Policy 1.H. Residential, commercial, and industrial projects that reduce vehicle miles traveled (VMTs) by providing alternative transportation options, home office and live/work spaces, and/or promote employees living close to work are preferred.

Policy 1.I. The Town shall continue to reduce waste generation, enhance recycling or reuse programs, and expand grey water systems for landscape irrigation.

Policy 1.J. The Town shall promote the use of solar and alternative energies and give priority to projects that include the use of solar cells and other alternative energy sources in their designs.

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 (BAAQMD) 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.

Construction

For the purpose of estimating Project emissions, construction was modeled beginning in October 2023 and concluding in towards the end of November 2024,[5] lasting approximately 14 months. On-site facility development and off-site improvements were accounted for in the modeling. The analysis contained herein is based on the following schedule assumptions (duration of phases is approximate):

On-Site Construction:

- Site preparation (on-site): October 2023
- Mass grading (on-site): October 2023 – December 2023
- Building construction (on-site): December 2023 – September 2024
- Architectural coating (on-site): June 2024 – September 2024
- Fine grading (on-site): August 2024 – September 2024
- Concrete laydown (on-site): September 2024 – November 2024

Off-Site Construction:

- Road removal/ pipeline install (off-site): November 2023 – March 2024
- Paving (off-site): November 2023 – June 2024
- Restriping (off-site): November 2023 – June 2024
- Pipeline Testing (off-site): June 2024 – July 2024

Construction modeling assumptions for equipment and vehicles are provided in Table 4.2-5. For on-site and off-site development, it was assumed that approximately 150,000 cubic yards and 2,288 cubic yards of soil would be

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 October 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.

exported, respectively. For the analysis, it was generally assumed that heavy-duty construction equipment would be operating at the site 5 days per week.

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	Daily Usage Hours
On-Site Construction						
Site Preparation	20	4	24	Crawler Tractors	1	8
				Tractors/ Loaders/ Backhoes	1	8
Mass Grading	30	8	16,072	Excavators	2	8
				Graders	1	8
				Rubber Tired Dozers	1	8
				Scrapers	4	8
				Tractors/ Loaders/ Backhoes	2	8
Building Construction	750	884	0	Aerial Lifts	3	7
				Cranes	1	7
				Forklifts	7	8
				Generator Sets	3	8
				Tractors/ Loaders/ Backhoes	9	7
				Welders	2	8
Architectural Coating	230	0	0	Aerial Lifts	3	6
				Air Compressors	3	6
Fine Grading	20	8	5,356	Excavators	2	8
				Graders	1	8
				Rubber Tired Dozers	1	8
				Scrapers	2	8
				Tractors/ Loaders/ Backhoes	2	8
Concrete Laydown	20	400	0	Other Construction Equipment (Laser Screed)	2	8
				Surfacing Equipment (Concrete Finishing)	6	8
Off-Site Improvements						
Road Removal/ Pipeline Install	16	2	286	Concrete/ Industrial Saws	1	8
				Excavators	1	8
				Pumps	1	8
				Tractors/ Loaders/ Backhoes	1	8

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	Daily Usage Hours
Paving	8	2	0	Pavers	1	8
				Paving Equipment	1	8
				Rollers	1	8
Restriping	4	2	0	Air Compressors	1	8
Pipeline Testing	6	0	0	Generator Sets	1	8

Source: Appendix B-1.
Note: It should be noted that the Project's square footage analyzed in the technical reports was 2,518,500 square feet. The Project's size has increased to 2,520,000 square feet since the technical reports were originally prepared (an increase of 1,500 square feet in Building 2). However, this 0.0596% increase in square footage is nominal when taking into consideration the ultimate size of the Project and would not result in significant changes to the analysis performed or new significant impacts not disclosed in this EIR.

Operation

Emissions from the operational phase of the Project were estimated using CalEEMod. Operational year 2025 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. 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 4,855 primary trips per day total, of which 3,382 trips would be passenger vehicles and 1,473 trips would be trucks, both of which were assumed 7 days per week. The passenger vehicle trip lengths were assumed to be CalEEMod default trip length of 14.7 miles for commercial-work trips (i.e., trips made by someone who is employed by the warehouse land use).

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. The Port of Long Beach was evaluated since it is the nearest major maritime cargo hub to the Project and potential origin/destination for haulage outside the MCAB. EMFAC data was queried for San Bernardino County for operational year 2025 for light-heavy duty (LHDT1 and LHDT2)[6], medium heavy duty (MHDT), and heavy-heavy duty trucks (HHDT) for total VMT and number of vehicle trips. Based on the EMFAC data it is estimated that MHDTs average 4.36 miles per trip and HHDTs average 9.77 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 104 miles. Based on the EIR's transportation analysis, HHDT make up 60.6% of the total truck trips for the Project and LHDT1, LHDT2, and MHDTs make up 39.4% 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 104 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 9.78 miles. To determine an average total truck distance for use in CalEEMod, HHDT trips are averaged with the other 39.4% of the trucks (and LHDT1, LHDT2, and MHDTs) to determine an overall weighted average truck trip distance, which equates to about 35 miles. See Table 4.2-6 for calculation details.

[6] LHDT1 and LHDT2 categories based on weight classes. Specifically, LHDT1 = 8,501 to 10,000 pounds and LHDT2 = 10,001 to 14,000 pounds.

Table 4.2-6. Operational Truck Trip Distance

Vehicle	Percent of Trucks Trips (%)[1]	EMFAC Data			Trip Distance
		EMFAC Truck Classification	County-wide VMT per Year	County-wide Vehicle Trips per Year	VMT per Trip
2-3 Axle Trucks (Arriving and Departing)	39.4	LHDT1, LHDT2, and MHDT	740,923[2]	232,755[2]	4.36
4+ Axle Trucks (Arriving from Port)	30.3 (50% of total HHDT Trips[4])	HHDT	N/A	N/A	104[3]
4+ Axle Trucks (Departing)	30.3 (50% of total HHDT Trips[4])	HHDT	2,718,529	278,293	9.77
				Weighted Average (All Truck Trips)	*35.37*

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 truck trip lengths were based on the SCAQMD recommendation of 40 miles and assumed to be 100% of primary trips.[7] 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.

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: idling which occurs while the trucks are waiting to pull up to the loading dock, at the loading dock, and prior to entering and exiting the site.

Transport refrigeration units (TRUs) are designed to maintain the temperature inside delivery truck trailers. The emissions associated with TRU operation were estimated in a spreadsheet model using emission factors from CARB's OFFROAD2021 model. Electric plug-ins are available at the loading dock; therefore, each TRU was assumed to operate for 30 minutes per visit. Based on data from the EIR's transportation analysis (Appendix I),

7 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 6.6 miles. Therefore, the conservatively assumed trip length of 40 miles is used for this analysis.[8] TRUs were assumed for all trucks (LHDT1, LHDT2, MHDT, and HHDT) that transport cargo to the cold storage building portions of the Project.

the Project would generate 358 truck delivery trips per day[8] to the High-Cube Cold Storage buildings, all of which were assumed be equipped with TRUs.

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

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. 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 302 forklifts (forklifts and pallet jacks, with a mix of 50% diesel and 50% electric) and 9 diesel-fueled yard tractors operating at 24 hours a day for 365 days of the year. See Appendix B-1 for detailed calculations.

Stationary Sources (Emergency Generators)

The Project would potentially operate three diesel-fueled 500-horsepower (hp) generators (one at each warehouse building). These generators were assumed to operate one-hour a day for up to 50-hours a year for routine testing and maintenance.

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).

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 22112 modeling system (computer software) with the Lakes Environmental Software implementation/user interface, AERMOD View Version 11.0.1. The HRA followed the Office of Environmental Health Hazard Assessment (OEHHA) 2015 guidelines (OEHHA 2015)

[8] TRUs were assumed for all trucks (LHDT1, LHDT2, MHDT, and HHDT) that transport cargo to the cold storage building portions of the Project.

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. American Meteorological Society/Environmental Protection Agency Regulatory Model Principal Parameters

Parameter	Details
Meteorological Data	AERMOD-specific meteorological data for the Barstow-Daggett Airport air monitoring station (KDAG) was used for the dispersion modeling based on the recommendation of the MDAQMD. A meteorological data set from 2015 through 2020 was obtained from the CARB in a preprocessed format suitable for use in AERMOD.
Urban versus Rural Option	The rural dispersion option was selected due to the undeveloped nature of the Project area.
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 arc-second resolution.
Source Release Characterizations	Air dispersion modeling of DPM emissions was conducted assuming the off-road equipment and trucks would operate in accordance with the modeling scenario estimated in CalEEMod (Appendix B-1), based on the best information available at the time of analysis: ▪ Off-road equipment was modeled as a line of adjacent volume sources across the project site with a release height of 5 meters, a plume height of 10 meters, and plume width of 9 meters. ▪ Diesel trucks were modeled as a line of adjacent volume sources across the project site with a release height of 3.4 meters, a plume height of 6.8 meters, and plume width of 9 meters.
Receptors	Discrete receptors were placed at the nearest receptor locations in all directions to the Project site.

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.

The health risk calculations were performed using the Hotspots Analysis and Reporting Program Version 2 (HARP2) Air Dispersion and Risk Tool (ADMRT, Version 22118). 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 2025 was assumed consistent with completion of Project construction. Emissions from the operation of the Project include truck trips, truck idling emissions, TRU operation, off-road diesel-fueled equipment, and routine testing and maintenance of the diesel emergency generators. 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.[9] Therefore, the analysis conservatively overestimates DPM emissions from idling. All deliveries would occur Monday through Sunday.

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. 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.

Table 4.2-8. Operational Health Risk Assessment American Meteorological Society/U.S. Environmental Protection Agency Regulatory Model Operational Principal Parameters

Parameter	Details
Meteorological Data	AERMOD-specific meteorological data for the Barstow-Daggett Airport air monitoring station (KDAG) was used for the dispersion modeling based on the recommendation of the MDAQMD. A meteorological data set from 2015 through 2020 was obtained from the CARB in a preprocessed format suitable for use in AERMOD.
Urban versus Rural Option	The rural dispersion option was selected due to the undeveloped nature of the Project area.
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 arc-second resolution.
Source Release Characterizations	The following operational source modeling parameters were based on the best information available at the time of analysis: ▪ Diesel truck travel was modeled as a line of adjacent volume sources to the west (95%) and east (5%) of the Project with a release height of 3.4 meters, a plume height of 6.8 meters, and plume width of 9 meters. ▪ Truck idling was modeled as a line of adjacent volume sources along each side of the warehouse building with loading docks, with a release height of 3.4 meters, a plume height of 6.8 meters, and plume width of 3 meters. ▪ TRU operations were modeled as a line of adjacent volume sources along each side of the warehouse building with loading docks, with a release height of 3.9 meters, a plume height of 7.8 meters, and plume width of 3 meters. ▪ Diesel yard trucks were modeled as a line of adjacent volume sources along each side of the warehouse building with loading docks, with a release height of 3.4 meters, a plume height of 6.8 meters, and plume width of 9 meters. ▪ Emergency generators were modeled as point sources and located adjacent to the respective buildings. The 500-hp generators were each assumed to have vertical stacks with a height of 2.50 meters, inside stack diameter of 13.46 centimeters, gas exhaust temperature of 931 degrees Fahrenheit, and gas exhaust of 51.79 cubic meters per minute.
Receptors	Discrete receptors were placed at the nearest receptor locations in all directions to the Project site.

Source: See Appendix B-2.

[9] 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.

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.

4.2.4 Impacts Analysis

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

Significant and Unavoidable 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 vehicle-miles traveled (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 Control for the Mojave Desert Planning Area). According to the Town's General Plan, the land use designation for the Project site is Regional Commercial (C-R). Additionally, the Project site is located within the Warehouse Distribution Regional Commercial (C-R) Overlay. The overlay would only apply to 978 acres within the CR District located immediately west of the I-15 freeway, Dante Road to the south and Caplet Street to the north, and the CR District's boundary to the east. Since the Project site is within this overlay, the proposed warehouse facility is an allowable use under the existing general plan land use designation.

As discussed below, Project construction-source emissions would not exceed applicable MDAQMD regional thresholds after implementation of Mitigation Measures (MM) AQ-1 and MM-AQ-2. However, Project operational-source air pollutant emissions would result in exceedances of regional thresholds for emissions of NO_x and PM_{10}, even after implementation of MM-AQ-3. As such, NO_x and PM_{10} operational emissions are considered significant and unavoidable and the Project would 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 in depth under the next impact criterion.

Based on the preceding considerations, the Project would conform to local land use plans and would comply with all applicable all MDAQMD Rules and Regulations. However, Project operational-source emissions have the potential to increase the frequency or severity of a violation in the federal or state ambient air quality standards. On this basis, the Project is considered to potentially conflict with the Federal Particulate Matter Attainment Plan and Ozone Attainment Plan for the MDAB. Therefore, impacts associated with the conflicting with the MDAQMD would be significant and unavoidable.

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

Significant and Unavoidable Impact. Construction and operation of the Project would result in emissions of criteria air pollutants from mobile, area, and stationary 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, soil disturbance, and VOC off-gassing from architectural coatings) 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 - Unmitigated

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds Per Day					
Summer						
2023	11.13	126.22	112.99	0.44	19.07	7.83
2024	215.78	142.06	144.04	0.60	32.48	11.81
Winter						
2023	10.97	129.46	107.40	0.44	19.07	7.84
2024	215.55	146.05	137.52	0.59	32.48	11.81
Maximum Daily Emissions	**215.78**	**146.05**	**144.04**	**0.60**	**32.48**	**11.81**
MDAQMD Threshold	*137*	*137*	*548*	*137*	*82*	*65*
Threshold Exceeded?	**Yes**	**Yes**	**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.
Includes compliance with MDAQMD Rule 403 for fugitive dust control.

As depicted in Table 4.2-9, emissions resulting from the Project construction would exceed criteria pollutant thresholds established by the MDAQMD for VOC and NO_x emissions. This impact would be potentially significant without mitigation.

The estimated maximum daily construction emissions with mitigation are summarized in Table 4.2-10. Detailed construction model outputs are presented in Appendix B-1. MM-AQ-1 will be implemented to reduce the VOC impacts, which requires that the Project shall utilize "Super-Compliant" low VOC paints which have been reformulated to exceed the regulatory VOC limits put forth by MDAQMD's Rule 1113. Super-Compliant low VOC paints shall be no more than 10 grams per liter (g/L) of VOC. Alternatively, the Project Applicant may utilize tilt-up concrete buildings that do not require the use of architectural coatings. In addition, MM-AQ-2 would be implemented to reduce Project-generated equipment exhaust, primarily by requiring all 75 horsepower (hp) or greater equipment to have CARB-compliant Tier 4 Final engines, which are the cleanest engines currently available. The effectiveness of MM-AQ-1 and MM-AQ-2 are quantified in the mitigated emissions estimate in Table 4.2-10.

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

Year	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds Per Day					
Summer						
2023	7.32	66.57	118.50	0.44	16.44	5.40
2024	54.98	84.42	152.27	0.60	29.83	9.34
Winter						
2023	7.16	69.82	112.91	0.44	16.44	5.40
2024	54.75	88.40	145.76	0.59	29.83	9.34
Maximum Daily Emissions	**54.98**	**88.40**	**152.27**	**0.60**	**29.83**	**9.34**
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; MM = Mitigation Measure.
Includes implementation of MM-AQ-1 and MM-AQ-2.

After implementation of MM-AQ-1 and MM-AQ-2, regional construction emissions would not exceed the applicable MDAQMD thresholds of significance for any criteria pollutant. Therefore, with the incorporation of mitigation, short-term impacts associated with a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment would be less than significant.

Long-Term Operational Impacts

Operation of the Project would generate criteria pollutant emissions from area sources (consumer products, architectural coatings, landscaping equipment), energy sources (natural gas combustion for space and water heating), mobile sources (vehicular traffic), off-road equipment (diesel-fueled forklifts and yard trucks), stationary sources (emergency diesel generator testing and maintenance), and TRU operation. Table 4.2-11 summarizes the unmitigated maximum daily operational emissions associated with the Project. Detailed operational model outputs are presented in Appendix B-1.

Table 4.2-11. Estimated Maximum Daily Operation Criteria Air Pollutant Emissions - Unmitigated

Emissions Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Summer						
Area	58.30	<0.01	0.26	<0.01	<0.01	<0.01
Energy	0.70	6.40	5.38	0.04	0.49	0.49
Mobile	10.87	235.79	165.91	1.64	92.81	27.25
Offroad Equipment	46.97	438.36	559.20	0.88	22.14	20.36
Stationary	3.37	9.42	8.60	0.02	0.50	0.50
Transport Refrigeration Units	0.03	0.03	0.00	0.00	0.00	0.00
Total Daily Summer Emissions	**120.24**	**690.01**	**739.35**	**2.57**	**115.93**	**48.60**
Winter						
Area	58.30	<0.01	0.26	<0.01	<0.01	<0.01
Energy	0.70	6.40	5.38	0.04	0.49	0.49
Mobile	9.71	247.54	148.79	1.61	92.81	27.25
Offroad Equipment	46.97	438.36	559.20	0.88	22.14	20.36
Stationary	3.37	9.42	8.60	0.02	0.50	0.50
Transport Refrigeration Units	0.03	0.03	0.00	0.00	0.00	0.00
Total Daily Winter Emissions	**119.08**	**701.76**	**722.23**	**2.54**	**115.93**	**48.60**
Maximum Daily Emissions	**120.24**	**701.76**	**739.35**	**2.57**	**115.93**	**48.60**
MDAQMD Threshold	*137*	*137*	*548*	*137*	*82*	*65*
Threshold Exceeded?	**No**	**Yes**	**Yes**	**No**	**Yes**	**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 4.2-11, the Project would exceed the numerical thresholds of significance established by the MDAQMD for emissions of NO_x, CO, and PM_{10}. This impact would be potentially significant without mitigation.

Mitigation measures are required to minimize operational-related air quality impacts (MM-AQ-3). Most criteria air pollutants associated with the Project are generated by diesel-fueled off-road cargo handling equipment and on-road vehicles. MM-AQ-3 includes the requirement for all off-road cargo handling equipment to be zero-emission, which would reduce the long-term criteria air pollutant emissions substantially. However, neither the Project Applicant nor the Town can substantively or materially affect reductions in Project on-road mobile source emissions beyond what is already required by regulation. Table 4.2-12 summarizes the mitigated maximum daily operational emissions associated with the Project. Detailed operational model outputs are presented in Appendix B-1.

Table 4.2-12. Estimated Maximum Daily Operation Criteria Air Pollutant Emissions - Mitigated

Emissions Source	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	Pounds per Day					
Summer						
Area	58.29	<0.01	0.15	<0.01	<0.01	<0.01
Energy	0.70	6.40	5.38	0.04	0.49	0.49
Mobile	10.87	235.79	165.91	1.64	92.81	27.25
Offroad Equipment	0.00	0.00	0.00	0.00	0.00	0.00
Stationary	3.37	0.99	8.60	0.02	0.05	0.05
Transport Refrigeration Units	0.03	0.03	0.00	0.00	0.00	0.00
Total Daily Summer Emissions	**73.26**	**243.22**	**180.04**	**1.69**	**93.35**	**27.79**
Winter						
Area	58.29	0.00	0.15	0.00	0.00	0.00
Energy	0.70	6.40	5.38	0.04	0.49	0.49
Mobile	9.71	247.54	148.79	1.61	92.81	27.25
Offroad Equipment	0.00	0.00	0.00	0.00	0.00	0.00
Stationary	3.37	0.99	8.60	0.02	0.05	0.05
Transport Refrigeration Units	0.03	0.03	0.00	0.00	0.00	0.00
Total Daily Winter Emissions	**72.10**	**254.97**	**162.92**	**1.66**	**93.35**	**27.79**
Maximum Daily Emissions	**73.26**	**254.97**	**180.04**	**1.69**	**93.35**	**27.79**
MDAQMD Threshold	*137*	*137*	*548*	*137*	*82*	*65*
Threshold Exceeded?	**No**	**Yes**	**No**	**No**	**Yes**	**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; MM = Mitigation Measure.
Includes implementation of MM-AQ-3.

After implementation of MM-AQ-3, the Project would still exceed the MDAQMD thresholds for NO_x and PM_{10}. No feasible mitigation measures or project design features beyond those already identified exist that would reduce these emissions to levels that are less than significant. Therefore, even with the incorporation of mitigation, long-term impacts associated with a cumulatively considerable net increase of criteria pollutants for which the Project region is non-attainment would be significant and unavoidable.

Health Effects of Criteria Air Pollutants

Construction of the Project would result in emissions that would not exceed the MDAQMD thresholds for criteria air pollutants, including VOC and NO_x, after implementation of MM-AQ-1 and MM-AQ-2. Operation of the Project, however, would result in emissions that would exceed the MDAQMD thresholds for criteria air pollutants including NO_x and PM_{10}, even after implementation of MM-AQ-3.

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. 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 exceed the MDAQMD NO_x threshold during Project operations, the Project could contribute to 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). Although Project-related NO_x emissions would exceed the MDAQMD construction mass daily thresholds, because the MDAB is a designated attainment area for NO_2 (and NO_2 is a constituent of NO_x) and the existing NO_2 concentrations in the area are well below the NAAQS and CAAQS standards,[10] it is not anticipated that the Project would cause an exceedance of the NAAQS and CAAQS for NO_2 or result in potential health effects associated with NO_2 and NO_x. However, because the Project would exceed the MDAQMD NO_x threshold during Project operations, the Project could contribute to 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). 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). Operation of the Project would exceed the MDAQMD threshold for PM_{10}. As such, the Project would potentially contribute to exceedances of the NAAQS and CAAQS for particulate matter and obstruct the MDAB from coming into attainment for these pollutants. Because the Project has the potential to contribute substantial particulate matter during operation, the Project could 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

[10] See Table 4.2-2, which shows that ambient concentrations of NO_2 at the Victorville monitoring station have not exceeded the NAAQS or CAAQS between 2019 and 2021.

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.

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,[11] involves complex chemical and physical interactions of multiple pollutants from natural and anthropogenic sources. The O_3 reaction is self-perpetuating (or catalytic) in the presence of sunlight because NO_2 is photochemically reformed from nitric oxide (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 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 2018a). 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).

Regarding 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

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

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 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 (PGM)[12] and the EPA Benefits Mapping and Analysis Program (BenMAP or BenMAP–Community Edition [CE]).[13] 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 $PM_{2.5}$.[14] 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 PGM 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

12 The first step in the publicly available HIAs includes running a regional PGM, 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).

13 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 2018b). 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 $PM_{2.5}$.

14 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).

of writing, no HIA has concluded that health effects estimated using the PGM 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.

In summary, operation of the Project could result in exceedances of the MDAQMD significance thresholds for NO_x and PM_{10}, even after mitigation, and the Project would potentially result in health effects associated with those pollutants. Because construction of the Project would not exceed any MDAQMD thresholds (after mitigation), and operation of the Project would not exceed the MDAQMD thresholds for CO, SO_x or $PM_{2.5}$, 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 CO, SO_x or $PM_{2.5}$.

Notably, there are numerous scientific and technological complexities associated with correlating criteria air pollutant emissions from an individual project to specific health effects or potential additional nonattainment days, and methods available to quantitatively evaluate health effects may not be appropriate to apply to emissions associated with the Project, which cannot be estimated with a high-level of accuracy. Notwithstanding, because operation of the Project could result in exceedances of MDAQMD significance thresholds for NO_x and PM_{10}, even after implementation of MM-AQ-3, the potential health effects associated with these criteria air pollutants are conservatively considered significant and unavoidable.

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

Significant and Unavoidable 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.

Criteria Air Pollutant Emissions and Associated Pollutant Concentrations

As discussed above in Threshold B, because operation of the Project could result in exceedances of the MDAQMD significance thresholds for NO_x and PM_{10}, the Project would potentially result in health effects associated with those pollutants. Because construction of the Project would not exceed any MDAQMD thresholds (after implementation of MM-AQ-1 and MM-AQ-2), and operation of the Project would not exceed the MDAQMD thresholds for CO, SO_x or $PM_{2.5}$ (after implementation of MM-AQ-3), 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 CO, SO_x or $PM_{2.5}$.

Notably, there are numerous scientific and technological complexities associated with correlating criteria air pollutant emissions from an individual project to specific health effects or potential additional nonattainment days, and methods available to quantitatively evaluate health effects may not be appropriate to apply to emissions associated with the Project, which cannot be estimated with a high-level of accuracy. Notwithstanding, because operation of the Project could result in exceedances of MDAQMD significance thresholds for NO_x and PM_{10}, even after implementation of MM-AQ-3, the potential health effects associated with these criteria air pollutants are conservatively considered significant and unavoidable.

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 Town of Apple Valley 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 19,187 daily trips on Stoddard Wells Road, east of I-15 NB Ramps - Outer I-15 intersection (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

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, on-site development and off-site improvements. Results of the construction HRA are presented in Table 4.2-13. Detailed operational model outputs are presented in Appendix B-2.

Table 4.2-13. Construction Health Risk Assessment Results – Unmitigated

Impact Parameter	Units	Project Impact	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	Per Million	3.39	10	Less than Significant
Chronic Hazard Index – Residential	Index Value	0.0039	1.0	Less than Significant

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

As shown in Table 4.2-13, Project construction activities would result in a Maximum Individual Cancer Risk of 3.39 in 1 million at the nearest residence, which is less than the significance threshold of 10 in 1 million. Project construction would result in a Chronic Hazard Index of 0.0039, which is below the 1.0 significance threshold. The Project construction TAC health risk impacts would be less than significant. Although not required to reduce the

construction risk impact, MM-AQ-2 would further reduce the Maximum Individual Cancer Risk and Chronic Hazard Index levels to 0.83 in 1 million and 0.0010, respectively.

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 4.2-14. Detailed operational model outputs are presented in Appendix B-2.

Table 4.2-14. Operational Health Risk Assessment Results - Unmitigated

Impact Parameter	Units	Impact Level	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	Per Million	307.11	10	**Potentially Significant**
Chronic Hazard Index – Residential	Index Value	0.10	1.0	Less than Significant.

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

As shown in Table 4.2-14, the DPM emissions from operation of the Project would result in a Maximum Individual Cancer Risk of 307 in 1 million and a Chronic Hazard Index of 0.10. The Chronic Hazard Index would be below the 1.0 significance threshold; however, the Project would exceed the cancer risk threshold of 10 in a million and would be potentially significant without mitigation.

Mitigation measures are required to minimize operational-related air quality impacts (MM-AQ-3). MM-AQ-3 would require all off-road cargo handling and landscaping equipment to be zero-emission and would require all diesel-fueled emergency generators to be equipped with CARB Tier 4 Final compliant engines. Table 4.2-15 summarizes the mitigated operational health risk levels associated with the Project.

Table 4.2-15. Operational Health Risk Assessment Results - Mitigated

Impact Parameter	Units	Impact Level	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	Per Million	4.42	10	Less than Significant.
Chronic Hazard Index – Residential	Index Value	0.0015	1.0	Less than Significant.

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

As shown in Table 4.2-15, mitigated Project operational activities would result in a Maximum Individual Cancer Risk of 4.42 in 1 million at the nearest residence, which is less than the significance threshold of 10 in 1 million. Mitigated Project operations would result in a Chronic Hazard Index of 0.0015, which is below the 1.0 significance threshold. The Project operational TAC health risk impacts would be less than significant after mitigation.

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 control 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 control 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.

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?

Significant and Unavoidable 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 Table 4.2-10, daily construction emissions associated with the Project would not exceed the MDAQMD significance thresholds after implementation of MM-AQ-1 and MM-AQ-2. However, as presented in the preceding analysis, Project operational-source air pollutant emissions would result in exceedances of regional thresholds for emissions of NO_X and PM_{10}, even after implementation of mitigation. Although MM-AQ-3 would reduce operational emissions from on-road vehicles to the extent feasible, since neither the Project Applicant nor the Town of Apple Valley have regulatory authority to control tailpipe emissions, no feasible MMs exist that would reduce these emissions to levels that are less-than-significant. As such, Project operational-source NO_X and PM_{10} emissions exceedances of applicable MDAQMD regional thresholds would be significant and unavoidable, and thus, cumulatively considerable.

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 result in potentially significant impacts with regard to conflicting with or obstructing implementation of an applicable air quality plan. Implementation of MM-AQ-1 through MM-AQ-3 would reduce the Project's impacts; however, impacts would remain **significant and unavoidable**.

Construction

MM-AQ-1 The Project shall utilize "Super-Compliant" low-volatile organic compound (VOC) paints which have been reformulated to exceed the regulatory VOC limits put forth by MDAQMD's Rule 1113. Super-Compliant low VOC paints shall be no more than 10 grams per liter (g/L) of VOC. Alternatively, the Project Applicant shall utilize tilt-up concrete buildings that do not require the use of architectural coatings.

MM-AQ-2 The following measures shall be implemented to reduce off-road equipment exhaust during construction:

- Require all generators, and all diesel-fueled off-road construction equipment greater than 75 horsepower, to be zero-emissions or equipped with California Air Resources Board (CARB) Tier 4 Final compliant engines (as set forth in Section 2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 of the Code of Federal Regulations) or better by including this requirement in applicable bid documents, purchase orders, and contracts with successful contractors. An exemption from these requirements may be granted by the Town of Apple Valley in the event that the applicant documents that equipment with the required tier is not reasonably available and corresponding reductions in criteria air pollutant emissions are achieved from other construction equipment (for example, another piece of equipment can be replaced with a zero-emission equipment to offset the emissions associated with using a piece of equipment that does not meet Tier 4 Final standards). Before an exemption may be considered by the Town, the applicant shall be required to demonstrate that at least two construction fleet owners/operators in the San Bernadino Region were contacted and that those owners/operators confirmed Tier 4 Final or better equipment could not be located within the San Bernardino Region. To ensure that Tier 4 Final construction equipment or better would be used during the proposed Project's construction, the applicant shall include this requirement in applicable bid documents, purchase orders, and contracts. Successful contractors must demonstrate the ability to supply the compliant construction equipment for use prior to any ground-disturbing and construction activities.
- 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.

Operation

MM-AQ-3 The Project shall implement the following measures in order to reduce operational off-road equipment, stationary source, and on-road vehicle air pollutant emissions to the extent feasible:

- All cargo handling equipment (including yard trucks, hostlers, yard goats, pallet jacks, forklifts, and landscaping equipment) shall be zero-emission vehicles. Each building 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.
- All diesel-fueled emergency generators shall be equipped with California Air Resources Board (CARB) Tier 4 Final compliant engines (as set forth in Section 2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 of the Code of Federal Regulations) or

better by including this requirement in applicable bid documents, purchase orders, and contracts with successful contractors.

- Prior to tenant occupancy, the Project Applicant or successor in interest shall provide documentation to the Town of Apple Valley 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.
- 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 electric truck charging stations at such time this technology becomes commercially available.
- 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.
- Include contractual language in tenant lease agreements requiring that any facility operator shall:
  - For occupants with more than 250 employees, require the establishment of a transportation demand management program to reduce employee commute vehicle emissions;
  - Place legible, durable, weather-proof signs at truck access gates, loading docks, and truck parking areas that identify applicable 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 Town of Apple Valley shall conduct a site inspection to ensure that the signs are in place;
  - 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 CARB-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;
  - 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.

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 potentially significant cumulatively considerable net increase of criteria pollutants for which the Project region is non-attainment (VOCs and NO_x). MM-AQ-1 and MM-AQ-2 would be implemented, and Project impacts would be **less than significant with mitigation incorporated**.

Long-Term Operational Impacts

Operation of the Project would result in a potentially significant cumulatively considerable net increase of criteria pollutants for which the Project region is non-attainment (i.e., NO_X and PM_{10}). Implementation of MM-AQ-3 would reduce the Project's impacts; however impacts would remain **significant and unavoidable**.

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

Construction and operation of the Project would not expose sensitive receptors to substantial pollutant concentrations, including concentrations of CO emissions, toxic air contaminants, and spores of the *Coccidioides immitis* fungus (which can result in Valley Fever). Operation of the Project, however, would result in potentially significant cancer risk at the nearest residence. MM-AQ-3 would be implemented, and Project health risk impacts would be less than significant with mitigation incorporated. Finally, since the Project could also result in exceedances of MDAQMD significance thresholds for NO_x and PM_{10}, even after implementation of MM-AQ-3, the potential health effects associated with criteria air pollutants are conservatively considered **significant and unavoidable**.

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 discussed in Threshold B, construction of the Project would result in a less-than significant cumulative air quality impact with implementation of MM-AQ-1 and MM-AQ-2; however, despite implementation of MM-AQ-3, operational-source NO_X and PM_{10} emissions exceedances of applicable MDAQMD regional thresholds would be **significant and unavoidable**, and thus, cumulatively considerable overall.

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4.3 Biological Resources

This section describes the existing biological resources conditions of the Apple Valley 143 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:

- Apple Valley 143 Project Biological Resources Technical Report, prepared by Dudek in June 2023 (Appendix C)
- Apple Valley Project Jurisdictional Waters of the United States Assessment (Appendix A of Appendix C) prepared by Noreas in June 2023
- Apple Valley Project Jurisdictional Waters of the State (Appendix B of Appendix C) prepared by Noreas in June 2023

The Biological Resources Technical Report and Jurisdictional Waters Reports analyze the biological resources present within the approximately 258.3-acre Project, including the 144-acre project site and the 114.3 acres of off-site improvements (hereafter referred to as the off-site improvement areas), plus an approximate 100-foot buffer, resulting in the Biological Study Area (BSA), which encompasses 467.6 acres.

These studies were prepared in compliance with the California Environmental Quality Act (CEQA) and other applicable environmental regulations. Furthermore, the analysis within this section involved the review of existing biological resources; technical data; and applicable laws, regulations, and guidelines to adequately assess potential impacts to biological resources.

As discussed in detail in Chapter 3, Project Description of this EIR, the Project proposes the construction of three industrial/warehouse buildings and associated improvements, as well as roadway off-site improvements and a culvert improvement just south of the project site.

4.3.1 Existing Conditions

The following discussion summarizes the existing biological resources present within the BSA. A description of the existing vegetation communities, special-status species, and jurisdictional waters, including wetlands and wildlife corridors, are discussed below. Note that the Biological Technical Report and Jurisdictional Delineation Report analyzed the entire BSA (467.6 acres); however, the Project impact calculations and impact table (Table 4-3.2) in Section 4.3.4 of this Draft EIR only analyzes the Project footprint (258.3 acres) for direct impacts. The entire BSA was evaluated for indirect impacts.

4.3.1.1 Topography and Soils

The on-site portion of the BSA's surface elevation ranges between approximately 2,912 and 3,010 feet above mean sea level (amsl) and gently slopes up from the northwestern corner towards the southern boundary along Stoddard Wells Road. The off-site portion of the BSA's surface elevation range between 3,085 feet amsl at the eastern portion of Johnson Road and slopes gently to 2,980 feet amsl at the western portion of Stoddard Wells Road and continues sloping southwesterly to approximately 2,890 feet amsl at Falchion Road.

According to the USDA Natural Resource Conservation Service's Web Soil Survey (USDA 2022a), the BSA occurs within the San Bernardino County, Mojave River Area (CA671). The BSA consists of eight soil complexes: Cajon sand (2% to 9% slopes), Cajon-Arizo complex (2% to 15% slopes), Helendale-Bryman loamy sands (2% to 5% slopes), Mirage-Joshua complex (2% to 5% slopes), Nebona-Cuddeback complex (2% to 9% slopes), rock outcrop-Lithic Torriorthents complex (15% to 50% slopes), and Sparkhule-rock outcrop complex (15% to 50% slopes). These soil types are presented on Figure 4.3-1.

4.3.1.2 Vegetation Communities and Land Covers

Vegetation Communities and Land Uses

The BSA supports vegetation communities and land covers, as identified in Table 4.3-1 and Figure 4.3-2A-I. Vegetation communities and land uses mapped within the BSA are predominantly comprised of creosote bush scrub with lesser areas of Joshua tree woodland, rubber rabbitbrush scrub, as well as disturbed habitat and urban/developed areas.

Vegetation communities within the BSA were mapped following CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2018) and California Natural Community List (CDFW 2022d), also referred to as the Natural Communities List, based on the Manual of California Vegetation, second edition (Sawyer et al. 2009). These classification systems focus on a quantified, hierarchical approach that includes both floristic (plant species) and physiognomic (community structure and form) factors as currently observed (as opposed to predicting climax or successional stages). Vegetation communities and land covers were delineated to the vegetation alliance level and, where appropriate, the association level. Some modifications, such as the Preliminary Descriptions of the Terrestrial natural Communities of California (Holland 1986; Oberbauer et al. 2008), were incorporated to accommodate the lack of conformity of the observed communities to those included in these references.

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)[2]
Ericameria nauseosa	*Ericameria nauseosa*	Rubber rabbitbrush scrub	—	4.8	11.3	16.1
Larrea tridentata	*Larrea tridentata*	Creosote bush scrub	127.7	34.0	128.9	290.5
Yucca brevifolia	N/A	Joshua tree woodland*	10.7	—	0.2	10.9
N/A	N/A	Disturbed habitat	5.6	27.9	47.6	81.1
N/A	N/A	Urban/developed	—	47.7	21.3	69.0
		Total[2]	**144.0**	**114.3**	**209.2**	**467.6**

Notes: BSA = biological survey area; N/A = not applicable.

1 The spatial distribution of the vegetation communities and land covers are presented on Figure 4.3-2A-I, Biological Resources.

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 association, is recognized by the Natural Communities List, and the community includes 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).

Rubber rabbitbrush scrub occurs along Frontage Road South within the off-site BSA and is dominated by rubber rabbitbrush, with a lower cover of allscale (*Atriplex polycarpa*) in some isolated locales. The rubber rabbitbrush scrub alliance is ranked as S5 and therefore is not considered a sensitive biological resource by CDFW under CEQA (CDFW 2022d).

Creosote Bush Scrub

Creosote bush scrub, or *Larrea tridentata* association, is recognized by the Natural Communities List, and the communities include creosote bush (*Larrea tridentata*) as the dominant shrub, exceeding all other shrubs in cover, and if white bursage (*Ambrosia dumosa*) or brittlebush (*Encelia farinosa*) are present, their cover is less than three times the cover of creosote bush, of if white bursage is present, it is less than two times the cover of creosote bush. (CNPS 2022b). This community can also be referred to as “creosote bush flats.”

Creosote bush scrub composes the majority of the BSA. Creosote is the dominant shrub species with a lower cover of Nevada joint fir. Additionally, western Joshua trees (*Yucca brevifolia*) were scattered throughout the creosote bush scrub community within the BSA; however, western Joshua tree made up less than 1% absolute cover and therefore did not warrant its own community. Creosote bush scrub is ranked as S5 and therefore is not considered a sensitive biological resource by CDFW under CEQA (CDFW 2022d).

Joshua Tree Woodland

Joshua tree woodland, or *Yucca brevifolia* alliance, is recognized by the Natural Communities List, and the community includes western Joshua tree 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 the tree canopy (CNPS 2022b).

Joshua tree woodland occurs within the western portion of the on-site BSA, east of I-15. In addition, there are portions of the central on-site BSA where individual Joshua trees are located; however, these areas do not meet the minimum requirement of 1% cover and therefore were not mapped as Joshua tree woodland alliance. Within the on-site BSA, this community contains greater than 1% cover of western Joshua tree and included scattered creosote bush and Nevada joint fir. Joshua tree woodland alliance is ranked as S3.2 and is considered a sensitive biological resource by CDFW under CEQA (CDFW 2022d).

Disturbed Habitat

Although not recognized by the Natural Communities List (CDFW 2022d), 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. Disturbed habitat is not considered a sensitive biological resource by CDFW under CEQA (CDFW 2022d).

Within the BSA, disturbed habitat includes the existing dirt roads found within the site and generally along the western and southern boundaries of the on-site portion of the BSA, as well as bordering Stoddard Wells Road and Johnson Road. The roads within the on-site area are commonly used by utility workers or vehicles that need access within the site. Disturbed habitat also includes various dirt roads within the off-site portion of the BSA. Disturbed habitat is not considered a sensitive biological resource by CDFW under CEQA (CDFW 2022d).

Urban/Developed Land

Although not recognized by the Natural Communities List (CDFW 2022d), 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 including Stoddard Wells Road running east/west along the southern boundary and Johnson Road running east/west along the northern boundary of the BSA, as well as an I-15 frontage road, Falchion Road, and Apple Valley Road where off-site improvements are proposed. Urban/developed land is not considered a sensitive biological resource by CDFW under CEQA (CDFW 2022d).

4.3.1.3 Plants and Wildlife Observed

Biological field surveys, including biological reconnaissance surveys, 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 October 2022. All plant and wildlife species observed during the surveys were recorded.

Plants

A total of 98 species of native or naturalized plants, 84 native (86%) and 14 non-native (14%), were recorded within the BSA. A full list of plant species observed is provided in Appendix E, Plant Compendium of Appendix C (Biological Technical Report).

Wildlife

A total of 30 wildlife species, consisting of 29 native species (97%) and 1 non-native species (3%), were recorded within the BSA or vicinity during surveys (Appendix F 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, 16 special-status plant species were identified as potentially occurring within the region of the BSA, and 8 species were determined to have at least a moderate potential to occur within the BSA: desert cymopterus (*Cymopterus deserticola*), purple-nerve cymopterus (*Cymopterus multinervatus*), Mojave monkeyflower (*Diplacus mohavensis*), Barstow woolly sunflower (*Eriophyllum mohavense*), sagebrush loeflingia (*Loeflingia squarrosa* var*. artemisiarum*), short-joint beavertail (*Opuntia basilaris* var. *brachyclada*), Beaver Dam breadroot (*Pediomelum castoreum*), and western Joshua tree. Therefore, a focused survey for these species was conducted in the BSA on April 11 and April 12, 2022, as well as April 27, 2023, as discussed in 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 further below. No other listed or non-listed CRPR 1 or CRPR 2 plants were observed during the focused surveys. There were no additional 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), and the California Native Plant Society Inventory (CNPS; 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 71 western Joshua tree individuals were observed within the Joshua Tree Inventory Survey Area (on-site project site, off-site improvement areas, and associated 186-foot buffer) (Figure 4.3-2A-I). Of the 71 trees found within the Joshua Tree Inventory Survey Area, 29 western Joshua tree individuals are located within the project site and all off-site improvement areas, with the remaining 42 western Joshua tree individuals located within the associated 186-foot buffer. Further details on phenological data of the 71 western Joshua tree individuals observed is provided in Appendix D of Appendix C.

Desert Native Plants

In addition to western Joshua tree, a total of 26 desert native plant species were observed within the BSA during the focused desert native plant survey (Figure 4-3.2A-I). Specifically, 6 blue palo verde (*Parkinsonia florida*), 5 Wiggins' cholla (*Cylindropuntia echinocarpa*), 9 branched pencil cholla (*Cylindropuntia ramosissima*), 2 short-joint beavertail cactus, 1 honey mesquite (*Prosopis glandulosa*), and 3 Mojave yucca (*Yucca schidigera*) were observed.

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, 26 special-status wildlife species were reported in the CNDDB and USFWS databases as occurring in the vicinity of the BSA. Of these, two listed 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): desert tortoise (*Gopherus agassizii*) and Mohave ground squirrel (*Xerospermophilus mohavensis*). Additionally, three non-listed special-status wildlife species were determined to have a moderate potential to occur within the BSA: loggerhead shrike (*Lanius ludovicianus*), LeConte's thrasher (*Toxostoma lecontei*), and American badger (*Taxidea taxus*). Finally, two non-listed special-status wildlife species were observed within the BSA: burrowing owl (*Athene cunicularia*) and desert kit fox (*Vulpes macrotis arsipus*). Protocol surveys for desert tortoise and Mojave ground squirrel were negative. All of the above listed species are detailed in the following discussion.

Desert Tortoise

Desert tortoise is a federally and state-listed threatened species. The range of the Mohave population of the desert tortoise 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 the 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 that burrows do not collapse (USFWS 2008). Although populations of desert tortoise are not generally known to inhabit elevations much above 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).

To evaluate the impacts to desert tortoise, protocol surveys were conducted in accordance with the Pre-Project Field Survey Protocol for Potential Desert Tortoise Habitats section included in Preparing for Any Action That May Occur within the Range of the Mojave Desert Tortoise (*Gopherus agassizii*) (USFWS 2019). Biologists surveyed the site by walking approximately 10-meter-wide transects for 100% coverage of the BSA. A buffer survey was not conducted as there was no legal access to these areas. Desert tortoise was not observed during 2022 or 2023 focused protocol surveys; therefore, this species is not expected to occur within the BSA. The BSA contains suitable sandy soils and creosote scrub; however, the BSA is immediately adjacent to I-15 to the west and bound along the south and east by Stoddard Wells Road. The nearest CNDDB occurrence was from 2004 and is mapped approximately 0.7 miles north of the BSA (CDFW 2022c). Survey forms are included as Appendix I of Appendix C.

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 between 1,800 and 5,000 feet amsl.

Dipodomys Ecological Consulting biologists conducted initial visual surveys within the project site and off-site improvement areas for Mohave ground squirrel in March and November 2022, as well as April 2023 (Dipodomys Ecological Consulting 2022, 2023). The visual surveys were conducted by driving and walking throughout the project site, portions of the off-site improvement areas, to identify suitable habitat for Mohave ground squirrel, which is consistent with the methods described in the 2010 CDFW Mohave Ground Squirrel Survey Guidelines (CDFG 2010). Mohave ground squirrel was not observed during 2022 and 2023 protocol surveys. A habitat assessment for Mohave ground squirrel conducted over the off-site improvement areas determined that the species is not expected to occur due to low habitat suitability (i.e., highly disturbed, lack of connectivity to core populations, lack of plant species preferred for food) within this portion of the project and protocol surveys were not warranted within the off-site improvement areas.

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.

One burrowing owl was observed flushing from a burrow on March 17, 2022 (Figure 4.3-2A-I). No additional observations were detected during subsequent 2022 or 2023 surveys on the BSA. The BSA contains suitable open scrub habitat with small mammal burrow complexes that are at least 4 inches wide. The nearest CNDDB occurrence record is approximately 2.5 miles south of the BSA and is from 2005 (CDFW 2022c).

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 habitat for loggerhead shrike is 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.

LeConte's Thrasher

LeConte's thrasher is a USFWS Bird of Conservation Concern and a California Species of Special Concern. LeConte's thrasher is found from below sea level up to 1,600 meters amsl in southern California deserts in southern Mono County to the Mexican border (Dobkin and Granholm 2005; Sheppard 1996).

Preferred habitat for LeConte's thrasher is desert scrub, alkali desert scrub, and desert succulent shrub habitats; LeConte's thrasher also occurs in western Joshua tree habitat with scattered shrubs (Dobkin and Granholm 2005). This species prefers gently rolling to well-drained slopes occupied by saltbush and joint fir (Ephedra sp.) with bare ground or sparse grass (Fitton 2008). Much of the LeConte's thrasher's diet consists of insects found within leaf litter under desert shrubs; therefore, habitat must contain a sufficient ground cover (Sheppard 1996).

LeConte's thrasher has moderate potential to occur within the BSA.

American Badger

American badger is a California Species of Special Concern. American badgers prefer open scrub or grassy areas (NPS 2015; USGS 2020). The BSA includes Joshua tree woodland and creosote bush flats with friable soils that could support this species.

American badger has a moderate potential to occur within the BSA.

Desert Kit Fox

Desert kit fox is considered a "fur-bearing mammal," protected from take under the 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. The desert kit fox lives in the open desert, on creosote bush flats, and amongst the sand dunes (NPS 2015; USGS 2020).

Desert kit fox was observed within the on-site BSA via a camera trap deployed for the Mohave ground squirrel focused surveys. The BSA provides suitable creosote bush flats habitat for this species, and other suitable desert kit dens were observed within the BSA (Figure 4.3-2A-I).

4.3.1.6 Jurisdictional Resources

The data presented in Appendix A of Appendix C (NOREAS 2023a) asserts that there are no waters of the United States within the project site and off-site improvement areas. Furthermore, there is no evidence that water leaves the project

site, or the off-site improvement areas, and enters Bell Mountain Wash on a relatively permanent - or continuously flowing basis. This assessment is also based on the fact that no signatures with an Ordinary High-Water Mark (OHWM) within the project site or off-site improvement areas reach the Mojave River, which, although not an interstate water nor a tributary to a Traditionally Navigable Water (TNW), is currently being regulated by the USACE. The project site and off-site improvement areas are not tributary to a TNW, nor an Interstate Water. Therefore, no signatures were identified within the project site and off-site improvement areas that are subject to federal Clean Water Act jurisdiction.

The data presented in Appendix B of Appendix C (NOREAS 2023b) is intended to delineate the extent of California Department of Fish and Wildlife (CDFW) jurisdiction - pursuant to Section 1600 (et seq.) of the California Fish and Game Code (CFG Code) within the project site and off-site improvement areas. To that end, there are no lake, rivers, or streambeds subject to regulation under Section 1600 (et seq.) of the CFG Code within the project site. This rationale is based on the fact that the erosional signatures observed within the project site do not possess resources that support fish and aquatic wildlife as described in the CFG Code. The following summarizes why the project site lacks resources that constitutes a stream for the purposes of implementing and enforcing CFG Code Sections 1600 (et seq.):

- The project site does not possess any creeks and rivers, as defined in Title 14, CCR, Section 1.72. As there is no riparian vegetation or aquatic resources within the project site that supports fish or other aquatic life; nor does the project site include watercourses having a surface or subsurface flow that supports - or has supported, riparian vegetation.
- There are no intermittent streams, blue-lines, swales, or erosional features that support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife within the project site.
- There is no observable difference in the vegetation composition, density, or vigor between the project site's erosional signatures, and the adjacent lands.
- There are no features within the project site – erosional or otherwise, that have a surface connection to Bell Mountain Wash, or the Mojave River. All soil types mapped within the BSA are well drained, and none have a hydric soil rating.
- The features detected within the project site are erosional signatures and rills, characterized by very small depressions, or the size of motorcycle tire ruts. These features have small, negligible, localized watershed areas, and they do not possess aquatic resources or other attributes that would distinguish them functionally - or biologically, from upland habitats.
- There is no aquatic or riparian vegetation, aquatic animals (i.e., fish, amphibians, reptiles and invertebrates), or terrestrial species which derive benefits from a stream system within the project site.
- There are no discernable banks, rack lines, shelving, or "in-stream" features within the project site.
- The project site is not within the 100-year flood plain.
- The native vegetation occurring naturally along the project site's erosional signatures, rills and tire ruts is not the result of increased water availability, or nutrients. Nor does it create an "edge" or ecotone between vegetation types that require water on one side, and adjacent upland habitat on the other; nor are there "natural banks" or evidence of confined flows that persist within the project site. No streambed indicators are present within the project site.
- Signatures observed within the project site meet the general definition and description for ruts and rills, and other erosional features characterized by low volume, infrequent, or short duration flow.

In conclusion, there is also no evidence that water leaves the project site and enters into larger systems that supports aquatic fish and wildlife, thus rendering the project site isolated, lacking aquatic fish and wildlife, and lacking aquatic or riparian vegetation/habitat; and not subject to CFG Code Sections 1600 (et seq.) jurisdiction.

Nonetheless, the off-site improvement areas - at six (6) specific locales, include non-wetland, ephemeral dry desert washes that total 404 linear feet. These six distinct features associated with the off-site improvement areas, have discernable bank lines with topographic relief, connectivity with Bell Mountain Wash, and subsequently to the Mojave River. As a result, it has been determined that the six features within the off-site improvement areas consist of 0.13-acres of ephemeral streambeds subject to regulation under Section 1600 (et seq.) of the CFG Code (Appendix B of Appendix C, NOREAS 2023b) (Figure 4.3-3A-K Aquatic Resources Delineation, Waters of the State).

In this instance, the limits of the Regional Water Boards jurisdiction as it applies to the Porter-Cologne Act (California Water Code section 13000 et seq.) is coincident with the extent of CDFW jurisdiction - pursuant to Section 1600 (et seq.) of the CFG Code within the off-site improvement areas (NOREAS 2023c).

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 BSA is not mapped as an essential connectivity area or natural landscape block; however, it is located approximately 1.8 miles southwest of an essential connectivity area and approximately 3.6 miles northeast of an essential connectivity area (CDFW 2022b). Additionally, the BSA is mapped as an Area of Conservation Emphasis, Rank 3 (CDFW 2022c).

According to CDFW (2019), Rank 3 is defined as:

> [O]ther areas that have been identified as having connectivity importance, but have not been identified as channelized areas, species corridors, or habitat linkages at this time. This may change with future changes in surrounding land use or regional specific information. Hexagons included in this category include areas mapped as “intensified” in the TNC Omniscape study, core habitat areas, and hexagons on the periphery of mapped habitat linkages when not included in the categories above [i.e., Rank 4 and Rank 5].

Additionally, due to the undeveloped land on the BSA, there are opportunities for wildlife to move across the site when migrating through the region. However, the BSA does not currently function as a corridor or linkage between two larger habitat blocks. Although the BSA may function as local dispersal habitat for wildlife movement and/or foraging/hunting, the project would not create a significant impediment to wildlife movement that would warrant a wildlife corridor study.

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 the 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) (16 USC 703 et seq.), as amended, prohibits the intentional take of any migratory bird or any part, nest, or eggs of any such bird. Under MBTA, "take" is defined as pursuing, hunting, shooting, capturing, collecting, or killing, or attempting to do so. In December 2017, Department of the Interior Principal Deputy Solicitor Jorjani issued a memorandum (M-37050) that interprets MBTA's "take" prohibition to apply only to affirmative actions that have as their purpose the taking or killing of migratory birds, their nests, or their eggs. Unintentional or accidental take is not prohibited. 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). The Executive Order 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) is the major federal legislation governing water quality, providing guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Section 401 of the CWA requires an applicant for a federal license or permit that may result in a discharge of pollutants into waters of the United States to obtain state certification, thereby ensuring that the discharge will comply with provisions of the CWA. The State Water Resources Control Board (SWRCB) and regional water quality control boards (RWQCBs) administer the 401 certification program in California. Section 402 of the CWA establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the United States. Section 404 establishes a permit program administered by the U.S. Army Corps of Engineers (USACE) that regulates the discharge of dredged or fill material into waters of the United States, including wetlands. USACE implementing regulations are found in 33 Code of Federal Regulations (CFR) Parts 320 to 332. Guidelines for implementation are referred to as the Section 404(b)(1) Guidelines, which were developed by the U.S. Environmental Protection Agency

in conjunction with USACE (40 CFR 230). The guidelines allow the discharge of dredged or fill material into the aquatic ecosystem only if there is no practicable alternative that would have less adverse impacts.

2023 Waters of the U.S. Rule The current applicability of the CWA, in accordance with the "2023 WoUS Rule," must be harmonized with the Supreme Court of the United Stated (SCOTUS) rulings on *United States v. Riverside Bayview* (BAYVIEW), *Solid Waste Agency of Northern Cook County v. USACE* (SWANCC), *Rapanos v. United States* (RAPANOS), and *Sackett v. Environmental Protection Agency* (SACKETT) rulings. To that end, the 2023 rule establishes a definition of "WoUS" that includes three parts:

- Paragraph (a) jurisdictional waters;
- Paragraph (b) exclusions; and
- Paragraph (c) definitions.

The 2023 Rule defines the following WoUS. There are no changes from the Pre-2015 Waters Rule in the definitions of a(1), a(2), and a(4) Waters. However, there are nuance changes to a(3) Waters, and there substantial changes to identifying a(5) Waters. In general, the 2023 Rule does not consider "isolated" as described in SWANCC, nor does it consider a need to have ties to interstate commerce (BAYVIEW). This rule relies entirely on the definitions below for TNWs, and their impoundment and tributaries which are established by having a "Significant Nexus" by contributing to the biological, chemical, or physical characteristics of a TNW.

During the first two months of the 2023 Rule implementation, several court cases have enjoined the use of the rule and subsequently reverted to the Pre-2015 Rule. Currently 27 States are using the Pre-2015 Rule. Nonetheless, California has not been enjoined and continues to fall under jurisdiction of the 2023 Rule. As such, on 26 May 2023 SCOTUS ruled on SACKETT. In general, this ruling found that the CWA's use of "waters" encompasses "only those relatively permanent, standing or continuously flowing bodies of water 'forming geographic[al] features' that are described in ordinary parlance as 'streams, oceans, rivers, and lakes.'" 547 U.S., at 739 (quoting Webster's New International Dictionary 2882 (2d ed. 1954) (Webster's Second); original alterations omitted). The court appears to have struck down the use of the Significant Nexus Analysis, use of "Similarly Situated Waters" being combined to have a biological, chemical, or biological nexus to a TNW.

Further, the court determined that WoUS extent only to tributaries of TNWs that have Relatively Permanent Flows, such that they flow or are inundated unless there is unusually prolonged drought, or the ebb of a tide.

On 26 May 2023, the USACE issued the following paragraph: "The U.S. Environmental Protection Agency and USACE (the agencies) are in receipt of SCOTUS's 25 May 2023 decision in SACKETT. In light of this decision, the agencies will interpret the phrase "WoUS" consistent with SCOTUS's decision in SACKETT. The agencies continue to review the decision to determine next steps." Based on the fact that the USACE states that they will interpret WoUS consistent with the Court Ruling," the likely result will be the changes identified below. However, until formal guidance from the U.S. Environmental Protection Agency and USACE is received, the results of how this decision will affect projects is speculative. All actions will need to be evaluated on a case-by-case basis using the guidance available, at the time.

Below are the 2023 WoUS categories, and the likely effect the SACKETT may have on their jurisdiction.

2023 WoUS Rule Definitions

a(1) Waters - Traditional navigable waters, the territorial seas, and interstate waters. Waters which are currently used or were used in the part 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.

These Waters remained unchanged from the "Pre-2015 WoUS Rule" and do not appear to conflict with the WoUS definition from SACKETT.

- ✓ Interstate Waters have been Clarified in the Preamble. They include Lake, ponds, and wetlands crossing state boundaries. These waters are jurisdictional in their entirety.
- ✓ Tributaries crossing interstate boundaries are jurisdictional for those portions of the tributary - of the same stream order, that crosses the state line.

a(2) Impoundments - Waters affected by discrete barriers, like natural or human-made barriers. This applies to both impoundments of previously jurisdictional waters, and impoundments that now qualify at the time of assessment.

These Waters remained unchanged from the "Pre-2015 WoUS Rule" and do not appear to conflict with the WoUS definition from SACKETT.

- ✓ This does not include other (a)5 Waters that become impounded, though they may be jurisdictional under different criteria.
- ✓ Paragraph (a)(2) of the final rule includes impoundments of "WoUS." Impoundments are distinguishable from natural lakes and ponds because they are created by discrete structures like dams or levees that typically have the effect of raising the water surface elevation, creating, or expanding the area of open water, or both.
- ✓ Impoundments can be natural (like beaver ponds) or artificial (like reservoirs). The agencies consider paragraph (a)(2) impoundments to include:

(1) impoundments created by impounding one of the "WoUS" that was jurisdictional under this rule's definition at the time the impoundment was created; and

(2) impoundments of waters that at the time of assessment meet the definition of "WoUS" under paragraph (a)(1), (a)(3), or (a)(4) of this rule.

(a)(3) Tributaries - Tributaries include natural, man-altered, or man-made water bodies that flow directly or indirectly into an (a)(1) Water, or an (a)(2) Impoundment. Jurisdictional tributaries must meet the relatively permanent standard (i.e., have flowing or standing water year-round or continuously during certain times of the year [RPW], or have a significant nexus [tributaries that alone - or in combination, significantly affect]) to an (a)(1) Water. For tributaries, interstate waters include the portion of the tributary - of the same stream order, as the point that crosses or serves as a state line.

SACKETT decision appears to limit the (a)3 Tributaries to only Permanent or Relatively Permanent Waters by excluding the vagaries of significant nexus, and they would need to be evaluated individually and not in conjunction with similarly situated Waters.

- ✓ Tributaries can include rivers, streams, lakes, ponds, and impoundments - as well as ditches and canals. Not all tributaries are jurisdictional under the final rule.
- ✓ To be jurisdictional, tributaries must meet either the relatively permanent standard, or the significant nexus standard. The final rule preamble explains that relatively permanent waters include tributaries that have flowing or standing water year-round - or continuously during certain times of year. Relatively permanent waters do not include tributaries with flowing - or standing water, for only a short duration in direct response to precipitation.

(a)(4) Adjacent Wetlands - No change to the definition of "wetlands," or "adjacent" to an (a)(1) Waters.

SACKETT has greatly affected what qualifies as adjacent. It appears to have constrained adjacent to only an unbroken surface connection.

- ✓ Unbroken surface or shallow subsurface connection - to a jurisdictional water, even though non-jurisdictional features.
- ✓ Are close enough to have significant water quality and aquatic ecosystem effects, alone - or in combination with, other jurisdictional tributaries and adjacent wetlands. It appears the Sackett case would eliminate wetlands that rely on a significant nexus analysis or only have a ground water connection to a WoUS

(a)(5) Waters are not identified in (a)(1) through (4) - Intrastate lakes and ponds, streams, and wetlands not identified as part of earlier qualifications that meet the two tests below. (a)(5) Waters not identified in (a)(1) through (4). It appears the Sackett decision has removed (a)5ii Waters from jurisdiction.

- ✓ Intrastate lakes and ponds, streams, and wetlands not identified as part of earlier qualifications that meet the two tests below.
  - Relatively Permanent Standard - Flowing or standing water year-round, or continuously during certain times of year, indirectly or directly to traditional navigable waterways, territorial seas, interstate waters, or impoundments, OR to relatively permanent tributaries to those waters.
  - Significant Nexus Standard - Feature can "significantly affect" biological, chemical, or physical characteristics of traditional navigable waterways, territorial seas, and interstate waters. Unlike for tributaries and adjacent wetlands, this must be assessed on an individual basis.

***SACKETT appears to remove these intermittent and ephemeral signatures jurisdiction under the CWA*.**

Summary of probable changes in CWA jurisdiction resulting from the SCOTUS Rulings:

Although the 2023 WoUS Rule includes the (a)(3) tributaries, (a)(4) Adjacent Wetlands, and a(5) Waters - outside the need to be used for interstate commerce, required post BAYVIEW. The final rule preamble notes that the agencies intend to address such waters in a future action.

The court concluded that the RAPANOS plurality[1] was correct: the CWA's use of "waters" encompasses "only those relatively permanent, standing or continuously flowing bodies of water 'forming geographic[al] features' that are described in ordinary parlance as 'streams, oceans, rivers, and lakes," and utilize several dictionary definitions for "waters" as "a. flowing water, or water moving in waves: The river's mighty waters. b. the sea or seas bordering a particular country or continent or located in a particular part of the world." They found in it difficult to reconcile these definitions with classifying "lands," wet or otherwise, as "waters" (RAPANOS plurality opinion) (BAYVIEW).

The SACKETT summation held that the "CWA extends to only those wetlands that are "as a practical matter indistinguishable from WoUS." This requires the party asserting jurisdiction over adjacent wetlands to establish "first, that the adjacent [body of water constitutes] …. 'water[s] of the United States' (i.e., a relatively permanent body of water).

State

California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game Code, Section 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 the project applicant from 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 implementation, and monitoring of mitigation measures.

On July 1, 2023, The Western Joshua Tree Conservation Act was passed. While western Joshua tree is a candidate species, take for western Joshua tree can be received through payment of pre-determined mitigation fees.

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 CDFW's responsibility 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.

[1] RAPANOS - Four Justices concluded that the CWA's coverage did not extend beyond two categories: first, certain relatively permanent bodies of water connected to traditional interstate navigable waters and, second, wetlands with such a close physical connection to those waters that they were "as a practical matter indistinguishable from WoUS."

Section 5901

Section 5901 makes it unlawful to construct or maintain any device or contrivance that prevents, impedes, or tends to prevent or impede, the passing of fish up and down stream. Fish are defined in Section 45 as a wild fish, mollusk, crustacean, invertebrate, amphibian, or part, spawn, or ovum of any of those animals.

Section 5937

Section 5937 requires that the owner of any dam shall allow sufficient water at all times to pass through a fishway, or in the absence of a fishway, allow sufficient water to pass over, around, or through the dam to keep in good condition any fish that may be planted or exist below the dam. During the minimum flow of water in any river or stream, permission may be granted by the department to the owner of any dam to allow sufficient water to pass through a culvert, waste gate, over, or around the dam to keep in good condition any fish that may be planted or exist below the dam, when, in the judgment of the department, it is impracticable or detrimental to the owner to pass the water through the fishway.

Section 1600–1616

Sections 1600 to 1616 of the California Fish and Game Code are outlined below.

1600. The Legislature finds and declares that the protection and conservation of the fish and wildlife resources of this state are of utmost public interest. Fish and wildlife are the property of the people and provide a major contribution to the economy of the state, as well as providing a significant part of the people's food supply; therefore their conservation is a proper responsibility of the state. This chapter is enacted to provide conservation for these resources.

1601. The following definitions apply to this chapter:

(a) "Agreement" means a lake or streambed alteration agreement.
(b) "Day" means calendar day.
(c) "Emergency" has the same definition as in Section 21060.3 of the Public Resources Code.
(d) "Entity" means any person, state or local governmental agency, or public utility that is subject to this chapter.

1602. (a) An entity may not 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, or 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, unless all of the following occur:

(1) The department receives written notification regarding the activity in the manner prescribed by the department. The notification shall include, but is not limited to, all of the following:
    (A) A detailed description of the project's location and a map.
    (B) The name, if any, of the river, stream, or lake affected.
    (C) A detailed project description, including, but not limited to, construction plans and drawings, if applicable.
    (D) A copy of any document prepared pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code.
    (E) A copy of any other applicable local, state, or federal permit or agreement already issued.

(F) Any other information required by the department.

(2) The department determines the notification is complete in accordance with Chapter 4.5 (commencing with Section 65920) of Division 1 of Title 7 of the Government Code, irrespective of whether the activity constitutes a development project for the purposes of that chapter.

(3) The entity pays the applicable fees, pursuant to Section 1609.

(4) One of the following occurs:

(A)

(i) The department informs the entity, in writing, that the activity will not substantially adversely affect an existing fish or wildlife resource, and that the entity may commence the activity without an agreement, if the entity conducts the activity as described in the notification, including any measures in the notification that are intended to protect fish and wildlife resources.

(ii) Each region of the department shall log the notifications of activities where no agreement is required. The log shall list the date the notification was received by the department, a brief description of the proposed activity, and the location of the activity. Each item shall remain on the log for one year. Upon written request by any person, a regional office shall send the log to that person monthly for one year. A request made pursuant to this clause may be renewed annually.

(B) The department determines that the activity may substantially adversely affect an existing fish or wildlife resource and issues a final agreement to the entity that includes reasonable measures necessary to protect the resource, and the entity conducts the activity in accordance with the agreement.

(C) A panel of arbitrators issues a final agreement to the entity in accordance with subdivision (b) of Section 1603, and the entity conducts the activity in accordance with the agreement.

(D) The department does not issue a draft agreement to the entity within 60 days from the date notification is complete, and the entity conducts the activity as described in the notification, including any measures in the notification that are intended to protect fish and wildlife resources.

(b) (1) If an activity involves the routine maintenance and operation of water supply, drainage, flood control, or waste treatment and disposal facilities, notice to and agreement with the department shall not be required after the initial notification and agreement, unless the department determines either of the following:

(A) The work described in the agreement has substantially changed.

(B) Conditions affecting fish and wildlife resources have substantially changed, and those resources are adversely affected by the activity conducted under the agreement.

(2) This subdivision applies only if notice to, and agreement with, the department was attained prior to January 1, 1977, and the department has been provided a copy of the agreement or other proof of the existence of the agreement that satisfies the department, if requested.

(c) It is unlawful for any person to violate this chapter.

1603. (a) After the notification is complete, the department shall determine whether the activity may substantially adversely affect an existing fish and wildlife resource. If the department determines that the activity may have that effect, the department shall provide a draft agreement to the entity within 60 days after the notification is complete. The draft agreement shall describe the fish and wildlife resources that the department has determined the activity may substantially adversely affect and include measures to protect those resources. The department's description of the affected resources shall be specific and detailed, and the department shall make available, upon request,

the information upon which its determination of substantial adverse effect is based. Within 30 days of the date of receipt of the draft agreement, the entity shall notify the department whether the measures to protect fish and wildlife resources in that draft agreement are acceptable. If the department's measures are not acceptable, the entity shall so notify the department in writing and specify the measures that are not acceptable. Upon written request, the department shall meet with the entity within 14 days of the date the department receives the request for the purpose of resolving any disagreement regarding those measures. If the entity fails to respond, in writing, within 90 days of receiving the draft agreement, the department may withdraw that agreement, and require the entity to resubmit a notification to the department before commencing the activity.

(b) If mutual agreement is not reached at any meeting held pursuant to subdivision (a), the entity may request, in writing, the appointment of a panel of arbitrators to resolve the disagreement. A panel of arbitrators shall be appointed within 14 days of receipt of the written request. The panel of arbitrators shall be comprised of three persons, as follows: one representative selected by the department; one representative selected by the affected entity; and a third person mutually agreed upon by the department and the entity, who shall serve as the panel chair. If the department and the entity cannot agree on the third person within that 14-day period, the third person shall be appointed in the manner provided by Section 1281.6 of the Code of Civil Procedure. The third person shall have scientific expertise relevant to the fish and wildlife resources that may be substantially adversely affected by the activity proposed by the entity and to the measures proposed by the department to protect those resources. The authority of the panel of arbitrators is limited to resolving disagreements regarding the measures specified in subdivision (a), and subdivisions (b) and (g) of Section 1605, and, in the case of an extension, whether or not the agreement needs to be modified to protect fish and wildlife resources. Any decision by the panel of arbitrators shall be issued within 14 days from the date the panel was established, shall be binding on the department and the affected entity, shall be based on the best scientific information reasonably available at the time of the arbitration, and, except for a decision to extend an agreement without modification, shall be made in the form of a final agreement. The final agreement issued by the panel shall also include, without modification, all measures that were not subject to arbitration. Each party shall pay the expenses of their selected representative and pay one-half the expenses of the third person.

1604. Any party affected by a decision made by an arbitration panel pursuant to this chapter may petition a court of competent jurisdiction for confirmation, correction, or vacation of the decision in accordance with Chapter 4 (commencing with Section 1285) of Title 9 of Part 3 of the Code of Civil Procedure.

1605. (a) (1) Except as otherwise provided in this section, the term of an agreement shall not exceed five years.

(2) Notwithstanding paragraph (1), after the agreement expires, the entity shall remain responsible for implementing any mitigation or other measures specified in the agreement to protect fish and wildlife resources.

(b) Any entity may request one extension of a previously-approved agreement, if the entity requests the extension prior to the expiration of its original term. The department shall grant the extension unless it determines that the agreement requires modification because the measures contained in the agreement no longer protect the fish and wildlife resources that the activity may substantially adversely affect. In the event the department makes that determination, the department shall propose measures intended to protect those resources.

(c) If the entity disagrees with the department's determination that the agreement requires modification to protect fish and wildlife resources or with the measures proposed by the department, the disagreement shall be resolved pursuant to the procedures described in subdivision (b) of Section 1603.

(d) The department may not extend an agreement for more than five years.

(e) (1) An original agreement shall remain in effect until the department grants the extension request, or new measures are imposed to protect fish and wildlife resources by agreement or through the arbitration process.

(2) Notwithstanding paragraph (1), an original agreement may not remain in effect for more than one year after its expiration date.

(f) If the entity fails to submit a request to extend an agreement prior to its expiration, the entity shall submit a new notification before commencing or continuing the activity covered by the agreement.

(g) Notwithstanding paragraph (1) of subdivision (a), the department may issue an agreement, that otherwise meets the requirements of this chapter, for a term longer than five years if the following conditions are satisfied:

(1) The information the entity provides to the department in its notification meets the requirements of paragraph (1) of subdivision (a) of Section 1602.

(2) The entity agrees to provide a status report to the department every four years. The status report shall be delivered to the department no later than 90 days prior to the end of each four-year period, and shall include all of the following information:

(A) A copy of the original agreement.

(B) The status of the activity covered by the agreement.

(C) An evaluation of the success or failure of the measures in the agreement to protect the fish and wildlife resources that the activity may substantially adversely affect.

(D) A discussion of any factors that could increase the predicted adverse impacts on fish and wildlife resources, and a description of the resources that may be adversely affected.

(3) The department shall review the four-year status report, and conduct an onsite inspection to confirm that the entity is in compliance with the agreement and that the measures in the agreement continue to protect the fish and wildlife resources. If the department determines that the measures in the agreement no longer protect the fish and wildlife resources that are being substantially adversely affected by the activity, the department, in consultation with the entity, and within 45 days of receipt of the report, shall impose one or more new measures to protect the fish and wildlife resources affected by the activity. If requested to do so by the entity, the department shall make available the information upon which it determined the agreement no longer protects the affected fish and wildlife resources. If the entity disagrees with one or more of the new measures, within seven days of receiving the new measures, it shall notify the department, in writing, of the disagreement. The entity and the department shall consult regarding the disagreement. The consultation shall be completed within seven days after the department receives the entity's notice of disagreement. If the department and entity fail to reach agreement, the entity may request, in writing, the appointment of a panel of arbitrators to resolve the disagreement. The panel of arbitrators shall be appointed within 14 days of the completed consultation. The panel of arbitrators shall issue a decision within 14 days of the date it is established.

All other provisions of subdivision (b) of Section 1603 regarding the panel shall apply to any arbitration panel established in accordance with this subdivision. If the entity fails to provide timely status reports as required by this subdivision, the department may suspend or revoke the agreement.

(4) The agreement shall authorize department employees to conduct onsite inspections relevant to the agreement, upon reasonable notice. Nothing in this section limits the authority of department employees to inspect private or public sites.

(5) Except as provided in paragraph (3), subparagraph (D) of paragraph (4) of subdivision (a) of Section 1602 and the time periods to process agreements specified in this chapter do not apply to agreements issued pursuant to this section.

(h) Each region of the department shall log the notifications of activities for which a long-term agreement is being considered pursuant to subdivision (g). The log shall list the date the notification was received by the department, a brief description of the proposed activity, and the location of the activity. Each item shall remain on the log for one year. Upon written request by any person, a regional office shall send the log to that person monthly for one year. A request made pursuant to this paragraph may be renewed annually.

1606. The department shall not condition the issuance of an agreement on the receipt of another local, state, or federal permit.

1607. Any time period prescribed in this chapter may be extended by mutual agreement.

1608. The department shall provide any entity that submits a notification pursuant to Section 1602 with all of the following information:

(a) The time period for review of the notification.
(b) An explanation of the entity's right to object to any measures proposed by the department.
(c) The time period within which objections may be made in writing to the department.
(d) The time period within which the department is required to respond, in writing, to the entity's objections.
(e) An explanation of the right of the entity to arbitrate any measures in a draft agreement.
(f) The procedures and statutory timelines for arbitration, including, but not limited to, information about the payment requirements for arbitrator fees.
(g) The current schedule of fees to obtain an agreement.

1609. (a) The director may establish a graduated schedule of fees to be charged to any entity subject to this chapter. The fees charged shall be established in an amount necessary to pay the total costs incurred by the department in administering and enforcing this chapter, including, but not limited to, preparing and submitting agreements and conducting inspections. The department may adjust the fees pursuant to Section 713. Fees received pursuant to this section shall be deposited in the Fish and Game Preservation Fund.

(b) (1) The fee schedule established pursuant to subdivision (a) may not impose a fee that exceeds five thousand dollars ($5,000) for any agreement.

(2) The fee limitation described in paragraph (1) does not apply to any agreement issued pursuant to subdivision (g) of Section 1605.

1610. (a) Except as provided in subdivision (b), this chapter does not apply to any of the following:

(1) Immediate emergency work necessary to protect life or property.
(2) Immediate emergency repairs to public service facilities necessary to maintain service as a result of a disaster in an area in which a state of emergency has been proclaimed by the Governor pursuant to Chapter 7 (commencing with Section 8550) of Division 1 of Title 2 of the Government Code.

(3) Emergency projects undertaken, carried out, or approved by a state or local governmental agency to maintain, repair, or restore an existing highway, as defined in Section 360 of the Vehicle Code, within the existing right-of-way of the highway, that has been damaged as a result of fire, flood, storm, earthquake, land subsidence, gradual earth movement, or landslide, within one year of the damage. Work needed in the vicinity above and below a highway may be conducted outside of the existing right-of-way if it is needed to stop ongoing or recurring mudslides, landslides, or erosion that pose an immediate threat to the highway, or to restore those roadways damaged by mudslides, landslides, or erosion to their predamage condition and functionality. This paragraph does not exempt from this chapter any project undertaken, carried out, or approved by a state or local governmental agency to expand or widen a highway damaged by fire, flood, storm, earthquake, land subsidence, gradual earth movement, or landslide. The exception provided in this paragraph does not apply to a highway designated as an official state scenic highway pursuant to Section 262 of the Streets and Highways Code.

(b) The entity performing the emergency work described in subdivision (a) shall notify the department of the work, in writing, within 14 days of beginning the work. Any work described in the emergency notification that does not meet the criteria for the emergency work described in subdivision (a) is a violation of this chapter if the entity did not first notify the department in accordance with Section 1602.

1611. (a) An entity that submits a timber harvesting plan in accordance with Section 4581 of the Public Resources Code or directly to the department is deemed to have given the notification required by Section 1602, as long as the following information is included in the plan:

(1) The volume, type, and equipment to be used in removing or displacing any one or combination of soil, sand, gravel, or boulders.
(2) The volume of water, intended use, and equipment to be used in any water diversion or impoundment, if applicable.
(3) The equipment to be used in road or bridge construction.
(4) The type and density of vegetation to be affected and an estimate of the area involved.
(5) A diagram or sketch of the location of the operation that clearly indicates the stream or other water and access from a named public road. Locked gates shall be indicated and the compass direction shall be shown.
(6) A description of the period of time in which operations will be carried out.

(b) Notwithstanding subdivision (a), the department is not required to determine whether the notification is complete or otherwise process the notification until the timber harvesting plan and the proper notification fee have both been received by the department.

(c) Nothing in this section requires the department to issue an agreement fewer than 60 days from the date the notification is complete.

(d) The date on which the term of an agreement issued pursuant to this section begins shall be the date timber operations first commence, unless the agreement specifies a later beginning date.

1612. The department may suspend or revoke an agreement at any time if it determines that an entity is not in compliance with the terms of the agreement or fails to provide timely status reports as required by subdivision (g) of Section 1605. The department shall adopt regulations establishing the procedure for suspension or revocation of an agreement. The procedure shall require the department to provide to the entity a written notice that explains

the basis for a suspension or revocation, and to provide the entity with an opportunity to correct any deficiency before the department suspends or revokes the agreement.

1613. If after receiving a notification, but before the department executes a final agreement, the director of the department informs the entity, in writing, that the activity described in the notification, or any activity or conduct by the entity directly related thereto, violates any provision of this code or the regulations that implement the code, the department may suspend processing the notification and subparagraph (D) of paragraph (4) of subdivision (a) of Section 1602 and the timelines specified in Section 1603 do not apply. This section ceases to apply if any of the following occurs:

(a) The department determines that the violation has been remedied.

(b) Legal action to prosecute the violation is not filed within the applicable statute of limitations.

(c) Legal action to prosecute the violation has been terminated.

1614. If the entity is required to perform work subject to this chapter pursuant to a court or administrative order or notice, the entity shall include the measures proposed by the department to protect fish and wildlife resources in the agreement. Those measures are not subject to arbitration.

1615. (a) A person who violates this chapter is subject to a civil penalty of not more than twentyfive thousand dollars ($25,000) for each violation.

(b) The civil penalty imposed pursuant to subdivision (a) is separate from, and in addition to, any other civil penalty imposed pursuant to this section or any other provision of the law.

(c) In determining the amount of any civil penalty imposed pursuant to this section, the court shall take into consideration all relevant circumstances, including, but not limited to, the nature, circumstance, extent, and gravity of the violation. In making this determination, the court may consider the degree of toxicity and volume of the discharge, the extent of harm caused by the violation, whether the effects of the violation may be reversed or mitigated, and, with respect to the defendant, the ability to pay, the effect of any civil penalty on the ability to continue in business, any voluntary cleanup efforts undertaken, any prior history of violations, the gravity of the behavior, the economic benefit, if any, resulting from the violation, and any other matters the court determines that justice may require.

(d) Every civil action brought under this section shall be brought by the Attorney General upon complaint by the department, or by the district attorney or city attorney in the name of the people of the State of California, and any actions relating to the same violation may be joined or consolidated.

(e) (1) In any civil action brought pursuant to this chapter in which a temporary restraining order, preliminary injunction, or permanent injunction is sought, it is not necessary to allege or prove at any stage of the proceeding any of the following:

(A) That irreparable damage will occur if the temporary restraining order, preliminary injunction, or permanent injunction is not issued.

(B) That the remedy at law is inadequate.

(2) The court shall issue a temporary restraining order, preliminary injunction, or permanent injunction in a civil action brought pursuant to this chapter without the allegations and without the proof specified in paragraph (1).

(f) All civil penalties collected pursuant to this section shall not be considered fines or forfeitures as defined in Section 13003, and shall be apportioned in the following manner:

(1) Fifty percent shall be distributed to the county treasurer of the county in which the action is prosecuted. Amounts paid to the county treasurer shall be deposited in the county fish and wildlife propagation fund established pursuant to Section 13100.

(2) Fifty percent shall be distributed to the department for deposit in the Fish and Game Preservation Fund. These funds may be expended to cover the costs of any legal actions or for any other law enforcement purpose consistent with Section 9 of Article XVI of the California Constitution.

1616. Any agreement or any memorandum of understanding executed by the department pursuant to this chapter prior to January 1, 2004, shall be subject to, and shall be governed by, the provisions of this chapter that were in existence prior to that date. This section does not apply to paragraph (2) of subdivision (b) of Section 1602, requiring an entity to provide a copy or other satisfactory evidence of an agreement attained prior to January 1, 1977, upon the request of the department.

SEC. 3. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because the only costs that may be incurred by a local agency or school district will be incurred because this act creates a new crime or infraction, eliminates a crime or infraction, or changes the penalty for a crime or infraction, within the meaning of Section 17556 of the Government Code, or changes the definition of a crime within the meaning of Section 6 of Article XIII B of the California Constitution California Native Plant Protection Act

The Native Plant Protection Act of 1977 (see California Fish and Game Code Section 1900 et seq.) 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, CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into the act as threatened species, but did not do so 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. The act also provides guidelines and thresholds for use by lead agencies for evaluating the significance of proposed impacts.

The State 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 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 CNDDB is interested in tracking, regardless of their legal or protection status." This is a broader list than those species that are protected under the 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 (BLM) 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 CRPR 2 by the CNPS, 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 waters of the state as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code, Section 13050[e]). As of April 2019, the State Water Resources Control Board has narrowed their definition of a waters of the state to include 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.

California Native Desert 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. Of the species covered under the CDNPA, western Joshua tree and one western honey mesquite are located on the Project site.

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 BLM 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 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 San Bernardino County 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.

Town of Apple Valley General Plan

Goal 1. Establish a pattern of community development that supports a functional, productive, and balanced relationship between the manmade environment and the natural environment.

Policy 1.A. Habitat for endangered, threatened, and sensitive species shall continue to be protected and preserved as Open Space by the Town.

Policy 1.B. The Town shall promote the use of native vegetation for landscaping to enhance and create viable habitat for local species.

Policy 1.C. The Town shall continue to promote biodiversity by protecting natural communities with high habitat value, protecting habitat linkages to prevent further fragmentation, and encouraging an appreciation for the natural environment and biological resources.

Goal 2. The Town shall work with local, state, and regional agencies to protect, preserve, and manage biological resources, especially threatened, endangered, and sensitive plants and wildlife species and their habitats.

Policy 2.A. The Town shall coordinate with CDFG [California Department of Fish and Game] and USFWS when working on projects that are proposed to be located within or adjacent to linkage areas or special survey areas.

Policy 2.B. The Town shall support and cooperate with other agencies in establishing multiple use corridors that link open space areas through drainage channels and utility easements, thereby encouraging the connectivity of natural communities.

Policy 2.C. The Town shall work with CDFG and the USFWS to approve and implement a MSHCP [Multiple Species Habitat Conservation Plan] for the Town and Sphere of Influence.

Policy 2.D. The Town shall work with CDFG and USFWS to ensure that state and federal protections required by the Migratory Bird Treaty Act addressed during the planning process.

Policy 2.E. The Town shall work with CDFG, RWQCB and ACOE [USACE] to ensure that state and federal jurisdictional areas are properly identified.

Apple Valley Municipal Code – Chapter 9.76 – Plant Protection and Management Policy

Chapter 9.76 of the Apple Valley Municipal Code contains the Town's Protected Plant Policies (Town of Apple Valley 2022). This chapter establishes policies governing the removal of protected plants, including:

> Desert native plants with stems 2 inches or greater in diameter or 6 feet or greater in height:
>
> a. Smoke tree (*Dalea spinosa*)
> b. All species of the family *Agavaceae* (century plants, nolinas, yuccas). Including the following known to Apple Valley:
> i. Mojave yucca (Yucca schidigera)
> ii. Lord's candle (Yucca whipplei)
> iii. Barrel cactus (Ferocactus acanthodes)
> c. All species of the genus *Prosopis* (mesquites)
>
> Creosote rings, 10 feet or greater in diameter
>
> All Joshua trees (mature and immature)
>
> All plants protected or regulated by the CDNPA

Additionally, Section 9.76.010 of the Apple Valley Municipal Code states the following:

> 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 shall be approved by the appropriate Town Review Authority (County Certified Plant Expert, Planning Commission or Town Council) for each site indicating exactly which trees or plants are authorized to be removed. The required information can be added to any other required plot plan.

Prior to issuance of development permits in areas with native trees or plants that are subject to the provisions of this Chapter, a pre-construction inspection shall be conducted by the appropriate authority.

Findings for Removals of Desert Native Plants

Per Apple Valley Municipal Code Section 9.76.010:

The Reviewing Authority shall authorize the removal of a native tree or plant subject to provisions of this Chapter 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.
B. The removal of the native tree or plant is justified for one of the following reasons:
    a. The location of the native tree (excluding Joshua Trees) or plant and/or its dripline 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.
    b. The location of the native tree or plant and/or its dripline interferes with the planned improvement of a street or development of an approved access to the subject or adjoining private property.
    c. The location of the native tree or plant is hazardous to pedestrian or vehicular travel or safety as determined by the Town Engineer.
    d. The native tree or plant or its presence interferes with or is causing extensive 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.
    e. The condition or location of the native plant or tree is adjacent to and in such close proximity to an existing structure that the native plant or tree has or will sustain significant damage.

Findings for Transplanting of Desert Native Plants

Per Apple Valley Municipal Code Section 9.76.010:

The Town Manager, or designee, or other Reviewing Authority, shall only authorize the transplanting of desert native plants … subject to the provisions of this Chapter only if one or more of the following findings are made:

a. The desert native plants are to be transplanted in a manner approved by the Town Manager, or designee, or other Reviewing Authority, including any requirement for the issuance of plant tag seals and/or wood receipts.
b. The desert native plant is to be transplanted to another property within the same plant habitat under the supervision of a Desert Native Plant Expert and the removal of such plant will not adversely affect the desert environment on the subject site.

c. Any desert native plant on the site which is determined by the Town Manager, or designee, or other Reviewing Authority, as requiring transplanting has or will be transplanted or stockpiled for transplanting in accordance with methods approved by Town Manager, or designee. A Desert Native Plant Expert shall supervise and manage any required transplanting of desert native plants.

Protection of Joshua Trees

As stated in Section 9.76.040, existing Joshua Trees shall not be:

> disturbed, moved (transplanted or otherwise), removed or destroyed unless such disturbance, move, removal or destruction is first reviewed and approved by the Town of Apple Valley. The Town Manager, or designee, shall be responsible for review and approval of any request to disturb, move (transplant or otherwise), remove or destroy any existing Joshua Tree located on any property within any zoning district in the Town of Apple Valley. Forms for such review shall be available within the Planning Division.

Section 9.76.040 also states that:

> Anyone submitting an application to disturb, move, remove or destroy an existing Joshua Tree shall use all means necessary to retain and preserve such Tree(s) in its native (present) location in considering and presenting said Tree Disturbance application. This application shall take into consideration lot configuration, potential property development (buildable envelope), onsite circulation and all associated and related infrastructure needed to support construction within the buildable envelope. Further, persons submitting an application for a discretionary review or for any subdivision of land within the Town of Apple Valley upon which a Joshua Tree(s) is present, shall use all reasonable means available to retain and preserve the Tree(s) in its native (present) location in considering and presenting said application or subdivision request with regard to lot location and configuration, potential property development (buildable envelope), circulation system and all associated and related infrastructure.

Retention in Place of Joshua Trees

As stated in Section 9.76.040, "Joshua Tree(s) which conforms to the following [criteria] shall be preserved in place unless its removal, transplantation or destruction is approved as prescribed within this Section 9.76.040 of the Town of Apple Valley Municipal Code." The criteria are as follows:

a. A Joshua Tree that is known, by historic record, including pictures or written description, to be at least forty (40) years old.
b. A Joshua Tree which has a width of at least fifteen (15) feet as measured from the furthest point of outstretched branches (measured parallel to the ground).
c. A Joshua Tree which is at least fifteen (15) feet in height as measured from the base of the trunk to the highest point of the Tree.
d. A Joshua Tree which has a trunk measuring at least twelve (12) inches in diameter as measured four (4) feet from the ground.

Joshua Trees that do not conform to the above criteria must be preserved but may be transplanted to another location on the same property or may be made available for adoption through the Town's Joshua Tree Preservation and Adoption Program.

Additionally, Section 9.76.040 states:

> For any Joshua Tree(s) which conform to the criteria listed [above], for which the property owner/applicant has made a request for a Building Permit, application for a discretionary review or application for a subdivision of land within the Town of Apple Valley, said owner/applicant shall submit, as part of the application for approval, documentation of their best efforts to retain and preserve all Joshua Tree(s) within the limits of the development or subdivision in its native (present) location. Such documentation of best effort shall include how alternative lot configurations (including building envelopes on lots with existing Tree(s)), circulation, physical or environmental constraints of the site, allow no alternative subdivision configuration which would retain and preserve the Tree(s) in its native (present) location.

Transplanting of Joshua Trees

Section 9.76.040 states that a Desert Native Plant Expert (i.e., a California Agricultural Biologist, Registered Forester, International Society of Arboriculture [ISA] Certified Arborist, County-Certified Plant Expert, or others approved by the Town's Building Official) must supervise the initiation and completion of Town-approved transplanting of Joshua trees. Per Section 9.76.040:

> Approval of such transplant must take into consideration the time of year, the plant's original and transplanted physical orientation, prevailing wind direction, soil type of the original and transplanted locations, and other related attributes which may affect the successful transplantation of the Joshua Tree(s) in question as determined by the Town and the retained Botanist.
>
> Joshua Trees that are proposed to be removed shall be transplanted or stockpiled for future transplanting wherever possible. In the instance of stockpiling and/or transplanting the permittee has submitted and has had the approval of a Joshua Tree maintenance plan prepared by a Desert Native Plant Expert. This plan shall include a schedule for maintenance and a statement by the Desert Native Plant Expert that this maintenance plan and schedule will be implemented under his/her supervision. The schedule shall include the requirement that a maintenance report is required at the end of the project or at six (6) month intervals, evidence to the satisfaction of the Building Official that the Desert Native Plant Expert has supervised the scheduled maintenance to the extent that all transplanted and stockpiled plants have been maintained in such a manner to insure the highest practicable survival rate. In the event that this report is not satisfactory, a tree and plant replacement plan and implementation schedule prepared by a Desert Native Plant Expert may be required by the Building Official.

Findings for Removal of Joshua Trees

As stated in Section 9.76.040:

> The Reviewing Authority shall authorize the removal of a Joshua Tree(s) subject to provisions of this Chapter only if the following findings are made:
>
> 1. The removal of the Joshua Tree(s) 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.
> 2. The removal of the Joshua Tree(s) is justified for one of the following reasons:
>   a. The location of the Joshua Tree(s) or its dripline 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 as determined by the Town Manager, or designee. 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.
>   b. The location of the native tree or plant and/or its dripline interferes with the planned improvement of a street or development of an approved access to the subject to adjoining private property.
>   c. The location of the native tree or plant is hazardous to pedestrian or vehicular travel or safety as determined by the Town Engineer.
>   d. The native tree or plant, because of its presence, interferes with or is causing extensive 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.
>   e. The condition or location of the native plant or tree is adjacent to and in such close proximity to an existing or proposed structure that the native plant or tree has or will sustain significant damage.

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 areas. 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.
G. Result in cumulatively considerable impacts to biological resources.

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

One listed special-status plant species was observed within the BSA: western Joshua tree. No other listed special-status plants were observed within the BSA.

No non-listed special-status plant species were observed within the BSA; therefore, the project would have no direct or indirect impacts to non-listed special-status plant species. In addition, the BSA does not occur within federally designated critical habitat for special-status plant species, and there would be no direct impacts to critical habitat.

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 29 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 tree are considered significant absent mitigation under CEQA.

Based on a literature review completed by CDFW (Vander Wall et al. 2006), 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 45.2 acres of direct impacts and 48.4 acres of indirect impacts to western Joshua trees, their seed bank, and their associated habitat.

Based on The Western Joshua Tree Conservation Act, impacts to western Joshua tree can be mitigated on a per-tree basis. Therefore, the project would result in impacts to 29 western Joshua trees.

As required by MM-BIO-1 (Conservation of Western Joshua Tree Lands), mitigation for direct impacts to 45.2 acres of western Joshua trees, or 29 individuals, would be fulfilled through a payment of fees consistent with The Western Joshua Tree Conservation Act or through payment to a CDFW-approved mitigation bank. Additionally, as required by MM-BIO-2 (Relocation of Desert Native Plants) and in accordance with Chapter 9.76 of the Apple Valley 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 Appendix C, Section 6.1, Impacts to Sensitive Vegetation Communities, and Section 6.2, Impacts to Special-Status Plants). As such, a Joshua Tree Preservation, Protection, and Relocation Plan, and California Desert Native Plant Relocation Plan (Appendix D of Appendix C) was prepared to provide detailed specifications for the project applicant to meet the requirements of Chapter 9.76 (Plant Protection and Management Policy) of the Apple Valley Municipal Code to protect, preserve, and mitigate impacts to western Joshua trees. Thus, mitigation for direct impacts to western Joshua tree would also mitigate for impacts to Joshua tree woodland. In addition, implementation of MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), and MM-BIO-6 (Construction Monitoring Notebook) would reduce potential direct impacts to a less-than-significant level.

Implementation of **MM-BIO-1** through **MM-BIO-6**, as described above, would reduce potential direct impacts to western Joshua trees to less than significant.

The BSA does not occur within federally designated critical habitat for special-status plant species, and there would be no direct impacts to critical habitat.

Indirect Impacts

Western Joshua Tree

With regards to western Joshua tree, typically CDFW considers any western Joshua tree within 186 feet of a direct impact to be indirectly impacted (Vander Wall et al. 2006). Therefore, the 42 western Joshua trees 186 feet from the off-site improvement areas would be indirectly impacted and considered significant absent mitigation.

It is possible that special-status plants may be indirectly impacted over the short-term or long-term. Therefore, short-term construction related indirect impacts and long-term operational indirect impacts to western Joshua are further discussed below.

Short-Term Construction Impacts

With regards to all special-status plants, construction-related, short-term indirect impacts may include inadvertent spillover impacts outside of the construction footprint, dust accumulation on non-listed special status plants, chemical spills, stormwater erosion and sedimentation, and increased wildfire risk.

Implementation of MM-BIO-3 (Designated Biologist Authority) gives the project's designated biologist the authority to stop work if construction is not compliant with this CEQA document. MM-BIO-4 (Compliance Monitoring) requires that an experienced biologist oversee compliance with the protective measures, including limiting impacts to the project impact footprint. MM-BIO-5 (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-6 (Construction Monitoring Notebook) provides for documentation that the education program was administered to applicable personnel. MM-BIO-11 (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 will be

responsible for unauthorized impacts from construction activities to western Joshua trees that are outside the permitted project footprint. Thus, implementation of MM-BIO-3 through MM-BIO-6 and MM-BIO-11 will 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's Rules 401 and 403.2, which limit the amount of fugitive dust generated during construction. These rules are described in Section 4.2.4 of this EIR.

MM-BIO-12 (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-12 would help to avoid and minimize impacts to western Joshua tree from any construction-related chemical spills.

A stormwater pollution prevention plan 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 practice (BMP) categories employed on site would include erosion control, sediment control, and non-stormwater good housekeeping. Preparation and implementation of a stormwater pollution prevention plan 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 Town 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 Town 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.

Long-Term Operational Impacts

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 of the surrounding area, increased traffic and vehicle emissions, and accidental chemical spills. Indirect impacts to non-listed special status plants are considered significant absent mitigation.

MM-BIO-13 (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 requirements (California Green Building Standards Code, California Code of Regulations [CCR], Title 24, 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 Town of Apple Valley 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 Town of Apple Valley Municipal Code, long-term indirect impacts to western Joshua tree associated with increased wildlife risk is not expected to occur.

In summary, implementation of MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), MM-BIO-6 (Construction Monitoring Notebook), MM-BIO-11 (Delineation of Property Boundaries), MM-BIO-12 (Hazardous Waste), and MM-BIO-13 (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 five special-status wildlife species: burrowing owl, loggerhead shrike, LeConte's thrasher, American badger, and desert kit fox; therefore, these species are further discussed below. Focused protocol-level surveys were conducted for desert tortoise and Mohave ground squirrel; therefore, these species are also discussed below.

The BSA does not occur within federally designated critical habitat for special-status wildlife species, and there would be no direct impacts to critical habitat.

Burrowing Owl

Burrowing owl was observed within the BSA, and several suitable burrows were mapped within the BSA; therefore, the species could occupy the BSA prior to construction.

The project would result in the loss of 210.6 acres of suitable habitat for burrowing owl, including impacts to rubber rabbitbrush scrub, creosote bush scrub, Joshua tree woodland, and disturbed habitat. These potential direct impacts to burrowing owls are considered significant absent mitigation under CEQA.

Pursuant to the California Fish and Game Code and the 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 located within the project limits so take of owls or active owl nests can be avoided. Consistent with MM-BIO-7 (Pre-construction Surveys for Burrowing Owl and Avoidance), pre-construction surveys for burrowing owl shall be conducted in areas supporting potentially suitable habitat with the first survey no less than 14 days prior to the start of construction activities, and the second within 24 hours of start of construction. A burrowing owl relocation plan has been prepared to facilitate implementation of this mitigation measure. This plan provides details on avoidance and minimization measures including buffer distances and active burrow screening, as well as the process used for excavating inactive burrows, and, if necessary, passive displacement and excavation of active

burrows. The burrowing owl relocation plan is attached to this report as Appendix J of Appendix C. In addition, implementation of MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), and MM-BIO-6 (Construction Monitoring Notebook) would reduce potential direct impacts to a less-than significant level.

Furthermore, should burrowing owl be located during the pre-construction survey, the project would result in the loss of 210.6 acres of suitable habitat for burrowing owl, including impacts to creosote bush scrub, Joshua tree woodland, unvegetated wash and river bottom, and disturbed habitat. These direct impacts would be significant absent mitigation. As required by MM-BIO-7 (Pre-Construction Surveys for Burrowing Owl Avoidance), mitigation for direct impacts to 210.6 acres, should burrowing owl be found during pre-construction surveys, would be fulfilled through conservation of suitable burrowing owl habitat through the purchase of credits at a CDFW-approved conservation bank within the Inland Deserts Region (Region 6) at a minimum of 1:1 in-kind habitat replacement. Conservation banks protect specific sensitive species and their habitats by establishing and selling credits for species that occur within the conservation bank; thereby helping to consolidate conservation efforts for sensitive species and their habitats into a large, contiguous preserves which provide high quality wildlife habitat (CDFW 2023).

Additionally, as required by MM-BIO-1 (Conservation of Western Joshua Tree Lands), mitigation for direct impacts to 29 western Joshua trees will be fulfilled through a payment of fees consistent with The Western Joshua Tree Conservation Act or through payment to a CDFW-approved mitigation bank. Conservation efforts for western Joshua tree 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, which use similar habitat.

In summary, implementation of MM-BIO-1 (Conservation of Western Joshua Tree Lands), MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), and MM-BIO-6 (Construction Monitoring Notebook), and MM-BIO-7 (Pre-construction Surveys for Burrowing Owl and Avoidance) would reduce potential direct impacts to a less-than significant level.

Loggerhead Shrike

Loggerhead shrike was not observed during the biological surveys but has a moderate potential to occur in the BSA. Suitable nesting habitat, particularly near western Joshua trees, is present within the BSA.

The project would result in the loss of 177.1 acres of suitable habitat for loggerhead shrike, including impacts to rubber rabbitbrush scrub, creosote bush scrub and Joshua tree woodland. These potential direct impacts to loggerhead shrike are considered significant absent mitigation under CEQA.

To avoid potential impacts to nesting loggerhead shrikes, 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-8 (Pre-construction Nesting Bird Surveys and Avoidance).

The project would result in the loss of 177.1 acres of suitable habitat for loggerhead shrike (i.e., rubber rabbitbrush scrub, creosote bush scrub, and Joshua tree woodland). However, due to the surrounding vacant lands available with comparable suitable habitat, the loss of 177.1 acres of suitable habitat for loggerhead shrike would be considered less than significant. Nonetheless, as required by MM-BIO-1 (Conservation of Western Joshua Tree

Lands), mitigation for direct impacts to 29 western Joshua trees would be fulfilled through a payment of fees consistent with The Western Joshua Tree Conservation Act or through payment to a CDFW-approved mitigation bank. Conservation efforts for western Joshua tree 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, which use similar habitat.

In summary, implementation of MM-BIO-1 (Conservation of Western Joshua Tree Lands) and MM-BIO-8 (Pre-construction Nesting Bird Surveys and Avoidance) would reduce potential direct impacts to loggerhead shrike to less than significant.

LeConte's Thrasher

LeConte's thrasher was not observed during biological surveys but has a moderate potential to occur within the BSA. Suitable nesting habitat, particularly near western Joshua trees, is present within the BSA.

The project would result in the loss of 177.1 acres of suitable habitat for LeConte's thrasher, including impacts to rubber rabbitbrush scrub, creosote bush scrub, and Joshua tree woodland. These potential direct impacts to LeConte's thrasher are considered significant absent mitigation under CEQA.

To avoid potential impacts to nesting LeConte's thrasher, 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-8 (Pre-construction Nesting Bird Surveys and Avoidance).

The project would result in the loss of 177.1 acres of suitable habitat for LeConte's thrasher (i.e., impacts to creosote bush scrub and Joshua tree woodland). However, due to the surrounding vacant lands available with comparable suitable habitat, the loss of 177.1 acres of suitable habitat for LeConte's thrasher would be considered less than significant. Nonetheless, as required by MM-BIO-1 (Conservation of Western Joshua Tree Lands), mitigation for direct impacts to 29 western Joshua trees would be fulfilled through a payment of fees consistent with The Western Joshua Tree Conservation Act or through payment to a CDFW-approved mitigation bank. Conservation efforts for western Joshua tree 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 LeConte's thrasher, which use similar habitat.

In summary, implementation of MM-BIO-1 (Conservation of Western Joshua Tree Lands) and MM-BIO-8 (Pre-construction Nesting Bird Surveys and Avoidance) would reduce potential direct impacts to LeConte's thrasher to less than significant.

American Badger

American badger was not observed during biological surveys but has a moderate potential to occur within the BSA due to the presence of open creosote flats with friable soils and suitable burrows.

The project would result in the loss of 210.6 acres of suitable habitat for American badger, including impacts to rubber rabbitbrush scrub, creosote bush scrub, Joshua tree woodland, and disturbed habitat. These potential direct impacts to American badger are considered significant absent mitigation under CEQA.

To avoid potential direct impacts to American badger, a pre-construction survey for American badger will be conducted within 10 days prior to the start of construction to determine the presence/absence of American badger. As such, in an abundance of caution and to ensure that potential impacts to this species are less than significant, the project applicant shall prepare a mitigation and monitoring plan that addresses American badger if the species is determined to occur on the project site prior to the start of construction, pursuant to MM-BIO-9 (Pre-Construction Survey for American Badger and Avoidance). With the incorporation of MM-BIO-9, impacts associated with American badger would be less than significant. In addition, implementation of MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), and MM-BIO-6 (Construction Monitoring Notebook) would reduce potential direct impacts to a less-than-significant level.

The project would result in the loss of 210.6 acres of suitable habitat for American badger, including impacts to allscale scrub, rubber rabbitbrush scrub, creosote bush scrub, Joshua tree woodland, and disturbed habitat. However, due to the surrounding vacant lands available with comparable suitable habitat, the loss 210.6 acres of suitable habitat for American badger would be considered less than significant. Nonetheless, as required by MM-BIO-1 (Conservation of Western Joshua Tree Lands), mitigation for direct impacts to 29 western Joshua trees would be fulfilled through a payment of fees consistent with The Western Joshua Tree Conservation Act or through payment to a CDFW-approved mitigation bank. Conservation efforts for western Joshua tree 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 American badger, which use similar habitat.

As required by MM-BIO-1 (Conservation of Western Joshua Tree Lands), mitigation for direct impacts to 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 Town and CDFW. Conservation efforts for western Joshua tree 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 American badger.

In summary, implementation of MM-BIO-1 (Conservation of Western Joshua Tree Lands), MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), MM-BIO-6 (Construction Monitoring Notebook), and MM-BIO-9 (Pre-construction Survey for American Badger and Avoidance) would reduce potential direct impacts to American badger to less than significant.

Desert Kit Fox

Desert kit fox was observed within the BSA through camera trapping as part of the Mohave ground squirrel–protocol surveys. Additionally, several suitable burrows were mapped within the BSA; therefore, the species could occupy the BSA prior to construction.

The project would result in the loss of 210.6 acres of suitable habitat for desert kit fox, including impacts to rubber rabbitbrush scrub, creosote bush scrub, Joshua tree woodland, and disturbed habitat. These potential direct impacts to desert kit fox are considered significant absent mitigation under CEQA.

To avoid potential direct impacts to desert kit fox, a pre-construction survey for desert kit fox will be conducted within 10 days prior to the start of construction to determine the presence/absence of desert kit fox, pursuant to MM-BIO-10

(Pre-construction Survey for Desert Kit Fox and Avoidance). To ensure that potential impacts to this species are less than significant, a desert kit fox relocation and mitigation plan has been prepared to facilitate implementation of this mitigation measure and is attached to this report as Appendix K of Appendix C. In addition, implementation of MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), and MM-BIO-6 (Construction Monitoring Notebook) would reduce potential direct impacts to a less-than significant level.

The project would result in the loss of 210.6 acres of suitable habitat for desert kit fox, including impacts to creosote bush scrub, Joshua tree woodland, unvegetated wash and river bottom, and disturbed habitat. However, due to the surrounding vacant lands available with comparable suitable habitat, the loss 210.6 acres of suitable habitat for desert kit fox is considered less than significant. Nonetheless, as required by MM-BIO-1 (Conservation of Western Joshua Tree Lands), mitigation for direct impacts to 29 western Joshua trees would be fulfilled through a payment of fees consistent with The Western Joshua Tree Conservation Act or through payment to a CDFW-approved mitigation bank. Conservation efforts for western Joshua tree 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 desert kit fox, which use similar habitat.

In summary, implementation of MM-BIO-1 (Conservation of Western Joshua Tree Lands), MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), MM-BIO-6 (Construction Monitoring Notebook), and MM-BIO-10 (Pre-construction Survey for Desert Kit Fox and Avoidance) would reduce potential direct impacts to desert kit fox to less than significant.

Desert Tortoise

The results of the protocol-level (USFWS 2019) survey determined that desert tortoise is currently considered absent from the BSA. The on-site vegetation has been determined to provide moderate-quality habitat for the desert tortoise. While potentially suitable 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 project and BSA would be less than significant under CEQA.

Mohave Ground Squirrel

The results of the protocol-level (CDFG 2010) surveys determined that Mohave ground squirrel is currently considered absent from the on-site portion of the BSA. The off-site portion of the BSA does not contain suitable habitat for Mohave ground squirrel. As such, the project would not result in any direct impacts to Mohave ground squirrel. Therefore, impacts to Mohave ground squirrel associated with the project and BSA would be less than significant under CEQA.

Nesting Migratory Birds and Raptors

Similar to most other sites containing trees, shrubs, and other vegetation, the BSA 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 BSA are protected by California Fish and Game Code Sections 3503 and 3503.5 and by the federal MBTA (16 USC 703–711). In particular, 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 considered significant absent mitigation under CEQA.

To ensure compliance with the California Fish and Game Code and the MBTA and to avoid potential impacts to nesting birds, it is recommended that the 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-8 (Pre-construction Nesting Bird Surveys and Avoidance). With the incorporation of mitigation, impacts associated with nesting birds, including raptors, would be less than significant.

In summary, implementation of MM-BIO-8 (Pre-construction Nesting Bird Surveys and Avoidance) would reduce potential direct impacts to nesting migratory birds and raptors to less than significant.

Indirect Impacts

Indirect impacts to special-status wildlife species are those that occur during construction to species present near the site within the 186-foot buffer, but not within the construction zone. These include fugitive dust that can degrade habitat and result in health implications for wildlife species; noise and vibration that can stress wildlife species or cause them to leave an area of otherwise suitable habitat, or that can result in disruption of bird nesting and abandonment of nests; increased human presence, which can also disrupt daily activities of wildlife and cause them to leave an area; night-time lighting, which can disrupt the activity patterns of nocturnal species, including many mammals and some birds, amphibians, and reptiles; and release of chemical pollutants, such as from oil leaks from construction vehicles and machinery.

The Project could result in significant, indirect impacts to five special-status wildlife: burrowing owl, loggerhead shrike, LeConte's thrasher, American badger, and desert kit fox. Therefore, these species are further discussed below.

Burrowing Owl

Short-Term Construction Impacts

Construction activities have the potential to result in short-term 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 nighttime lighting. These potential short-term or temporary indirect impacts to burrowing owls are considered significant absent mitigation under CEQA.

MM-BIO-7 (Pre-construction Surveys for Burrowing Owl and Avoidance) would require pre-construction 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, nighttime lighting, and vehicle collisions. MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), and MM-BIO-6 (Construction Monitoring Notebook) 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-12 (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. 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's Rules 401 and 403.2, which limit the amount of fugitive dust generated during construction. MM-BIO-14 (Lighting) would require nighttime lighting during construction within 50 feet of habitat for special-status species to be shielded downward. MM-BIO-15 (Trash and Debris) would require trash and debris to be removed regularly and would require animal-resistant trash receptacles to avoid attracting urban-related predator species.

Long-Term Operational Impacts

Post-construction (long-term) activities have the potential to result in indirect impacts to burrowing owls and their habitat. Those long-term impacts could result from development within or adjacent to burrowing owl habitat, including trash and debris, increased human presence, vehicle collisions, chemical spills, nighttime lighting, and increased invasive plant species that may degrade habitat. These potential long-term indirect impacts to burrowing owls are considered significant absent mitigation under CEQA.

MM-BIO-14 (Lighting) would require nighttime lighting during operations within 50 feet of habitat for special-status species to be shielded downward. MM-BIO-16 (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 (Cal-IPC) California Invasive Plant Inventory (http://www.cal-ipc.org/ip/inventory/index.php).

In summary, implementation of MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), MM-BIO-6 (Construction Monitoring Notebook), MM-BIO-7 (Pre-construction Surveys for Burrowing Owl and Avoidance), MM-BIO-12 (Hazardous Waste), MM-BIO-14 (Lighting), MM-BIO-15 (Trash and Debris), and MM-BIO-16 (Invasive Plant Management) would reduce potential indirect (short-term and long-term) impacts to burrowing owl to less than significant.

Loggerhead Shrike

Short-Term Construction Impacts

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

MM-BIO-8 (Pre-construction Nesting Bird Surveys and Avoidance) 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, nighttime lighting, and vehicle collisions. MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), and MM-BIO-6 (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-12 (Hazardous Waste) 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 the Mojave Desert Air Quality Management District's Rules 401 and 403.2, which limit the amount of fugitive dust generated during construction. MM-BIO-14 (Lighting) would require nighttime lighting during construction within 50 feet of habitat for special-status species to be shielded downward.

Long-Term Operational Impacts

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 nighttime 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-14 (Lighting) would require nighttime lighting during operations within 50 feet of habitat for special-status species to be shielded downward. MM-BIO-16 (Invasive Plant Management) would require that landscape plants within 200 feet of native vegetation communities not be on the most recent version of the Cal-IPC Inventory of Invasive Plants (http://www.cal-ipc.org/ip/inventory/index.php).

In summary, implementation of MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), MM-BIO-6 (Construction Monitoring Notebook), MM-BIO-8 (Pre-construction Nesting Bird Surveys and Avoidance), MM-BIO-12 (Hazardous Waste), MM-BIO-14 (Lighting), and MM-BIO-16 (Invasive Plant Management) would reduce potential indirect impacts (short-term and long-term) to loggerhead shrike to less than significant.

LeConte's Thrasher

Short-Term Construction Impacts

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

MM-BIO-8 (Pre-construction Nesting Bird Surveys and Avoidance) 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, nighttime lighting, and vehicle collisions. MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), and MM-BIO-6 (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-12 (Hazardous Waste) 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 the Mojave Desert Air Quality Management District's Rules 401 and 403.2, which limit the amount of fugitive dust generated during construction. MM-BIO-14 (Lighting) would require nighttime lighting during construction within 50 feet of habitat for special-status species to be shielded downward.

Long-Term Operational Impacts

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

MM-BIO-14 (Lighting) would require nighttime lighting during operations within 50 feet of habitat for special-status species to be shielded downward. MM-BIO-16 (Invasive Plant Management) would require that landscape plants within 200 feet of native vegetation communities not be on the most recent version of the Cal-IPC Inventory of Invasive Plants (http://www.cal-ipc.org/ip/inventory/index.php).

In summary, implementation of MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), MM-BIO-6 (Construction Monitoring Notebook), MM-BIO-8 (Pre-construction Nesting Bird Surveys and Avoidance), MM-BIO-12 (Hazardous Waste), MM-BIO-14 (Lighting), and MM-BIO-16 (Invasive Plant Management) would reduce potential indirect impacts (short-term and long-term) to LeConte's thrasher to less than significant.

American Badger

Short-Term Construction Impacts

Construction activities have the potential to result in short-term indirect impacts to American badger and their habitat. Those short-term impacts could include dust, noise and vibration, trash and debris, increased human presence, vehicle collisions, chemical spills, and nighttime lighting. These potential short-term or temporary indirect impacts to the species are considered significant absent mitigation under CEQA.

MM-BIO-9 (Pre-construction Survey for American Badger and Avoidance) would require a pre-construction survey for American badger and if determined present, would result in establishment of an American badger mitigation and monitoring plan, which shall include avoidance and minimization measures to reduce potential impacts, as well as compensatory mitigation to offset indirect impacts including noise and vibration, increased human presence, nighttime lighting, and vehicle collisions. MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), and MM-BIO-6 (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-12 (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. 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's Rules 401 and 403.2, which limit the amount of fugitive dust generated during construction.

Long-Term Operational Impacts

Post-construction (long-term) activities have the potential to result in indirect impacts to the species and their habitat. These impacts could include trash and debris, increased human presence, vehicle collisions, chemical spills, and nighttime lighting. Given the species could occupy the BSA prior to construction, potential long-term indirect impacts to American badger are considered significant absent mitigation under CEQA.

MM-BIO-12 (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. MM-BIO-14 (Lighting) would require nighttime lighting during operations within 50 feet of habitat for special-status species to be shielded downward. MM-BIO-15 (Trash and Debris) 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-16 (Invasive Plant Management) would require that landscape plants within 200 feet of native vegetation communities not be on the most recent version of the Cal-IPC California Invasive Plant Inventory (http://www.cal-ipc.org/ip/inventory/index.php).

In summary, implementation of MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), MM-BIO-6 (Construction Monitoring Notebook), MM-BIO-9 (Pre-construction Survey for American Badger and Avoidance), MM-BIO-12 (Hazardous Waste), MM-BIO-14 (Lighting), MM-BIO-15 (Trash and Debris), and MM-BIO-16 (Invasive Plant Management) would reduce potential indirect impacts (short-term and long-term) to American badger to less than significant.

Desert Kit Fox

Short-Term Construction Impacts

Construction activities have the potential to result in short-term indirect impacts to desert kit fox and their habitat. Those impacts could include dust, noise and vibration, trash and debris, increased human presence, vehicle collisions, chemical spills, and nighttime lighting. These potential short-term or temporary indirect impacts to desert kit fox are considered significant absent mitigation under CEQA.

MM-BIO-10 (Pre-construction Survey for Desert Kit Fox and Avoidance) would require a pre-construction survey for desert kit and if determined present, would result in implementation of the prepared desert kit fox mitigation and monitoring plan (Appendix K of Appendix C), which includes avoidance and minimization measures to reduce potential impacts, as well as compensatory mitigation to offset indirect impacts including noise and vibration, increased human presence, nighttime lighting, and vehicle collisions. MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), and MM-BIO-6 (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-12 (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. MM-BIO-14 (Lighting) would require nighttime lighting during construction within 50 feet of habitat for special-status species to be shielded downward. 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's Rules 401 and 403.2, which limit the amount of fugitive dust generated during construction.

Long-Term Operational Impacts

Post-construction (long-term) activities have the potential to result in indirect impacts to this species and their habitat. These impacts could include trash and debris, increased human presence, vehicle collisions, chemical spills, and nighttime lighting. These potential long-term indirect impacts to desert kit fox are considered significant absent mitigation under CEQA.

MM-BIO-12 (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. MM-BIO-14 (Lighting) would require nighttime lighting during operations within 50 feet of habitat for special-status species to be shielded downward. MM-BIO-15 (Trash and Debris) 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-16 (Invasive Plant Management) would require that landscape plants within 200 feet of native vegetation communities not be on the most recent version of the Cal-IPC California Invasive Plant Inventory (http://www.cal-ipc.org/ip/inventory/index.php).

In summary, implementation of MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), MM-BIO-6 (Construction Monitoring Notebook), MM-BIO-10 (Pre-construction Survey for Desert Kit Fox and Avoidance), MM-BIO-12 (Hazardous Waste), MM-BIO-14 (Lighting), MM-BIO-15 (Trash and

Debris), and MM-BIO-16 (Invasive Plant Management) would reduce potential indirect (short-term and long-term) impacts to desert kit fox to less than significant

Nesting Migratory Birds and Raptors

Short-Term Construction Impacts

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 nighttime lighting. These potential short-term or temporary indirect impacts to these species are considered significant absent mitigation under CEQA.

MM-BIO-8 (Pre-construction Nesting Bird Surveys and Avoidance) 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, nighttime lighting, and vehicle collisions. MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), and MM-BIO-6 (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-12 (Hazardous Waste) 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 the Mojave Desert Air Quality Management District's Rules 401 and 403.2, which limit the amount of fugitive dust generated during construction. MM-BIO-14 (Lighting) would require nighttime lighting during construction within 50 feet of habitat for special-status species to be shielded downward.

Long-Term Operational Impacts

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

MM-BIO-14 (Lighting) would require nighttime lighting during operations within 50 feet of habitat for special-status species to be shielded downward. MM-BIO-16 (Invasive Plant Management) would require that landscape plants within 200 feet of native vegetation communities not be on the most recent version of the Cal-IPC California Invasive Plant Inventory (http://www.cal-ipc.org/ip/inventory/index.php).

In summary, implementation of MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), MM-BIO-6 (Construction Monitoring Notebook), MM-BIO-8 (Pre-construction Nesting Bird Surveys and Avoidance), MM-BIO-12 (Hazardous Waste), and MM-BIO-14 (Lighting), and MM-BIO-16 (Invasive Plant Management) would reduce potential indirect impacts (short-term and long-term) to nesting migratory 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 258.3[5]acres, including 144.0-acres within the project site and 114.3-acres within the off-site improvement areas, would be impacted from the project within the BSA, all of which would be a permanent impact. (Figure 4.3-4A-I, Impacts to Biological Resources). Table 4.3-2 summarizes permanent direct impacts to vegetation communities and land covers within the BSA. As stated in Appendix C, Section 5.1, 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 are considered permanent impacts to Joshua tree woodland. The Project would result in permanent impacts to 10.7 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 247.6 acres of vegetation communities and land cover types that are not considered sensitive by CDFW, including creosote bush scrub, rubber rabbitbrush scrub, disturbed habitat, and urban/developed land. Therefore, these direct impacts are considered 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)
Ericameria nauseosa	*Ericameria nauseosa*	Rubber rabbitbrush scrub	16.1	—	4.8
Larrea tridentata	*Larrea tridentata*	Creosote bush scrub	290.5	127.7	34.0
Yucca brevifolia	N/A	Joshua tree woodland	10.9	10.7	—
N/A	N/A	Disturbed habitat	81.1	5.6	27.9
N/A	N/A	Urban/developed	69.0	—	47.7
		Total[1]	**467.6**	**144.0**	**114.3**

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

Mitigation for direct impacts to 29 western Joshua tree individuals will also mitigate for impacts to 10.7 acres of Joshua tree woodland. As required by MM-BIO-1 (Conservation of Western Joshua Tree Lands), mitigation for direct impacts to 29 western Joshua trees (45.2 acres of direct impacts that include the associated 186-foot buffer applied to each induvial western Joshua tree) will be fulfilled through a payment of fees consistent with The Western Joshua Tree Conservation Act or through payment to a CDFW-approved mitigation bank. Conservation efforts for western

Joshua tree 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 10.7 acres of Joshua tree woodland.

Additionally, as required by MM-BIO-2 (Relocation of Desert Native Plants) and in accordance with Chapter 9.76 of the Town of Apple Valley 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. As such, a Joshua Tree Preservation, Protection, and Relocation Plan, and California Desert Native Plant Relocation Plan (Appendix D of Appendix C) was prepared for the project to provide detailed specifications for the project applicant to meet the requirements of Chapter 9.76 of the Town of Apple Valley 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.

In summary, 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

Potential construction- and operation-related indirect impacts to Joshua tree woodland would be considered a significant impact under CEQA absent mitigation.

Short-Term Construction Impacts

Construction-related short-term 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.

Implementation of MM-BIO-3 (Designated Biologist Authority) gives the project's designated biologist the authority to stop work if construction is not compliant with this CEQA document. MM-BIO-4 (Compliance Monitoring) requires that an experienced biologist oversee compliance with the protective measures, including limiting impacts to the project impact footprint. MM-BIO-5 (Education Program) would provide construction personnel with training related to Joshua tree woodland that is present on and adjacent to the impact footprint. MM-BIO-6 (Construction Monitoring Notebook) provides for documentation that the education program was administered to applicable personnel. MM-BIO-11 (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 will be responsible for unauthorized impacts from construction activities to Joshua tree woodland that are outside the permitted project footprint. Thus, implementation of MM-BIO-3 through MM-BIO-6 and MM-BIO-11 will 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's Rules 401 and 403.2, which limit the amount of fugitive dust generated during construction.

MM-BIO-12 (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-12 would help to avoid and minimize impacts to western Joshua tree from any construction-related chemical spills.

A stormwater pollution prevention plan 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 practice (BMP) categories employed on site would include erosion control, sediment control, and non-stormwater good housekeeping. Preparation and implementation of a stormwater pollution prevention plan 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 Town 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 Town 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.

Long-Term Operational Impacts

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 of the surrounding area, increased traffic and vehicle emissions, and accidental chemical spills. Indirect impacts to Joshua tree woodland are considered significant absent mitigation.

MM-BIO-13 (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 Joshua tree woodland.

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 requirements (California Green Building Standards Code, California Code of Regulations [CCR], Title 24, 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 Joshua tree woodland 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 Town of Apple Valley 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 Town of Apple Valley Municipal Code, long-term indirect impacts to Joshua tree woodland associated with increased wildlife risk is not expected to occur.

In summary, implementation of MM-BIO-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), MM-BIO-6 (Construction Monitoring Notebook), MM-BIO-11 (Delineation of Property Boundaries), MM-BIO-12 (Hazardous Waste), and MM-BIO-13 (Herbicides) would reduce potential indirect impacts (short-term and long-term) to Joshua tree woodland 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. [This section to be updated with results of aquatic resources delineation].

Direct Impacts

The data presented in Appendix A of Appendix C (NOREAS 2023a) asserts that there are no waters of the U.S. within the project site and off-site improvement areas. The data presented in Appendix B of Appendix C (NOREAS 2023b) details that there are no lake, rivers, or streambeds subject to regulation under Section 1600 (et seq.) of the CFG Code within the project site. But in sharp contrast, Appendix B of Appendix C (NOREAS 2023b) also outlines that within the off-site improvement areas - at six (6) specific locales, non-wetland, ephemeral dry desert washes that total 404 linear feet were detected. These six distinct features are associated with the off-site improvement areas, have discernable bank lines with topographic relief, connectivity with Bell Mountain Wash, and subsequently to the Mojave River. As a result, it has been determined that the six features within the off-site improvement areas consist of 0.13-acres of ephemeral streambeds subject to regulation under Section 1600 (et seq.) of the CFG Code. In this instance, the limits of the Regional Water Boards jurisdiction - as it applies to the Porter-Cologne Act (California Water Code section 13000 et seq.), is coincident with the extent of CDFW jurisdiction - pursuant to Section 1600 (et seq.) of the CFG Code within the off-site improvement areas.

The project would result in the loss of 0.12 acres of non-wetland ephemeral waters of the state subject to regulation under Section 1600 (et seq.) of the CFG Code and RWQCB jurisdiction. It is important to note this presents NOREAS' best professional judgment at estimating special aquatic resource area boundaries using the most up-to-date regulations, written policies, and guidance from the resource agencies. However, only the resource agencies can make a final determination of special aquatic resource area boundaries and jurisdiction. These potential direct impacts to jurisdictional waters are considered significant absent mitigation under CEQA.

For direct impacts to 0.12 acres of ephemeral streambeds, permits would be required and typically entail providing mitigation to offset the impacts. RWQCB regulates waters of the state under California's Porter–Cologne Act. California Fish and Game Code Sections 1600–1616 give CDFW regulatory powers over streams and lakes, as well as vegetation associated with these features. MM-BIO-17 (Aquatic Resources Mitigation) would require obtaining permits from the regulatory agencies (i.e., the RWQCB, and CDFW).

In summary, implementation of MM-BIO-17 (Aquatic Resources Mitigation) would reduce potential direct impacts to aquatic resources to less than significant.

Indirect Impacts

Short-Term Construction 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 are considered significant absent mitigation under CEQA.

MM-BIO-3 (Designated Biologist Authority) gives the project's designated biologist the authority to stop work if construction is not compliant with this CEQA document. MM-BIO-4 (Compliance Monitoring) requires that an experienced biologist oversee compliance with the protective measures, including limiting impacts within the project footprint. MM-BIO-5 (Education Program) would provide construction personnel with training related to waters of the state that are present on and adjacent to the impact footprint. MM-BIO-6 (Construction Monitoring Notebook) provides for documentation that the education program was administered to applicable personnel. MM-BIO-11 (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 will be responsible for unauthorized impacts from construction activities to waters of the state that are outside the permitted project footprint, if applicable. Thus, implementation of MM-BIO-3 through MM-BIO-6 and MM-BIO-11 will enable the project to avoid and minimize inadvertent spillover impacts outside of the approved impact footprint.

MM-BIO-12 (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-12 (Hazardous Waste) would help to avoid and minimize impacts to waters of the state from any construction-related chemical spills.

A stormwater pollution prevention plan 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. BMP categories employed on site would include erosion control, sediment control, and non-stormwater good housekeeping. Preparation and implementation of a stormwater pollution prevention plan would help to avoid and minimize the potential effects of stormwater erosion during construction.

Long-Term Operational Impacts

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 are considered significant absent mitigation under CEQA.

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 requirements (California Green Building Standards Code, CCR, Title 24, 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-12 (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-12 (Hazardous Waste) would help to avoid and minimize impacts to western Joshua tree from any operations-related chemical spills.

In summary, implementation of MM-BIO-3, (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), MM-BIO-6 (Construction Monitoring Notebook), MM-BIO-11 (Delineation of Property Boundaries), and MM-BIO-12 (Hazardous Waste) would reduce potential indirect (short-term and long-term) 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. The BSA is located in an area that has been identified by CDFW as having connectivity importance but not having been identified as a channelized area, a species corridor, or a habitat linkage (CDFW 2019). As a result, the BSA 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 in nature. Nearby corridors that could support wildlife movement in the region include an area of land mapped as a part of the linkage design for the California Desert Linkage Network that is located approximately 1.8 miles northeast of the BSA. Additionally, a second area mapped as a linkage for the California Desert Linkage lies approximately 3.6 miles southwest of the BSA (CDFW 2022b).

Direct Impacts

Although the BSA may function as local dispersal habitat for wildlife movement and/or foraging/hunting, the project would not create a significant impediment to wildlife movement that would warrant a wildlife corridor study. 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 be less than significant under CEQA.

Indirect Impacts

Short-Term Construction 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 nighttime. Therefore, implementation of the Project would not result in significant short-term indirect impacts to wildlife corridors and migratory routes.

Long-Term Operational Impacts

Post-construction (long-term) indirect impacts from operations and maintenance activities may include nighttime lighting. These potential long-term indirect impacts to wildlife movement are considered significant absent mitigation under CEQA.

MM-BIO-14 (Lighting) 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.

In summary, implementation of MM-BIO-14 (Lighting) would reduce potential indirect impacts (long-term) 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 Apple Valley Municipal Code (Chapter 9.76) 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

In addition to western Joshua tree, 26 desert native plant species were recorded within the BSA: 6 blue palo verde, 5 Wiggins' cholla, 9 branched pencil cholla, 2 short-joint beavertail, 1 honey mesquite , and 3 Mojave yucca . In total, 14 of these 26 desert native plants would be directly impacted within the on-site BSA: 4 Wiggins' cholla, 3 branched pencil cholla, 5 blue palo verde, 1 Mojave yucca, and 1 short-joint beavertail (Figure 4.3-4A-I). The remaining 3 blue palo verde were documented within the off-site improvement areas associated with existing landscaping and would not be impacted Therefore, because the focused desert native plant survey was positive for Wiggins' cholla, branched pencil cholla, and short-joint beavertail, and in accordance with the CDNPA and Chapter 9.76 of the Apple Valley Municipal Code a native plant removal permit must be obtained from the Town prior to the removal of these individuals. Additionally, these are addressed in the Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan (Appendix D of Appendix C), prepared to provide detailed specifications for the project applicant to meet the requirements of Chapter 9.76 of the Apple Valley Municipal Code to protect, preserve, and mitigate impacts to desert native plants.

Pursuant to MM-BIO-2 (Relocation of Desert Native Plants), the Project applicant shall submit an application and applicable fee paid to the Town for removal or relocation of protected native desert plants (i.e., western Joshua tree) under Town of Apple Valley Municipal Code Chapter 9.76. The application shall 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 Town of Apple Valley Municipal Code. The application will include the Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan (Appendix D of Appendix C). The plan was prepared by a qualified Joshua Tree and native desert plant expert. With the incorporation of mitigation, and with adherence to both the CDNPA and the Town of Apple Valley Municipal Code, impacts associated with western Joshua tree and desert native plants would be less than significant.

Western Joshua Trees

In accordance with Chapter 9.76 of the Apple Valley 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. As such, a Joshua Tree Preservation, Protection, and Relocation Plan, and Desert Native Plant Relocation Plan (Appendix D of Appendix C) was prepared for the project to provide detailed specifications for the project applicant to meet the requirements of Chapter 9.76 of the Apple Valley 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 Town's Protected Plant Policy and provides details for the initial survey of the BSA'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.

The Project could result in potentially significant impacts to native desert plants and western Joshua trees, 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 and 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 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, impacts associated with an adopted habitat conservation plan would be less than significant under CEQA.

In addition, the BSA occurs within the Town of Apple Valley Multiple-Species Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP), which is in the early stages of development, and there is no draft Town of Apple Valley Multiple-Species NCCP/HCP available for review at this time. However, there is a draft Public Review Planning Agreement document (Town of Apple Valley 2017) available for review that contains interim guidelines for the Town. Based on discussions Dudek has had with the Town on other projects in the Town, it is understood that the Town is at least 2 to 3 years away from completing this effort. However, the Town should be contacted for further clarity on this issue and to determine if they are implementing the interim guidelines. The interim guidelines, which should be reviewed in their totality, include requirements that are generally required under CEQA for biological resources, and there are some specific items to note: (1) all reports documenting the presence of listed species will be forwarded to responsible agencies; (2) for projects that propose to restore, enhance, or create habitats, the project will be required to prepare a mitigation plan consistent with USACE Mitigation Rule; (3) for impacts to drainages other than the Mojave River, mitigation must be provided at least a 1:1 ratio, and all avoided drainages must have a buffer of 50 feet in width; (4) endemic plants must be translocated/restored at a 2:1 ratio; (5) areas of steep slopes should be avoided, and a buffer of 100 feet should be provided at the base of steeps slops; and (6) preferred landscaping is native, and planting invasive species is prohibited. In the event that

the NCCP/HCP is approved at the time of project implementation, the biological technical report should be consistent with the Town of Apple Valley Multiple-Species NCCP/HCP.

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 Town of Apple Valley and by the CDNPA. Joshua tree woodlands are considered a sensitive natural community by CDFW (CDFW 2020). As required by MM-BIO-1 (Conservation of Western Joshua Tree Lands), mitigation for direct impacts to 4529 western Joshua trees will consist of a payment of fees consistent with The Western Joshua Tree Conservation Act or through payment to a CDFW-approved mitigation bank. Additionally, as required by MM-BIO-2 (Relocation of Desert Native Plants) and in accordance with Town of Apple Valley Municipal Code Chapter 9.76, 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, LeConte's thrasher, American badger and desert kit fox, and nesting birds and raptors would be reduced to less than significant through Project implementation of MM-BIO-1 through MM-BIO-17. 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-3 (Designated Biologist Authority), MM-BIO-4 (Compliance Monitoring), MM-BIO-5 (Education Program), MM-BIO-6 (Construction Monitoring Notebook), MM-BIO-12 (Hazardous Waste), and MM-BIO-17 (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 special-status wildlife species, burrowing owl and desert kit fox, were observed and would be directly impacted by the project. Three wildlife species were determined to have a moderate potential to occur within the BSA and could occur during construction of the Project: loggerhead shrike, LeConte's thrasher, American

badger. Suitable habitat for loggerhead shrike, LeConte's thrasher, American badger 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 Town of Apple Valley Municipal Code. Implementation of MM-BIO-1 through MM-BIO-16 is required to reduce impacts to less than significant level.

MM-BIO-1 Conservation of Western Joshua Tree Lands. Mitigation for direct impacts to 29 western Joshua trees will be fulfilled through payment of the elected fees as described in Section 1927.3 of The Western Joshua Tree Conservation Act. In conformance with the fee schedule, mitigation will consist of payment of $1,000 for each western Joshua tree five meters or greater in height, and $500 for each western Joshua tree less than five meters in height. Alternatively, mitigation will occur through off-site conservation or through a CDFW-approved mitigation bank, or as required by an Incidental Take Permit, if received.

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 Town of Apple Valley for removal or relocation of protected native desert plants under Town of Apple Valley Municipal Code Chapter 9.76, as required, and shall schedule a pre-construction site inspection with the appropriate authority. In addition, a plot plan shall be approved by the appropriate Town of Apple Valley Review Authority (County Certified Plant Expert, Planning Commission, or Town Council) indicating exactly which trees or plants are authorized to be removed.

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 Town of Apple Valley Municipal Code. Protected plants subject to Town of Apple Valley Municipal Code Chapter 9.76 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 plan was prepared by a qualified western Joshua tree and native desert plant expert(s). The plan shall include, but not be limited to, 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 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-4 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 within the direct impact footprint (i.e., does not include the Project buffer). Weekly written observation and inspection records that summarize oversight activities, compliance inspections, and monitoring activities required by the Incidental Take Permit shall be prepared.

MM-BIO-5 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-6 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 notebook will include a sign-off date page for the designated biologist to sign and date each construction date that the project is in compliance. 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-7 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 Staff Report on Burrowing Owl Mitigation (prepared by the California Department of Fish and Game [now California Department of Fish and Wildlife]) in 2012 or current version.

If burrowing owls are detected, the burrowing owl relocation plan (Appendix J of Appendix C) shall be implemented in consultation with the Town of Apple Valley. As required by the burrowing owl relocation plan, disturbance to burrows shall be avoided during the nesting season (February 1

through August 31). Buffers will be established around occupied burrows as determined by a qualified biologist. 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 if there is a threat to the surface or subterranean burrow structure by installing one-way doors in burrow entrances. These doors will 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 will be provided following the guidance in the CDFW 2012 Staff Report on Burrowing Owl Mitigation or current version.

Where possible, burrows will 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.

Should burrowing owl be located during the pre-construction survey, the project would result in the loss of 210.6 acres of suitable habitat for burrowing owl. Mitigation for direct impacts to 210.6 acres shall be fulfilled through conservation of suitable burrowing owl habitat through the purchase of credits at a minimum of 1:1 in-kind habitat replacement of equal or better functions and values to those impacted by the project, for a total of 210.6 acres.

MM-BIO-8 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 on 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 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 will be determined by the 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 close proximity to an active nest buffer. No project activities may encroach into established buffers without the consent of a monitoring biologist. The buffer shall remain in place until it is determined the nestlings have fledged and the nest is no longer considered active.

MM-BIO-9 Pre-construction Survey for American Badger and Avoidance. A pre-construction survey for American badger shall be conducted within 10 days before initiation of site preparation or grading activities to determine the presence/absence of American badger. If discovered during the survey, an American badger mitigation and monitoring plan shall be developed. The mitigation and monitoring plan shall include avoidance and minimization measures to reduce potential impacts,

as well as compensatory mitigation to offset direct or indirect impacts. The plan will be developed in consultation with the California Department of Fish and Wildlife. At a minimum, the plan shall:

Identify pre-construction survey methods for American badger

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 zone for both active and natal burrows

MM-BIO-10 Pre-construction Survey for Desert Kit Fox and Avoidance. A pre-construction survey for desert kit fox shall be conducted within 10 days before initiation of site preparation or grading activities to determine the presence/absence of desert kit fox.

If desert kit fox is detected, the desert kit fox relocation and mitigation plan shall be implemented. As required by the desert kit fox relocation and mitigation plan, if an active non-natal desert kit fox den is detected, a 200-foot no disturbance buffer will be established around the active den, unless otherwise authorized by the California Department of Fish and Wildlife. Where required buffering will not be feasible, passive relocation, as outlined in the desert kit fox relocation and mitigation plan, is allowed with concurrence from the County of San Bernardino, California Department of Fish and Wildlife, and U.S. Fish and Wildlife Service. If an active natal desert kit fox den is detected, an initial 200-foot no disturbance buffer will be established around the natal den, and this buffer will be maintained until the den can be verified to not host pups. Construction activities will not be permitted in this area until the den has been vacated. Once the den is vacated, and if in danger by construction, it can be collapsed, if deemed necessary by a qualified biologist.

A report to evaluate the success of the relocation efforts and any subsequent re-occupation, if applicable, will be provided (including a comprehensive summary, tables, maps, etc.) at the end of the construction period Data will be readily available to the California Department of Fish and Wildlife upon request. If an injured, sick, or dead desert kit fox is detected on any area associated with the project, the designated California Department of Fish and Wildlife personnel at both the Ontario office and the Wildlife Investigation Lab will be notified as described within the desert kit fox relocation and mitigation plan.

MM-BIO-11 Delineation of Property Boundaries. Before beginning activities that would 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-12 Hazardous Waste. The 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-13 Herbicides. The 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-14 Lighting. Lighting for construction activities and operations within 50 feet of the outside edge of the impact footprint containing habitat for special-status wildlife will be directed away from natural areas.

MM-BIO-15 Trash and Debris. The following avoidance and minimization measures shall be implemented during project construction.

Fully covered trash receptacles that are animal-proof will 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 will be removed at least once a week from the project site.

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-16 Invasive Plant Management. In order 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 Cal-IPC California Invasive Plant Inventory (http://www.cal-ipc.org/ip/inventory/index.php). Post-construction, the 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. Implementation of MM-BIO-2 through MM-BIO-7 and MM-BIO-12 through MM-BIO-13 is required to reduce impacts to a less than significant level. See Section 7.2.3 for the full text of the following mitigation measures:

- **MM-BIO-1** (Conservation of Western Joshua Tree Lands)
- **MM-BIO-2** (Relocation of Desert Native Plants)
- **MM-BIO-3** (Designated Biologist Authority)
- **MM-BIO-4** (Compliance Monitoring)
- **MM-BIO-5** (Education Program)
- **MM-BIO-6** (Construction Monitoring Notebook)
- **MM-BIO-11** (Delineation of Property Boundaries)
- **MM-BIO-12** (Hazardous Waste)
- **MM-BIO-13** (Herbicides)

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 non-wetland waters of the state 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-3, MM-BIO-4, MM-BIO-5, MM-BIO-6, MM-BIO-11, MM-BIO-12, and MM-BIO-17 is required to reduce direct and indirect impacts to a less-than-significant level.

MM-BIO-17 Aquatic Resources Mitigation. The off-site improvement areas support aquatic resources that are considered jurisdictional to the Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Wildlife (CDFW). Prior to construction activity, the applicant shall coordinate with the Lahontan RWQCB (Region 6) and CDFW (Inland Deserts Region 6) to assure conformance with applicable and relevant discretionary permitting requirements.

The project shall mitigate to ensure no-net-loss of state waters at a minimum of 1:1 with re-establishment credits (0.12-acre RWQCB/CDFW) for impacts on aquatic resources as a part of an overall strategy to accomplish no net loss, or at a higher ratio if re-establishment credits are not available. Mitigation shall be completed through 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 shall be prepared in accordance with State Water Resources Control Board guidelines and approved by the agencies in accordance with the proposed program permits. The habitat mitigation and monitoring plan will include but is not limited to 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.

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-14 is required to reduce long-term indirect impacts to a less-than-significant level.

- **MM-BIO-14** (Lighting)

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 and MM-BIO-2 would reduce potential impacts to California desert native plants (western Joshua tree, Wiggins' cholla, branched pencil cholla, and short-joint beavertail) to less than significant.

- **MM-BIO-1** (Conservation of Western Joshua Tree Lands)
- **MM-BIO-2** (Relocation of Desert Native Plants)

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, the West Mojave Plan, the Desert Renewable Energy Conservation Plan, or the Town of Apple Valley Multiple-Species Natural Community Conservation Plan/Habitat 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, desert kit fox, loggerhead shrike, LeConte's thrasher, American badger, 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-18 is required to reduce impacts to less than significant.

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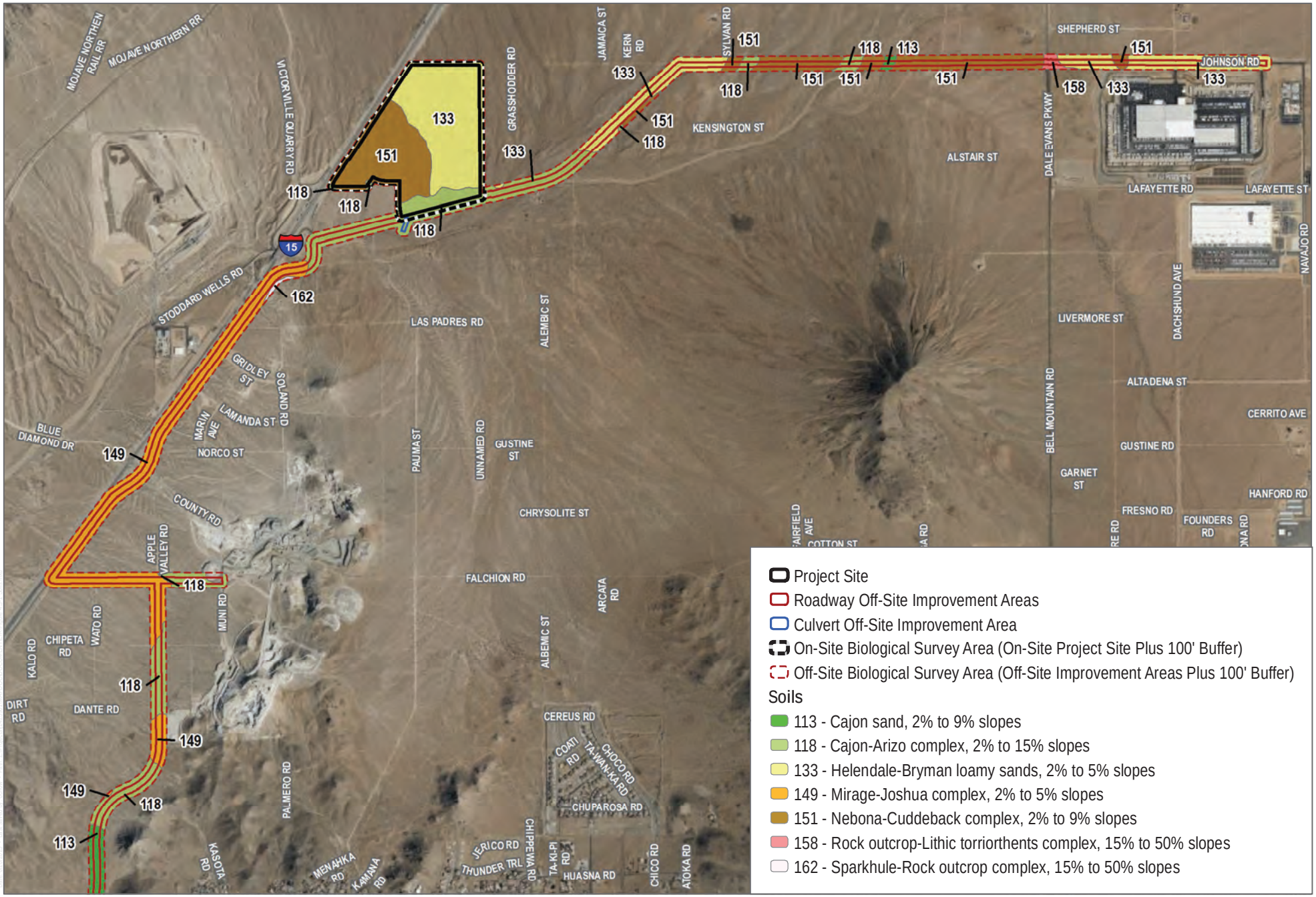
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SOURCE: Bing Maps (accessed 2022); USDA 2021

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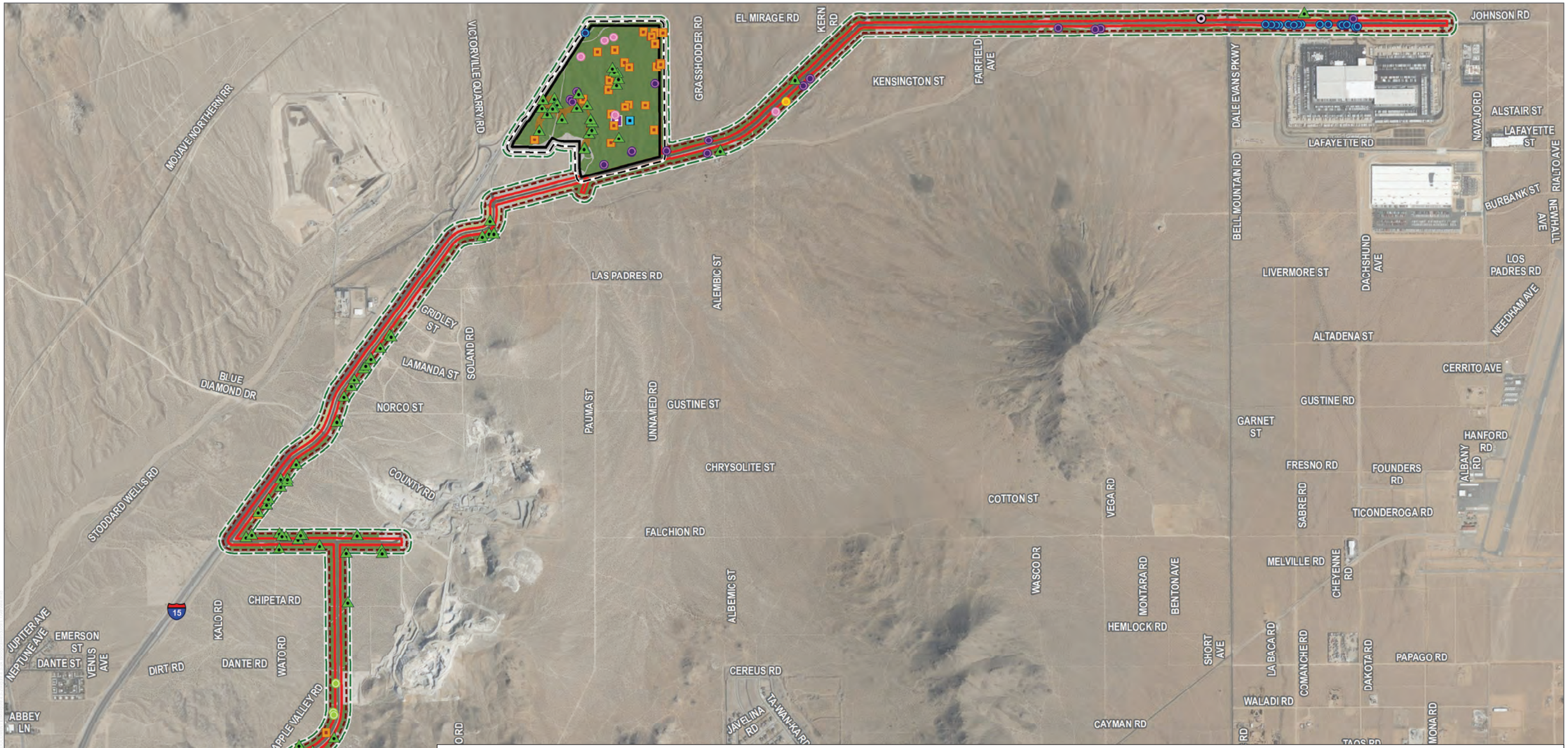
0 1,350 2,700 Feet

FIGURE 4.3-1

Soils

Apple Valley 143 Project

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Project Site
Off-Site Improvement Area
On-Site Biological Survey Area (On-Site Project Site Plus 100' Buffer)
Off-Site Biological Survey Area (Off-Site Improvement Areas Plus 100' Buffer)
Joshua Tree Inventory Survey Area (186' Buffer)
Joshua trees (*Yucca brevifolia*)

Plants
- Wiggin's cholla (*Cylindropuntia echinocarpa*)
- Branched pencil cholla (*Cylindropuntia ramosissima*)
- Beavertail pricklypear (*Opuntia basilaris var. basilaris*)
- Blue palo verde (*Parkinsonia florida*)
- Honey mesquite (*Prosopis glandulosa*)
- Mojave yucca (*Yucca schidigera*)

Wildlife

Burrowing Owl (Athene cunicularia) Burrow Locations
- Active Burrow
- Inactive Suitable Burrow

Kit Fox (Vulpes macrotis) Den Locations
- Active Den
- Inactive Suitable Den

Vegetation Communities and Land Cover Types
- *Ericameria nauseosa* Association (ERINAU)
- *Larrea tridentata* Association (LARTRI)
- *Yucca brevifolia* Alliance (YUBRE)
- Disturbed Habitat (DH)
- Urban/Developed (DEV)

SOURCE: Bing Maps (accessed 2022)

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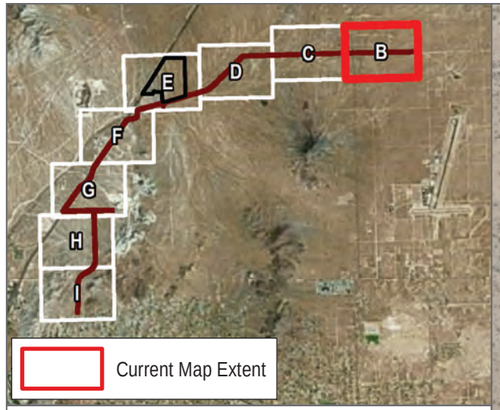
0 1,000 2,000 Feet

FIGURE 4.3-2A

Biological Resources

Apple Valley 143 Project

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- Project Site
- Off-Site Improvement Area
- On-Site Biological Survey Area (On-Site Project Site Plus 100' Buffer)
- Off-Site Biological Survey Area (Off-Site Improvement Areas Plus 100' Buffer)
- Joshua Tree Inventory Survey Area (186' Buffer)
- Joshua trees (*Yucca brevifolia*)

Plants

- Branched pencil cholla (*Cylindropuntia ramosissima*)
- Blue palo verde (*Parkinsonia florida*)

Vegetation Communities and Land Cover Types

- *Ericameria nauseosa* Association (ERINAU)
- *Larrea tridentata* Association (LARTRI)
- Disturbed Habitat (DH)
- Urban/Developed (DEV)

SOURCE: Bing Maps (accessed 2022)

DUDEK

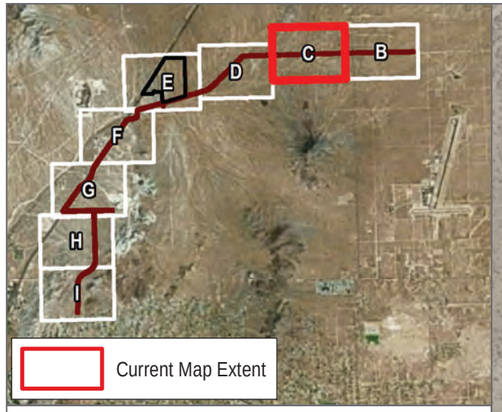
0 200 400 Feet

FIGURE 4.3-2B

Biological Resources

Apple Valley 143 Project

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- Project Site
- Off-Site Improvement Area
- On-Site Biological Survey Area (On-Site Project Site Plus 100' Buffer)
- Off-Site Biological Survey Area (Off-Site Improvement Areas Plus 100' Buffer)
- Joshua Tree Inventory Survey Area (186' Buffer)

Plants

- Branched pencil cholla (*Cylindropuntia ramosissima*)
- Beavertail pricklypear (*Opuntia basilaris var. basilaris*)

Vegetation Communities and Land Cover Types

- *Larrea tridentata* Association (LARTRI)
- Disturbed Habitat (DH)
- Urban/Developed (DEV)

SOURCE: Bing Maps (accessed 2022)

DUDEK

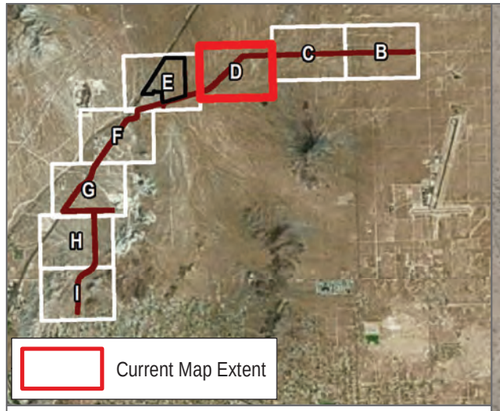
0 200 400 Feet

FIGURE 4.3-2C

Biological Resources

Apple Valley 143 Project

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- Project Site
- Off-Site Improvement Area
- On-Site Biological Survey Area (On-Site Project Site Plus 100' Buffer)
- Off-Site Biological Survey Area (Off-Site Improvement Areas Plus 100' Buffer)
- Joshua Tree Inventory Survey Area (186' Buffer)
- Joshua trees (*Yucca brevifolia*)

Plants

- Wiggin's cholla (*Cylindropuntia echinocarpa*)
- Branched pencil cholla (*Cylindropuntia ramosissima*)
- Honey mesquite (*Prosopis glandulosa*)

Vegetation Communities and Land Cover Types

- *Larrea tridentata* Association (LARTRI)
- Disturbed Habitat (DH)
- Urban/Developed (DEV)

SOURCE: Bing Maps (accessed 2022)

DUDEK

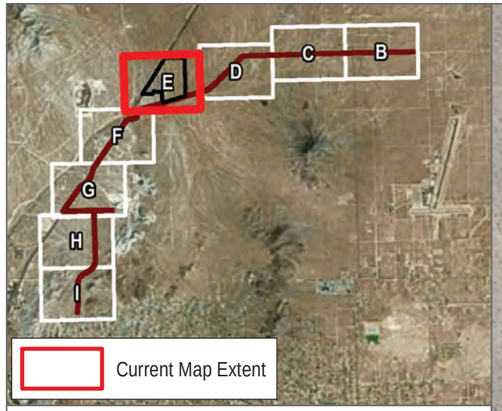
0 200 400 Feet

FIGURE 4.3-2D

Biological Resources

Apple Valley 143 Project

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- Project Site
- Off-Site Improvement Area
- On-Site Biological Survey Area (On-Site Project Site Plus 100' Buffer)
- Off-Site Biological Survey Area (Off-Site Improvement Areas Plus 100' Buffer)
- Joshua Tree Inventory Survey Area (186' Buffer)
- Joshua trees (*Yucca brevifolia*)

Plants

- Wiggin's cholla (*Cylindropuntia echinocarpa*)
- Branched pencil cholla (*Cylindropuntia ramosissima*)
- Blue palo verde (*Parkinsonia florida*)

Wildlife

Burrowing Owl (Athene cunicularia) Burrow Locations

- Active Burrow
- Inactive Suitable Burrow

Kit Fox (Vulpes macrotis) Den Locations

- Active Den
- Inactive Suitable Den

Vegetation Communities and Land Cover Types

- *Ericameria nauseosa* Association (ERINAU)
- *Larrea tridentata* Association (LARTRI)
- *Yucca brevifolia* Alliance (YUBRE)
- Disturbed Habitat (DH)
- Urban/Developed (DEV)

SOURCE: Bing Maps (accessed 2022)

DUDEK

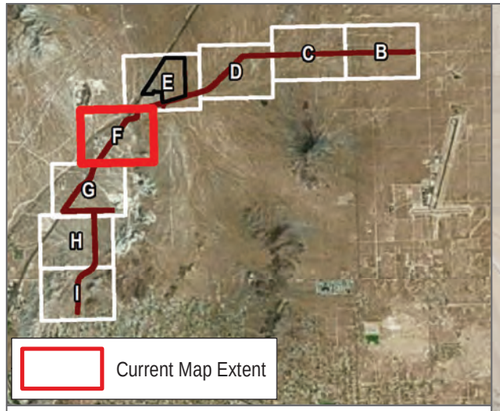
0 210 420 Feet

FIGURE 4.3-2E

Biological Resources

Apple Valley 143 Project

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- Project Site
- Off-Site Improvement Area
- On-Site Biological Survey Area (On-Site Project Site Plus 100' Buffer)
- Off-Site Biological Survey Area (Off-Site Improvement Areas Plus 100' Buffer)
- Joshua Tree Inventory Survey Area (186' Buffer)
- Joshua trees (*Yucca brevifolia*)

Vegetation Communities and Land Cover Types

- *Ericameria nauseosa* Association (ERINAU)
- *Larrea tridentata* Association (LARTRI)
- Disturbed Habitat (DH)
- Urban/Developed (DEV)

SOURCE: Bing Maps (accessed 2022)

DUDEK

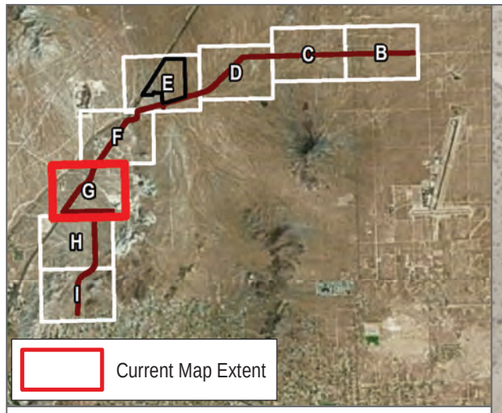
0 200 400 Feet

FIGURE 4.3-2F

Biological Resources

Apple Valley 143 Project

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- Project Site
- Off-Site Improvement Area
- On-Site Biological Survey Area (On-Site Project Site Plus 100' Buffer)
- Off-Site Biological Survey Area (Off-Site Improvement Areas Plus 100' Buffer)
- Joshua Tree Inventory Survey Area (186' Buffer)
- Joshua trees (*Yucca brevifolia*)

Wildlife

Burrowing Owl (Athene cunicularia) Burrow Locations

- Inactive Suitable Burrow

Vegetation Communities and Land Cover Types

- *Ericameria nauseosa* Association (ERINAU)
- *Larrea tridentata* Association (LARTRI)
- Disturbed Habitat (DH)
- Urban/Developed (DEV)

SOURCE: Bing Maps (accessed 2022)

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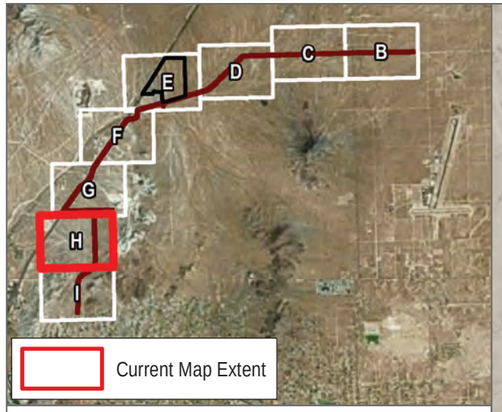
0 200 400 Feet

FIGURE 4.3-2G

Biological Resources

Apple Valley 143 Project

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- Project Site
- Off-Site Improvement Area
- On-Site Biological Survey Area (On-Site Project Site Plus 100' Buffer)
- Off-Site Biological Survey Area (Off-Site Improvement Areas Plus 100' Buffer)
- Joshua Tree Inventory Survey Area (186' Buffer)
- Joshua trees (*Yucca brevifolia*)

Plants

- Mojave yucca (*Yucca schidigera*)

Wildlife

Burrowing Owl (Athene cunicularia) Burrow Locations

- Inactive Suitable Burrow

Vegetation Communities and Land Cover Types

- *Larrea tridentata* Association (LARTRI)
- Disturbed Habitat (DH)
- Urban/Developed (DEV)

SOURCE: Bing Maps (accessed 2022)

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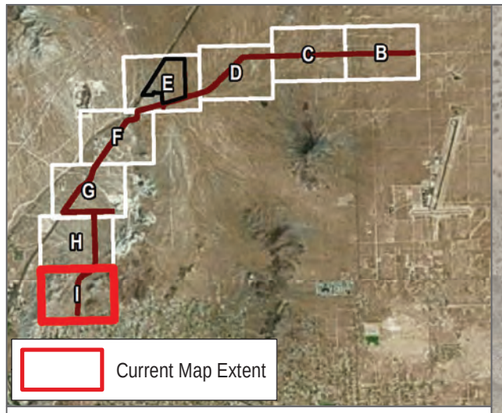
0 200 400 Feet

FIGURE 4.3-2H

Biological Resources

Apple Valley 143 Project

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- Project Site
- Off-Site Improvement Area
- On-Site Biological Survey Area (On-Site Project Site Plus 100' Buffer)
- Off-Site Biological Survey Area (Off-Site Improvement Areas Plus 100' Buffer)
- Joshua Tree Inventory Survey Area (186' Buffer)
- Joshua trees (*Yucca brevifolia*)

Vegetation Communities and Land Cover Types

- *Larrea tridentata* Association (LARTRI)
- Disturbed Habitat (DH)
- Urban/Developed (DEV)

SOURCE: Bing Maps (accessed 2022)

DUDEK

0 200 400 Feet

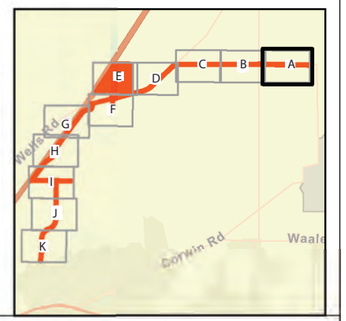
FIGURE 4.3-2I

Biological Resources

Apple Valley 143 Project

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Project Site

Off-Site Areas

Study Area

0 150 300 Feet

1 inch = 333 feet

Data Sources:
- Bing Maps Hybrid and ESRI Reference layer accessed Apr 2023

Map Prepared: 4-14-23

Prepared by:
NOREAS

SOURCE: Noreas 2023

FIGURE 4.3-3A

Aquatic Resources Delineation - Waters of the State

Apple Valley 143 Project

DUDEK

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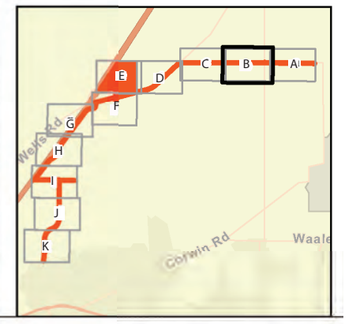


Project Site

Off-Site Areas

Study Area

Waters of the State



0 150 300 Feet

1 inch = 333 feet

Data Sources:
- Bing Maps Hybrid and ESRI Reference layer accessed Apr 2023

Map Prepared: 4-14-23

Prepared by:
NOREAS

SOURCE: Noreas 2023

FIGURE 4.3-3B

Aquatic Resources Delineation - Waters of the State

Apple Valley 143 Project

DUDEK

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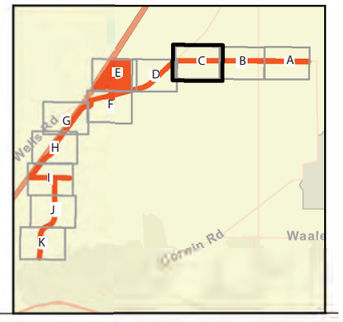


Project Site

Off-Site Areas

Study Area

Waters of the State



0 150 300 Feet

1 inch = 333 feet

Data Sources:
- Bing Maps Hybrid and ESRI Reference layer accessed Apr 2023

Map Prepared: 4-14-23

Prepared by:
NOREAS

SOURCE: Noreas 2023

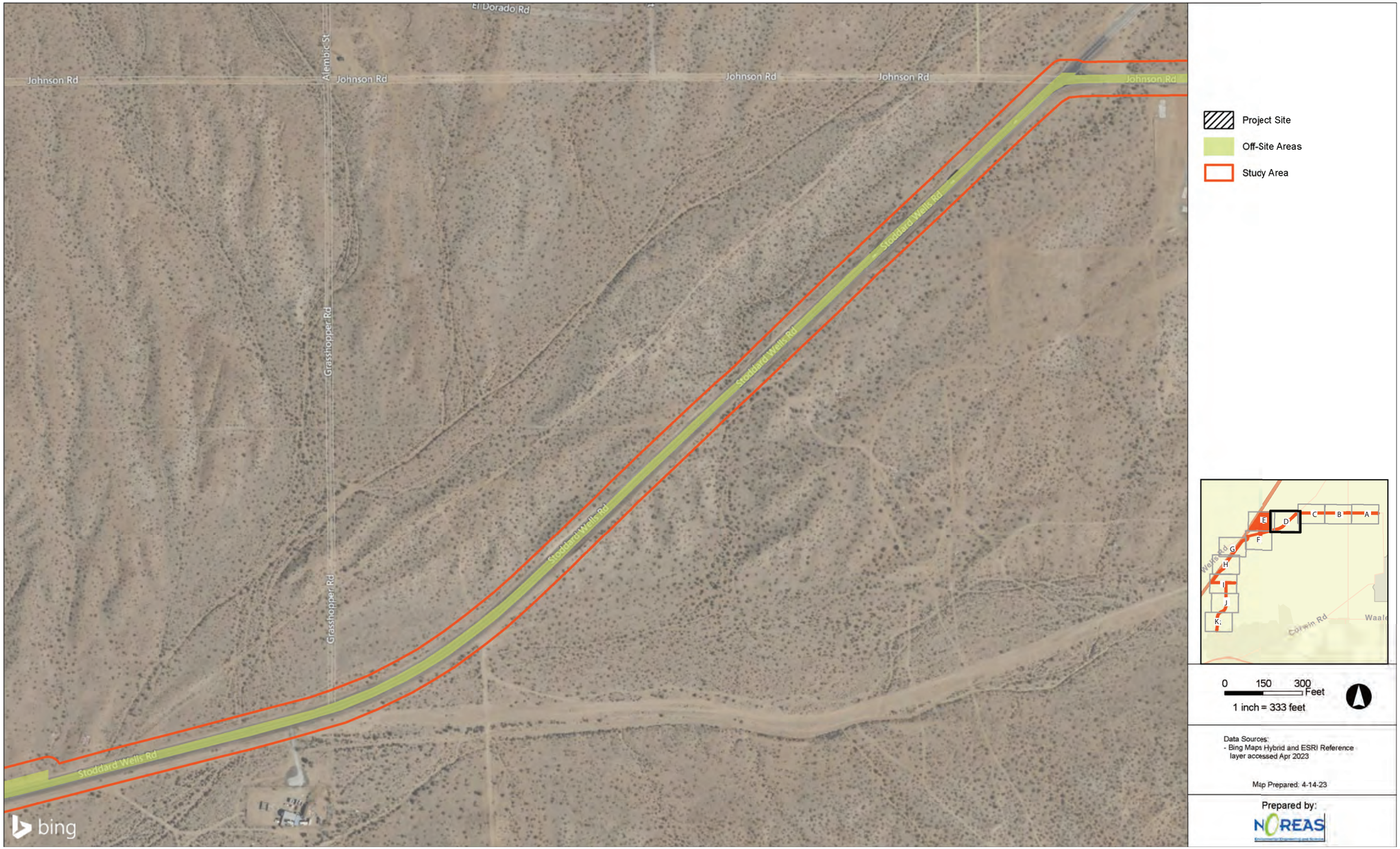
FIGURE 4.3-3C

Aquatic Resources Delineation - Waters of the State

Apple Valley 143 Project

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SOURCE: Noreas 2023

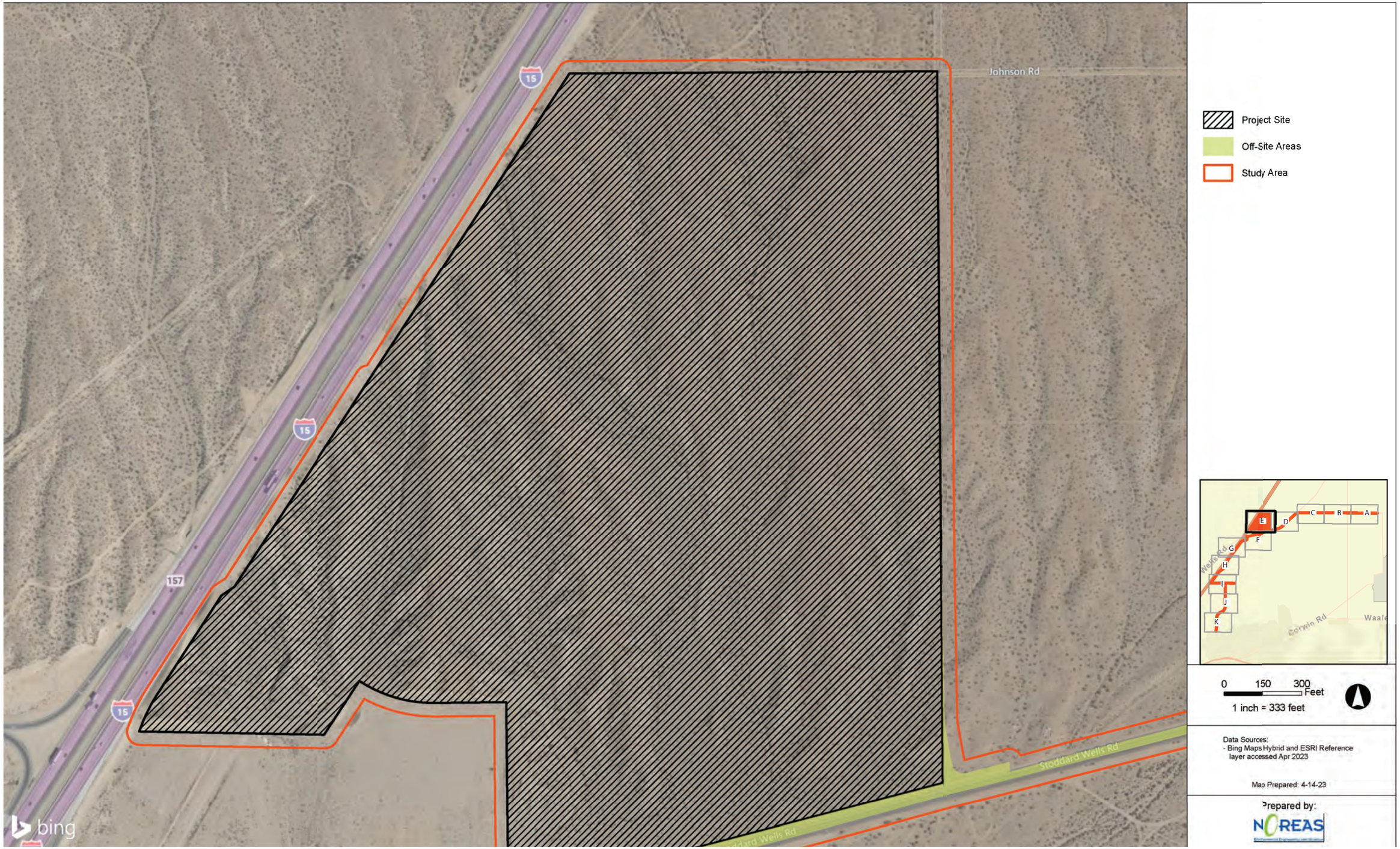
FIGURE 4.3-3D

Aquatic Resources Delineation - Waters of the State

Apple Valley 143 Project

DUDEK

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SOURCE: Noreas 2023

FIGURE 4.3-3E

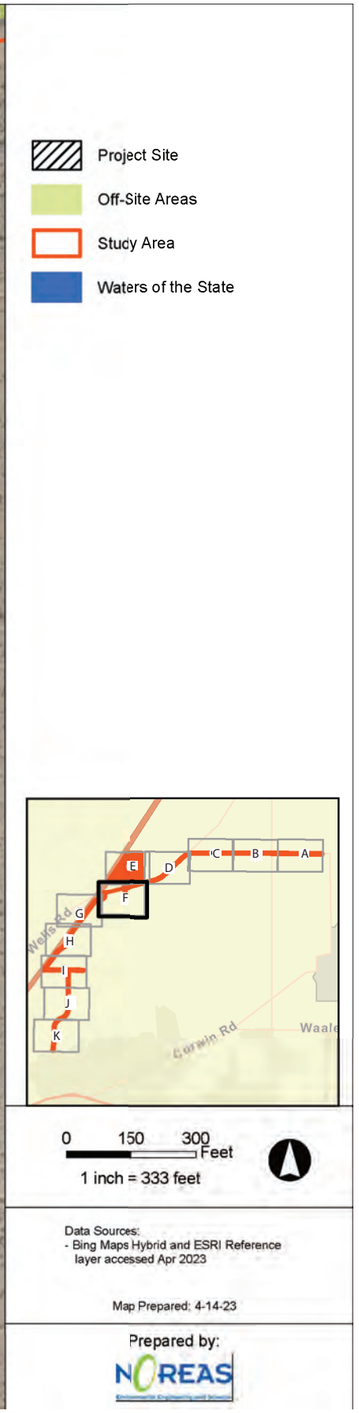
Aquatic Resources Delineation - Waters of the State

Apple Valley 143 Project

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SOURCE: Noreas 2023

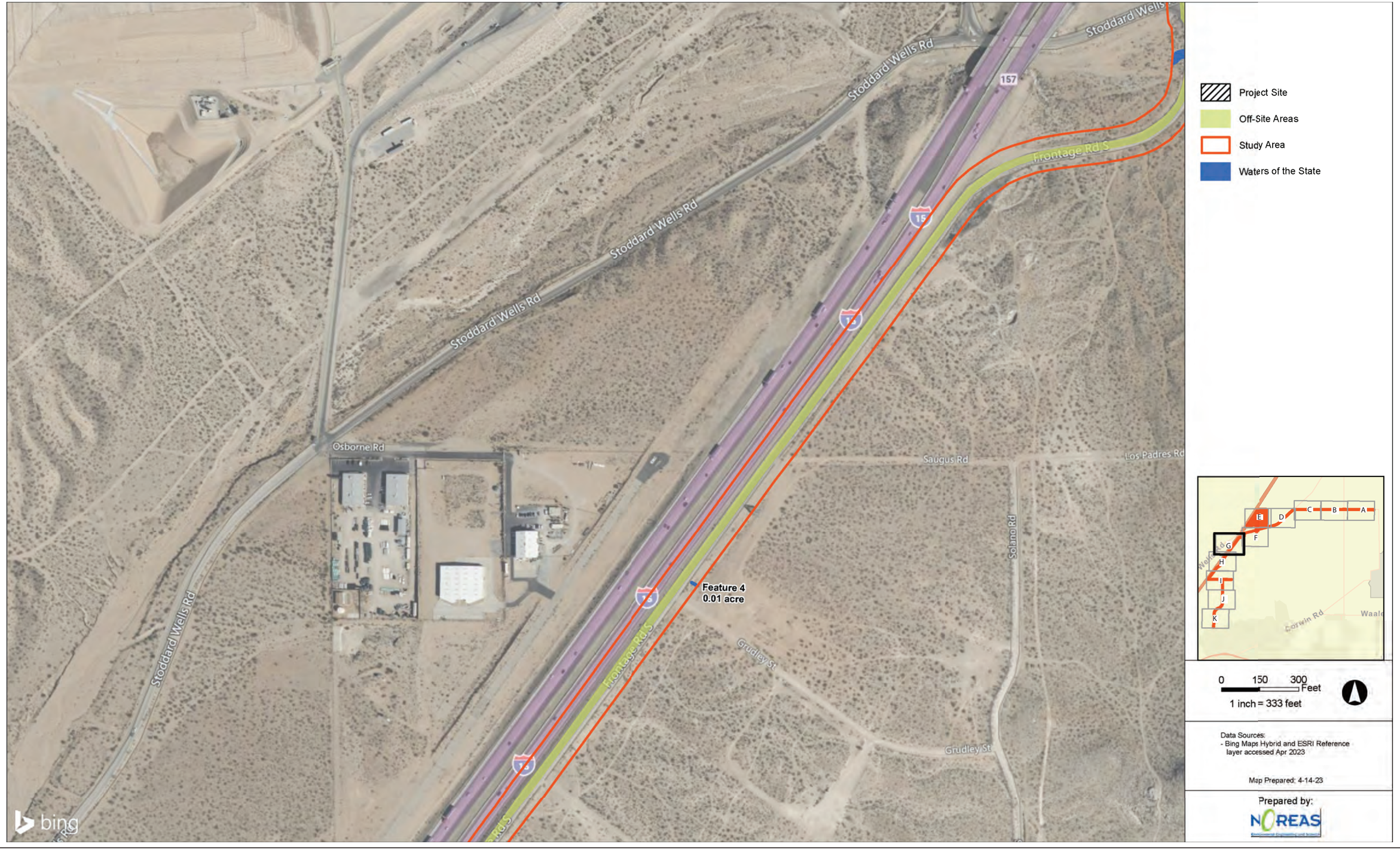
FIGURE 4.3-3F

Aquatic Resources Delineation - Waters of the State

Apple Valley 143 Project

DUDEK

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SOURCE: Noreas 2023

FIGURE 4.3-3G

Aquatic Resources Delineation - Waters of the State

Apple Valley 143 Project

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SOURCE: Noreas 2023

FIGURE 4.3-3H

Aquatic Resources Delineation - Waters of the State

Apple Valley 143 Project

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SOURCE: Noreas 2023

FIGURE 4.3-3I

Aquatic Resources Delineation - Waters of the State

Apple Valley 143 Project

DUDEK

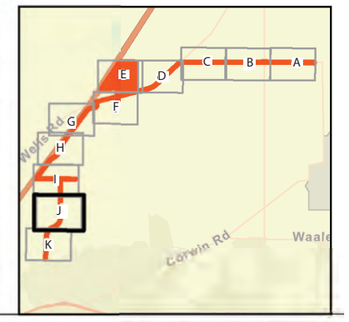
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Project Site

Off-Site Areas

Study Area



0 150 300 Feet

1 inch = 333 feet

Data Sources:
- Bing Maps Hybrid and ESRI Reference layer accessed Apr 2023

Map Prepared: 4-14-23

Prepared by:
NOREAS

SOURCE: Noreas 2023

FIGURE 4.3-3J

Aquatic Resources Delineation - Waters of the State

Apple Valley 143 Project

DUDEK

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SOURCE: Noreas 2023

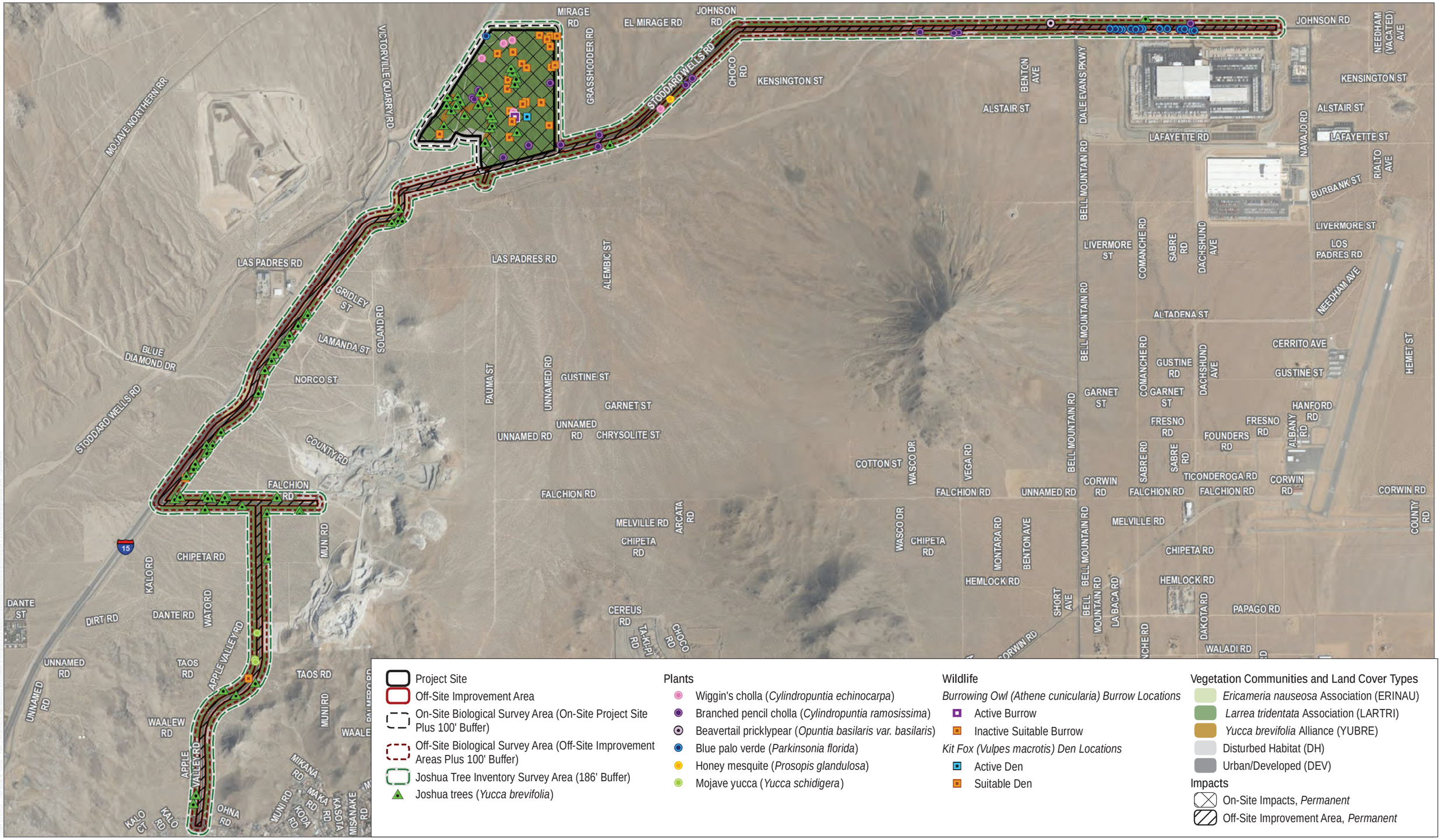
FIGURE 4.3-3K

Aquatic Resources Delineation - Waters of the State

Apple Valley 143 Project

DUDEK

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Project Site
Off-Site Improvement Area
On-Site Biological Survey Area (On-Site Project Site Plus 100' Buffer)
Off-Site Biological Survey Area (Off-Site Improvement Areas Plus 100' Buffer)
Joshua Tree Inventory Survey Area (186' Buffer)
Joshua trees (*Yucca brevifolia*)

Plants

- Wiggin's cholla (*Cylindropuntia echinocarpa*)
- Branched pencil cholla (*Cylindropuntia ramosissima*)
- Beavertail pricklypear (*Opuntia basilaris var. basilaris*)
- Blue palo verde (*Parkinsonia florida*)
- Honey mesquite (*Prosopis glandulosa*)
- Mojave yucca (*Yucca schidigera*)

Wildlife

Burrowing Owl (Athene cunicularia) Burrow Locations

- Active Burrow
- Inactive Suitable Burrow

Kit Fox (Vulpes macrotis) Den Locations

- Active Den
- Suitable Den

Vegetation Communities and Land Cover Types

- *Ericameria nauseosa* Association (ERINAU)
- *Larrea tridentata* Association (LARTRI)
- *Yucca brevifolia* Alliance (YUBRE)
- Disturbed Habitat (DH)
- Urban/Developed (DEV)

Impacts

- On-Site Impacts, *Permanent*
- Off-Site Improvement Area, *Permanent*

SOURCE: Bing Maps (accessed 2022)

DUDEK

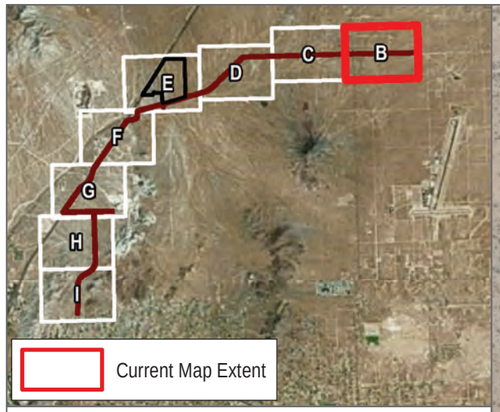
0 1,000 2,000 Feet

FIGURE 4.3-4A

Impacts to Biological Resources

Apple Valley 143 Project

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- Project Site
- Off-Site Improvement Area
- On-Site Biological Survey Area (On-Site Project Site Plus 100' Buffer)
- Off-Site Biological Survey Area (Off-Site Improvement Areas Plus 100' Buffer)
- Joshua Tree Inventory Survey Area (186' Buffer)
- Joshua trees (*Yucca brevifolia*)

Plants

- Branched pencil cholla (*Cylindropuntia ramosissima*)
- Blue palo verde (*Parkinsonia florida*)

Vegetation Communities and Land Cover Types

- *Ericameria nauseosa* Association (ERINAU)
- *Larrea tridentata* Association (LARTRI)
- Disturbed Habitat (DH)
- Urban/Developed (DEV)

Impacts

- Off-Site Improvement Area, *Permanent*

SOURCE: Bing Maps (accessed 2022)

DUDEK

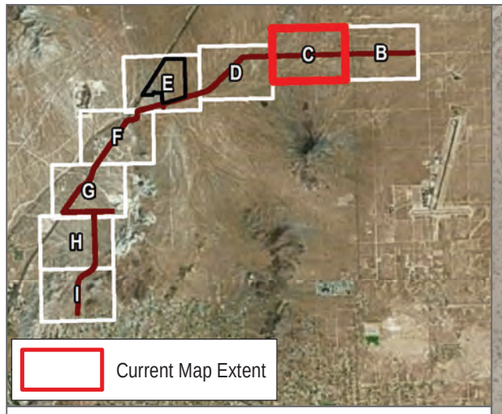
0 200 400 Feet

FIGURE 4.3-4B

Impacts to Biological Resources

Apple Valley 143 Project Biological Resources Technical Report

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Project Site
Off-Site Improvement Area
On-Site Biological Survey Area (On-Site Project Site Plus 100' Buffer)
Off-Site Biological Survey Area (Off-Site Improvement Areas Plus 100' Buffer)
Joshua Tree Inventory Survey Area (186' Buffer)

Plants
- Branched pencil cholla (*Cylindropuntia ramosissima*)
- Beavertail pricklypear (*Opuntia basilaris var. basilaris*)

Vegetation Communities and Land Cover Types
- *Larrea tridentata* Association (LARTRI)
- Disturbed Habitat (DH)
- Urban/Developed (DEV)

Impacts
- Off-Site Improvement Area, *Permanent*

SOURCE: Bing Maps (accessed 2022)

DUDEK

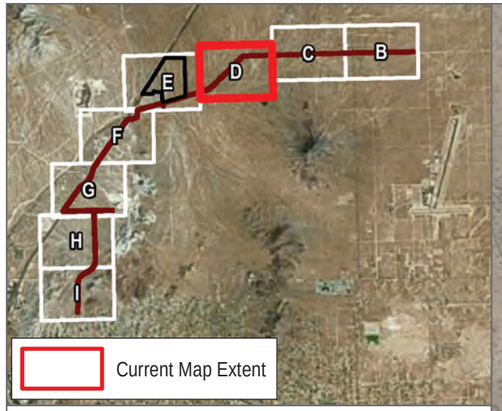
0 200 400 Feet

FIGURE 4.3-4C

Impacts to Biological Resources

Apple Valley 143 Project Biological Resources Technical Report

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- Project Site
- Off-Site Improvement Area
- On-Site Biological Survey Area (On-Site Project Site Plus 100' Buffer)
- Off-Site Biological Survey Area (Off-Site Improvement Areas Plus 100' Buffer)
- Joshua Tree Inventory Survey Area (186' Buffer)
- Joshua trees (*Yucca brevifolia*)

Plants

- Wiggin's cholla (*Cylindropuntia echinocarpa*)
- Branched pencil cholla (*Cylindropuntia ramosissima*)
- Honey mesquite (*Prosopis glandulosa*)

Vegetation Communities and Land Cover Types

- *Larrea tridentata* Association (LARTRI)
- Disturbed Habitat (DH)
- Urban/Developed (DEV)

Impacts

- Off-Site Improvement Area, *Permanent*

SOURCE: Bing Maps (accessed 2022)

DUDEK

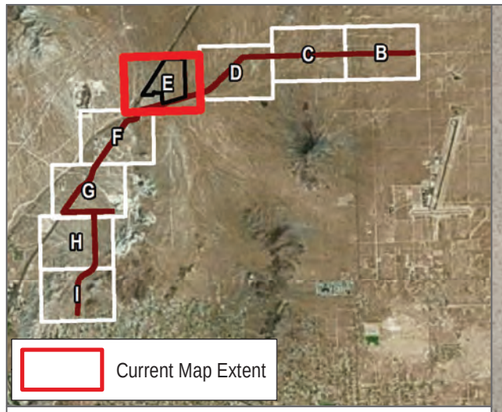
0 200 400 Feet

FIGURE 4.3-4D

Impacts to Biological Resources

Apple Valley 143 Project Biological Resources Technical Report

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- Project Site
- Off-Site Improvement Area
- On-Site Biological Survey Area (On-Site Project Site Plus 100' Buffer)
- Off-Site Biological Survey Area (Off-Site Improvement Areas Plus 100' Buffer)
- Joshua Tree Inventory Survey Area (186' Buffer)
- Joshua trees (*Yucca brevifolia*)

Plants

- Wiggin's cholla (*Cylindropuntia echinocarpa*)
- Branched pencil cholla (*Cylindropuntia ramosissima*)
- Blue palo verde (*Parkinsonia florida*)

Wildlife

Burrowing Owl (Athene cunicularia) Burrow Locations

- Active Burrow
- Inactive Suitable Burrow

Vegetation Communities and Land Cover Types

- *Ericameria nauseosa* Association (ERINAU)
- *Larrea tridentata* Association (LARTRI)
- *Yucca brevifolia* Alliance (YUBRE)
- Disturbed Habitat (DH)
- Urban/Developed (DEV)

Impacts

- On-Site Impacts, *Permanent*
- Off-Site Improvement Area, *Permanent*

SOURCE: Bing Maps (accessed 2022)

DUDEK

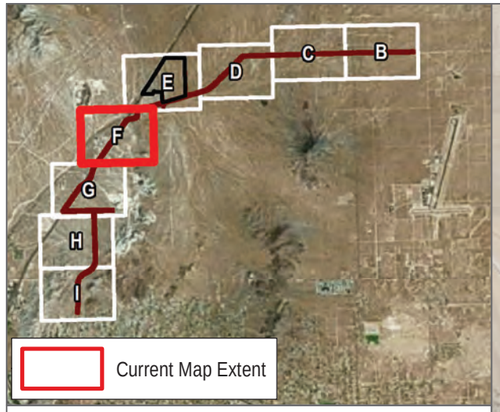
0 210 420 Feet

FIGURE 4.3-4E

Impacts to Biological Resources

Apple Valley 143 Project Biological Resources Technical Report

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- Project Site
- Off-Site Improvement Area
- On-Site Biological Survey Area (On-Site Project Site Plus 100' Buffer)
- Off-Site Biological Survey Area (Off-Site Improvement Areas Plus 100' Buffer)
- Joshua Tree Inventory Survey Area (186' Buffer)
- Joshua trees (*Yucca brevifolia*)

Vegetation Communities and Land Cover Types

- *Ericameria nauseosa* Association (ERINAU)
- *Larrea tridentata* Association (LARTRI)
- Disturbed Habitat (DH)
- Urban/Developed (DEV)

Impacts

- Off-Site Improvement Area, *Permanent*

STODDARD WELLS RD
LAS PADRES RD
SAUGUS RD
15
GRIDLEY ST
SOLANO RD
LAMANDA ST
MARINA VE

SOURCE: Bing Maps (accessed 2022)

DUDEK

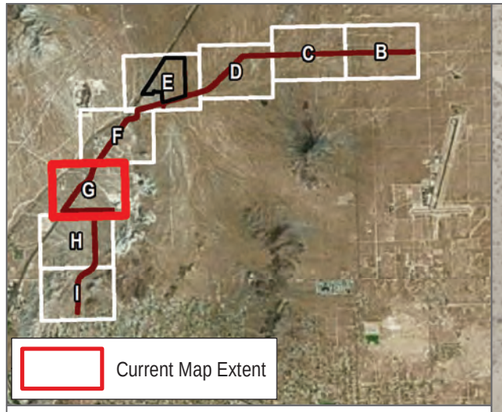
0 200 400 Feet

FIGURE 4.3-4F

Impacts to Biological Resources

Apple Valley 143 Project Biological Resources Technical Report

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- Project Site
- Off-Site Improvement Area
- On-Site Biological Survey Area (On-Site Project Site Plus 100' Buffer)
- Off-Site Biological Survey Area (Off-Site Improvement Areas Plus 100' Buffer)
- Joshua Tree Inventory Survey Area (186' Buffer)
- Joshua trees (*Yucca brevifolia*)

Wildlife

Burrowing Owl (Athene cunicularia) Burrow Locations

- Inactive Suitable Burrow

Vegetation Communities and Land Cover Types

- *Ericameria nauseosa* Association (ERINAU)
- *Larrea tridentata* Association (LARTRI)
- Disturbed Habitat (DH)
- Urban/Developed (DEV)

Impacts

- Off-Site Improvement Area, *Permanent*

BLUE DIAMOND DR
STODDARD WELLS RD
LAMANDA ST
MARINA VE
NORCO ST
COUNTY RD
15
APPLE VALLEY RD
FALCHION RD
WATO RD
APPLE VALLEY RD
MUNI RD

SOURCE: Bing Maps (accessed 2022)

DUDEK

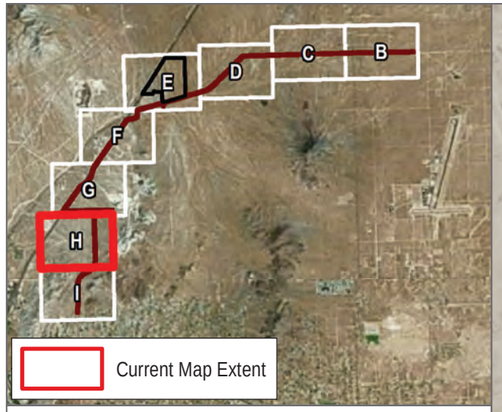
0 200 400 Feet

FIGURE 4.3-4G

Impacts to Biological Resources

Apple Valley 143 Project Biological Resources Technical Report

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- Project Site
- Off-Site Improvement Area
- On-Site Biological Survey Area (On-Site Project Site Plus 100' Buffer)
- Off-Site Biological Survey Area (Off-Site Improvement Areas Plus 100' Buffer)
- Joshua Tree Inventory Survey Area (186' Buffer)
- Joshua trees (*Yucca brevifolia*)

Plants

- Mojave yucca (*Yucca schidigera*)

Wildlife

Burrowing Owl (Athene cunicularia) Burrow Locations

- Inactive Suitable Burrow

Vegetation Communities and Land Cover Types

- *Larrea tridentata* Association (LARTRI)
- Disturbed Habitat (DH)
- Urban/Developed (DEV)

Impacts

- Off-Site Improvement Area, *Permanent*

SOURCE: Bing Maps (accessed 2022)

DUDEK

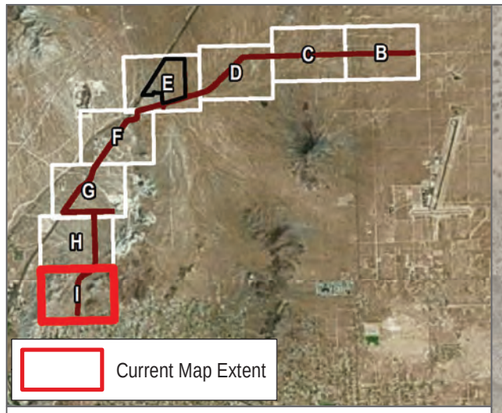
0 200 400 Feet

FIGURE 4.3-4H

Impacts to Biological Resources

Apple Valley 143 Project Biological Resources Technical Report

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- Project Site
- Off-Site Improvement Area
- On-Site Biological Survey Area (On-Site Project Site Plus 100' Buffer)
- Off-Site Biological Survey Area (Off-Site Improvement Areas Plus 100' Buffer)
- Joshua Tree Inventory Survey Area (186' Buffer)
- Joshua trees (*Yucca brevifolia*)

Wildlife

Burrowing Owl (Athene cunicularia) Burrow Locations

- Inactive Suitable Burrow

Vegetation Communities and Land Cover Types

- *Larrea tridentata* Association (LARTRI)
- Disturbed Habitat (DH)
- Urban/Developed (DEV)

Impacts

- Off-Site Improvement Area, *Permanent*

SOURCE: Bing Maps (accessed 2022)

DUDEK

0 200 400 Feet

FIGURE 4.3-4I

Impacts to Biological Resources

Apple Valley 143 Project Biological Resources Technical Report

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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 Apple Valley 143 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 Technical Report for the Apple Valley 143 Project, prepared by Dudek in July 2023 (Appendix D)
- Geotechnical Feasibility Study Proposed Commercial/Industrial Development, prepared by Southern California Geotechnical (Appendix E)

In addition to the sources above, the evaluation of potential impacts to Tribal Cultural Resources is based on the findings resulting from tribal consultation conducted by the Town of Apple Valley, as the lead agency. Other sources referenced are listed in Section 4.4.6, References.

4.4.1 Existing Conditions

This section describes the existing conditions on the Project site, including its environmental and cultural setting and the results of the California Historical Resources Information System (CHRIS) and Native American Heritage Commission (NAHC) Sacred Lands File (SLF) records searches, other background research, pedestrian survey, and the results of formal tribal consultation completed by the lead agency, the Town of Apple Valley (Town), pursuant to California Assembly Bill 52.

Environmental Setting

The currently vacant and undeveloped Project site is situated within the geomorphic province of the Mojave Desert, which is bound to the northwest and south by the Transverse Ranges including the northern peninsular Tehachapi Mountains and the southern San Gabriel Mountains and San Bernardino Mountains. More specifically, the Project site is within Victor Valley in the western Mojave Desert. The Project site is approximately 1.5 miles northwest of Bell Mountain, less than 2.5 miles southeast of Quartzite Mountain, which is located south of Silver Mountain, approximately 4.5 miles west/northwest of Fairview Mountain, approximately 4.5 miles southwest of Turtle Mountain, and over 6.5 miles southwest of Black Mountain. The Project site is south of Turtle Valley, southwest of Sidewinder Valley, and west of Fairview Valley. Water sources near the Project site include the Bell Mountain Wash, and the Oro Grande Wash, tributaries of the Mojave River, approximately 3.5-miles to the southwest, the Mojave River proper approximately 3.8 miles southwest, the California Aqueduct over 13 miles to the southwest, and Spring Valley Lake, an anthropogenic lake created for a country club approximately 6 miles south. The terrain within the Project site consists of desert terraces with elevation ranging between approximately 2,920 and 3,000 feet above mean sea level (amsl) and slopes towards the south (Google 2022). There are no substantial topographical features in the Project site. However, there are ephemeral desert drainages/washes that drain southward are present within the Project site that drain toward the Bell Mountain Wash.

According to the U.S Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2022), the main soil types identified in the Project site and along the off-site improvement alignments consist of: Cajon sand with 2 to 9 percent slopes; Cajon-Arizo Complex with 2 to 15 percent slopes; Helendale-Bryman loamy sand with 2 to 5 percent slopes; Mirage-Joshua Complex with 2 to 5 percent slopes; Nebona-Cuddeback Complex with 2 to 9 percent slopes; Rock Outcrop-Lithic Torriorthents Complex with 15 to 50 percent slopes; and Sparkhule-Rock Outcrop Complex with 15 to 50 percent slopes.

A review of the United States Geological Society (USGS) mineral resources (USGS 2022) online spatial data for geology indicates that native soils within the Project site are comprised of Older Quaternary alluvium and marine deposits from the Pleistocene epoch. The terminal Pleistocene-era alluvial formations do have the potential to support the presence of buried archaeological resources. These soils are associated with the period of prehistoric human use that have potential to preserve cultural material in context, depending on area-specific topographical setting.

Cultural Setting

Prehistoric Overview

Evidence for continuous human occupation in Southern California spans the last 10,000 years. Various attempts to parse out variability in archaeological assemblages over this broad period have led to the development of several cultural chronologies; some of these are based on geologic time, most are based on temporal trends in archaeological assemblages, and others are interpretive reconstructions. To be more inclusive, this research employs a common set of generalized terms used to describe chronological trends in assemblage composition: Paleoindian (before 7500 years ago), Archaic (10,000 – 1500 years ago), Late Prehistoric (1500 BP–AD 1769), and Ethnohistoric (after AD 1769).

Paleoindian Period (before 7500 years ago)

Evidence for Paleoindian occupation has been collected from within an area extending from coastal San Diego, through the Mojave Desert, and beyond. The evidence considered to be the earliest evidence of human adaptation to North American is known as “Clovis.” This consists of fluted projectile points and a highly formal lithic tool kit with almost no processing equipment. Typical Paleoindian period sites consists mainly of projectile points and evidence of lithic production, suggesting a highly mobile big-game hunting society.

Archaic Period (10,000 – 1500 years ago)

The Archaic Period, also known as the Millingstone Horizon, is defined by assemblages consisting of predominantly food processing tools. These tools include millingstones, handstones, battered cobbles, heavy crude scrapers, incipient flake-based tools, and cobble-core reduction. This period suggests local socioeconomic adaptation and a shift from the nomadic lifestyle.

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. In general, this period is defined by the addition of arrow points and ceramics, as well as the widespread use of bedrock mortars.

Ethnohistoric Overview (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. 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. 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.

This is also a particularly important consideration for studies focused on TCRs, where concepts of "cultural resource" and the importance of traditional cultural places are intended to be interpreted based on the values expressed by present-day Native American representatives and may vary from archaeological values (Giacinto 2012).

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."

Historic Setting

The written 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

CHRIS Records Search

On March 24, 2022 and November 22, 2022, in-person records searches of the CHRIS database on file at the South Central Coast Information Center (SCCIC), located on the campus of California State University, Fullerton were conducted. The searches included any previously recorded cultural resources and investigations within a 0.5-mile radius of the Project site. The CHRIS search also included a review of the NRHP, the CRHR, the California Points of Historical Interest list, the California Historical Landmarks list, and the California State Historic Resources Inventory list. The records search results are provided in confidential Appendix A in Appendix D in this Draft EIR[1].

Previously Conducted Cultural Resource Studies

Results of the CHRIS database records search indicate that 15 previous cultural resource studies have been conducted within the 0.5-mile records search area between 1979 and 2007. Of these studies, nine (9), are mapped as adjacent or overlapping the Project site and nine (9) are mapped as adjacent or overlapping the off-site improvements. Five (5) of these reports consist of geographically large-scale studies and/or do not directly address the Project site or off-site improvements. Approximately 10 percent of the Project site and approximately 30 percent of the off-site improvement areas have been previously subjected to cultural resource studies. A detailed listing of all previous cultural resource studies within the Project's records search area is provided in Table 1 of Appendix D. No cultural resources were identified within the Project site and/or the off-site improvements areas as a result of these previous investigations.

Previously Recorded Cultural Resources

The SCCIC records indicate that thirteen (13) cultural resources have been previously recorded within a 0.5-mile radius of the Project site and off-site improvements areas; one is located within the Project site and two are partially located within the off-site improvements. The identified cultural resources include, five (5) historic archaeological sites, and eight (8) built environment resources. A detailed listing of all previously recorded cultural resources within the Project's records search area is provided in Table 2 of Appendix D. Summaries of each cultural resource located within and/or adjacent to the Project site and off-site improvements are provided below.

P-36-009360 [CA-SBR-009360H]

Resource P-36-009360/CA-SBR-009360H is a historic-period road that runs generally east to west for approximately 8.3-miles. The resource is adjacent and south of the Project site and overlaps the off-site improvements area along Stoddard Wells Road. Resource P-36-009360/CA-SBR-009360H is documented as Stoddard Wells Road, a wagon route that became an unpaved road for automobiles; however, the portion that is adjacent to and overlapping the Project site and off-site improvements area, respectively, is now paved. It was originally formally documented in 1998 by Romani and Huey, who reported it as first constructed in 1867. It was revisited in 2006 by Hatheway, who formally evaluated a paved segment of Stoddard Wells Road between the Mojave River and Dale Evans Parkway; this segment of the resource was given the California Office of Historic Preservation (OHP) status code of and 6Z: Found ineligible for NR (National Register), CR (California Register), or Local designation through survey evaluation. Subsequent recordings between 2011 and 2014 include updates to the resource. In 2014, a segment of this resource, located outside the Project site and off-site improvements, at

[1] The confidential records search results which contains sensitive information related to the location of cultural sites is on file with the Town and is available for review by eligible individuals

the intersection of Stoddard Wells Road and Cape Gloucester Avenue was evaluated and given the status code of 3S: Appears eligible in the National Register for separate listing. No other segments have been evaluated according to the related SCCIC records.

P-36-010315 [CA-SBR-10315H]

Resource P-36-010315/CA-SBR-10315H is a historic built environment resource, the Hoover Dam Transmission Line, and runs generally northeast to southwest for approximately 225-miles. The resource alignment overlaps the northwestern corner of the Project site and is documented as a 132kV transmission line running from the Hoover Dam to San Bernardino and was constructed in 1931. It was originally formally documented in 1988 by Neuenschwander and Miller during a Class III cultural resources inventory. The resource was given the OHP status code of 2S2: Determined eligible for separate listing through a consensus determination by a federal agency and the State Historic Preservation Officer.

P-36-012649 [CA-SBR-12348H]

P-36-012649/CA-SBR-12348H is a historic-period road that runs northwest to southeast for approximately 1 mile. The resource intersects the current Project's off-site improvements area along Outer I-15 Road, approximately 1.5 miles to the southwest of the current Project site. Resource P-36-012649/CA-SBR-12348H is documented as consisting of a dirt roadway that was originally formally recorded in 2006 by Roger Hatheway, who described the site as a portion of the old Victorville Lime Rock Company and Riverside Cement Company access road that originally extended from mining activity areas to the east, to Stoddard Wells Road on the west. Additional records of the site include one conducted in 2011, by ICF international, who described the site as unchanged from its previous description by Hatheway. However, in 2014, C. Peterson also recorded the site and noted that the road alignment was substantially altered by the California Division of Highways in 1957-1958, during the completion of I-15 between Victorville and Barstow. This resource was evaluated and was given the OHP status code of and 6Z: Found ineligible for NR, CR, or Local designation through survey evaluation.

Review of Historical Topographic Maps and Aerial Photographs

A review of historical topographic maps and aerial photographs accessed through the Nationwide Environmental Title Research, LLC (NETR) was conducted to better understand any natural or human-made changes to the Project site and surrounding properties over time. A review of historical topographic maps and aerial photographs indicate that the Project site has remained vacant and undeveloped since at least 1952 with minimal disturbances caused by off-site vehicle use, illegal dumping, the installation of Hoover Dam Transmission Line Tower at the northwest corner of the Project site and associated dirt access/maintenance roads, underground pipelines along the perimeter with evidence of discrete grading, including natural aeolian and alluvial activities. Detailed summaries of the historical topographical maps and aerial photographs review are provided in Appendix D in this Draft EIR.

Geotechnical Report Review

To better understand the potential of encountering buried cultural resources, a review of the geotechnical report completed for the Project site was reviewed (Appendix E). The report details the results of six (6) subsurface exploratory borings by a hollow-stem auger drill rig. These subsurface exploratory investigations were placed at accessible locations throughout the Project site to a maximum depth of 20 to 30 feet below the existing 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. The soil characteristics typically consisted of 0 to 12+ feet of

medium dense silty sands with varying gravel content and 20+ feet of dense to very dense sands, clayey sands, silty sands, and gravelly sands. Results of the geotechnical report indicates that should cultural deposits exist within the Project site, they may be encountered within the native younger and older alluvial soils that extend from surface elevation to a maximum depth of 30+ feet bgs. Cultural deposits typically exist within the "A" soil horizon (top soil) and "B" soil horizon (subsoil) that in 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.

Native American Coordination

Sacred Lands File Search

A search of the NAHC's SLF database was completed on April 18, 2022 with positive results; however, it is important to understand that NAHC SLF results relate to the general regional area within and surrounding the project site and don't necessarily equate to the existence of resources within the specific area occupied by the Project site. The NAHC identified 14 Native American individuals who would potentially have specific knowledge as to whether or not Native American cultural resources are identified within the study area that could be at-risk. In compliance with AB 52, the Town has contacted all NAHC-listed traditionally geographically affiliated tribal representatives that have requested formal notification of eligible projects occurring within the Town's jurisdiction. AB 52 consultation efforts conducted by the Town are discussed in sections below. Documentation of the NAHC SLF search results is provided in Appendix B of Appendix D in this Draft EIR.

It should be noted that Sacred Land Files maintained by the NAHC represent a curation of "sacred lands" or tribal cultural resources (TCRs) provided by Tribal entities and Native American representatives. For various reasons, Tribal entities and Native American representatives do no not always report sacred lands or TCRs to the NAHC. As such, the NAHC's SLF is not a comprehensive list, and searches of the SLF must be considered in concert with other research and not used as a sole source of information regarding the presence of TCRs or cultural resources.

Assembly Bill 52 Consultation

The Project is subject to compliance with Assembly Bill (AB) 52, which requires consideration of impacts to TCRs as part of the CEQA process, and that the lead agency notify California Native American Tribal representatives that have requested eligible project notification pursuant to AB 52. AB 52 notification letters were sent by the Town on July 17, 2023, via email. The notification letters contained a brief Project description, outline of AB 52 timing, an invitation to consult, a Project site plan, contact information for the appropriate lead agency representative and the stipulation of a 30-day response period. AB 52 allows tribes 30 days after receiving notification to request consultation. If a response is not received within the allotted 30 days, it can be assumed consultation is declined. 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 Town. Because AB 52 is a government-to-government processes that involves consultation regarding sensitive information, all records of correspondence related to AB 52 notification and any subsequent consultation are on file with the Town. Tribal consultation is ongoing. No responses have been received to date.

Survey Methods and Results

Archaeological Survey

Pedestrian surveys of the Project site were conducted in 2022 on March 25, 26, and 27, August 22, and December 01. The survey area included an approximate 143-acre Project site and the approximately 7.9-mile linear off-site improvement areas. The intensive-level survey methods consisted of a pedestrian survey conducted in parallel transects, spaced no more than 15 meters (approximately 50 feet) apart, where feasible, traversing east to west. The survey area includes an approximate 143-acre Project site and the off-site improvement areas. Deviations from transects only occurred in areas containing steep slopes, dense vegetation, or impassible natural features. With respect to the off-site improvements along Stoddard Wells Road and Johnson Road, each side of these roads were surveyed, within the limits of the off-site improvements. The ground surface was inspected for prehistoric artifacts (e.g., flaked stone tools, tool-making debris, groundstone 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 are only considered if they are 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 three (3) previously recorded overlapping or adjacent resources, P-36-009360/CA-SBR-009360H, P-36-010315/CA-SBR-10315H, and P-36-012649/CA-SBR-12348H, were revisited in order to document the current site conditions.

Ground visibility throughout the Project site was variable and ranged from fair to excellent (50 to 100 percent). Soils within the Project site are alluvial soils found on alluvial fans and/or old terraces and formed from mixed alluvium, granitic rocks, and/or volcanic rocks. Vegetation observed on site included desert grasses, bushes, and trees such as creosote bush scrub and Joshua tree and covered approximately 30 percent of the Project site limiting ground surface visibility. The Project site is generally vacant, and the topography of the site consists of undulating desert terrain with terraces across the landscape with deep and ephemeral drainages and washes that traverse the Project site in various directions and drains naturally to the south, following the drop in elevation within the Project site. Disturbances observed across the site include bioturbation activities, recreational use of the landscape with evidence of off-highway vehicle (OHV) tracks throughout, and opportunistic or episodic roadside dumping of modern refuse comprised of consumer, household, vehicular, and domestic items, including structural debris along trails and informal dirt roads. Also observed were widely dispersed modern and historic-period refuse that appeared to have been deposited/distributed across the site through aeolian and/or alluvial forces.

Both Stoddard Wells Road and Johnson Road are paved; so, a survey of the areas alongside these roads was conducted within the limits of the off-site improvements. Ground surface visibility was variable and ranged from good to excellent (70 to 90 percent). Disturbances to the landscape include various existing utilities that parallel the roads, including man-holes, waterlines, and transmission line poles. Also observed are evidence of mechanical grading, which extends between 2 to 20 feet (0.5 to 6 meters) from the edge of the paved roadway, and sloping of the natural landscape for the creation of the paved roadways and installation and maintenance of the utilities. Modern refuse piles were observed alongside the Stoddard Wells Road and Johnson Road and are a result of opportunistic and episodic roadside dumping and/or aeolian/alluvial activities.

Dudek revisited the location of one previously recorded cultural resource, P-36-010315/CA-SBR-10315H, mapped as within the Project site through the CHRIS records search. Additionally, a previously unknown cultural resource,

Stoddard-H-1, was identified during the pedestrian survey conducted in support of the Project. The following paragraphs provide a summary of the findings for each resource.

Previously Recorded Cultural Resources

P-36-010315/CA-SBR-10315H

As mapped, a portion of resource P-36-010315/CA-SBR-10315H, the Hoover Dam Transmission Line, intersects the northwestern corner of the Project site. The Hoover Dam Transmission Line was previously evaluated and determined eligible for separate listing through a consensus determination by a federal agency and the State Historic Preservation Officer. One of the transmission towers associated with the overall Hoover Dam Transmission Line that intersects the Project site was identified and observed to be mapped correctly and in the condition as documented in the associated Department of Parks and Recreation (DPR) 523 forms on file at the SCCIC. Current Project design does not involve any impacts to the existing transmission tower. Therefore, no further cultural resources considerations are required for this resource.

P-36-009360/CA-SBR-009360H

As mapped, a portion of resource P-36-009360/CA-SBR-009360H, which represents the historic-period Stoddard Wells Road first constructed in 1897, overlaps a portion of the off-site improvements area. Stoddard Wells Road is within the proposed off-site improvements footprint and observed to be mapped correctly and in the condition (paved) as documented in the associated DPR on file at the SCCIC. A paved segment of Stoddard Wells Road was previously evaluated and was found ineligible for NR, CR, or Local designation through survey evaluation. Therefore, no further cultural resources considerations are required for this resource.

P-36-012649/CA-SBR-12348H

As mapped, a portion of resource P-36-012649/CA-SBR-12348H, which represents a historic-period access road associated with the old Victorville Lime Rock Company and Riverside Cement Company that originally extended from mining activity areas east of the Project site, to Stoddard Wells Road, is purported to intersect the proposed off-site improvement areas, specifically Stoddard Wells Road. The road was previously evaluated in 2014 and found to have been significantly altered since it was documented in 2011. As a result of the 2014 survey evaluation, the road was found ineligible for NR, CR, or Local designation through survey evaluation. An effort was made, during this investigation's pedestrian survey, to locate the road as mapped and document the condition of the road since 2014; the findings concluded that the present conditions of the resource are as reported in the most recent records – it has been significantly altered beyond recognition and no integrity of this resource remains. Therefore, no further cultural resources considerations are required for this resource.

Newly Identified Cultural Resource

Stoddard-H-1

Stoddard-H-1 is located in the northeastern quadrant of the Project site, on a natural desert terrace situated adjacent to a wash. The site consists of a series of rock-lined features, a large oval-shaped pit, and historic-period artifacts; the flat portion of the terrace is surrounded by four (4) drainages that each travel downslope and generally southward. None of these features present any subsurface structural components and appear to be surficial,

embedded no deeper than 4 inches (10 centimeters) at most. The depth of the embedding of these rocks, that make up the features, appear to be a result of aeolian and/or alluvial sediment deposition.

The cultural constituents or artifacts identified within and surrounding the features on the terrace include tin cans, metal hardware, glass fragments, ceramic fragments, and metal barrel bands. Observed along the slopes and at the base of the terrace where drainages are present, were additional artifacts similar in type to those identified on the terrace. The total for each research type are as follows: 16 tin cans/lids; 50+ glass fragments in a variety of colors, including aqua, sun-colored amethyst (SCA), colorless, and milk glass; 90+ ceramic fragments; six (6) metal barrel bands; one (1) metal jar lid; one (1) metal spring; four (5) miscellaneous metal hardware; three (3) metal wires; two (2) miscellaneous metal fragments that were heavily corroded with unknown function; and three (3) round nails. Based on the analysis of these diagnostic artifacts, the period of association for the artifacts identified within the site dates between 1903 and 1920 (Rock 1987; sha.org; Birks 2023). A summary of the diagnostic (dateable) resources identified within the site and the date ranges associated with them is provided in Table 4 of Appendix D.

A review of the CHRIS records search results, historical maps and aerial photographs, including in-depth field investigations of the features did not indicate any potential function or indication that the features are prehistoric or historic in age or associated with the artifacts identified. Although the cultural constituents (artifacts) within and surrounding the features within the site are historic in age, they were not observed to be in a discrete deposit, but rather, were scattered and only fragments, partial, or crushed materials remain. The dating of the few resources with diagnostic attributes may provide a date range for these resources observed; however, they are not clearly representative of the collection of resources as a whole and these types of materials are not unique archaeological resources, nor do they provide any information relating to the rock-lined features or the pit. Moreover, the Project site shows evidence of opportunistic and episodic roadside refuse dumping activities and there are OHV tracks that lead to the terrace, and it is therefore highly possible that the cultural constituents identified within this site were a result of those activities. Furthermore, the Project site exhibits evidence of recreational use of the landscape and it is possible that the rock-lined features and the pit may be a result of those activities in more recent times as archival records do not provide any information that would suggest otherwise. Therefore, site Stoddard-H-1 is determined to not be a historical/significant or unique archaeological resource for the purposes of CEQA. The resource was documented on DPR 523 forms; these forms are included in the Confidential Appendix of Appendix D of this Draft EIR.

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, and TCRs:

- 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.

Regarding paleontological resources, 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.

CEQA Guidelines Section 15064.5(b)(2)

Pursuant to these sections, the CEQA first evaluates evaluating whether a project site contains any "historical resources," then assesses 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.

When a project significantly affects a unique archeological resource, CEQA imposes special mitigation requirements. Specifically, "[i]f it can be demonstrated that a project will cause damage to a unique archeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. Examples of that treatment, in no order of preference, may include, but are not limited to, any of the following:"

1. "Planning construction to avoid archeological sites."
2. "Deeding archeological sites into permanent conservation easements."
3. "Capping or covering archeological sites with a layer of soil before building on the sites."

California Public Resources Code Section 21083.2(b)(1)-(4)

If these "preservation in place" options are not feasible, mitigation may be accomplished through data recovery (California Public Resources Code Section 21083.2(d); CEQA Guidelines Section 15126.4(b)(3)(C)). California Public Resources Code Section 21083.2(d) states that "[e]xcavation as mitigation shall be restricted to those parts of the unique archeological resource that would be damaged or destroyed by the project. Excavation as mitigation shall not be required for a unique archeological resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the resource, if this determination is documented in the environmental impact report."

These same requirements are set forth in slightly greater detail in CEQA Guidelines Section 15126.4(b)(3), as follows:

4. Preservation in place is the preferred manner of mitigating impacts to archeological sites. Preservation in place maintains the relationship between artifacts and the archeological context. Preservation may also avoid conflict with religious or cultural values of groups associated with the site.
5. Preservation in place may be accomplished by, but is not limited to, the following:
    a. Planning construction to avoid archeological sites;
    b. Incorporation of sites within parks, greenspace, or other open space;
    c. Covering the archeological sites with a layer of chemically stable soil before building tennis courts, parking lots, or similar facilities on the site [; and]
    d. Deeding the site into a permanent conservation easement.
6. When data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provision for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken.
7. Note that, when conducting data recovery, "[i]f an artifact must be removed during project excavation or testing, curation may be an appropriate mitigation." However, "[d]ata recovery shall not be required for an historical resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archeological or historic resource, provided that determination is documented in the EIR and that the studies are deposited with the California Historical Resources Regional Information Center" (CEQA Guidelines Section 15126.4(b)(3)(D)). "Planning parks, greenspace, or other open space to incorporate archeological sites."

PRC Section 5097.5

The 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.

Assembly Bill 52

Assembly Bill 52 of 2014 (AB 52) amended PRC Section 5097.94 and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3.

Consultation with Native Americans

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

Tribal Cultural Resources

Section 4 of AB 52 adds Sections 21074 (a) and (b) to the PRC, addressing tribal cultural resources (TCRs) and cultural landscapes. Section 21074 (a) defines tribal cultural resources as one of the following:

8. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
   a. Included or determined to be eligible for inclusion in the California Register of Historical Resources.
   b. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
9. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

Section 1 (a)(9) of AB 52 establishes that "a substantial adverse change to a tribal cultural resource has a significant effect on the environment." Effects on tribal cultural resources should be considered under CEQA. Section 6 of AB 52 adds Section 21080.3.2 to the PRC, which states that parties may propose mitigation measures "capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to a tribal cultural resource." Further, if a California Native American tribe requests consultation regarding project alternatives, mitigation measures, or significant effects to tribal cultural resources, the consultation shall include those topics (PRC Section 21080.3.2[a]). The environmental document and the mitigation monitoring and reporting program (where applicable) shall include any mitigation measures that are adopted (PRC Section 21082.3[a]).

Native American Historic Cultural Sites

The Native American Historic Resources Protection Act (California 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.

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 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.

Local

Town of Apple Valley General Plan

The Town of Apple Valley General Plan contains the following goals and policies that address cultural resources and are applicable to the Project.

Archaeological and Historic Resources Element

Goal. That all elements of the Town's cultural heritage, including archaeological and historic sites, artifacts, traditions and other elements, shall be professionally documented, maintained, preserved, conserved and enhanced.

Policy 1A. Early in the planning process, the Town shall implement its obligation to identify, document and assess archaeological, historical and cultural resources that proposed development projects and other activities may affect.

Policy 1B. The Town shall establish and maintain a confidential inventory of archaeological and historical resources within the Town, including those identified in focused cultural resources studies.

Policy 1C. The Town shall, to the greatest extent possible, protect sensitive archaeological and historic resources from vandalism and illegal collection.

Policy 1D. Public participation in and appreciation of the Town's cultural heritage shall be encouraged.

The Town of Apple Valley General Plan discusses the potential for recovery of significant paleontological resources within the Town and sphere of influence based on surficial geological mapping. However, no goals or policies are detailed in the plan for paleontological resources

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 Impact 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 National Register of Historic Places (NRHP) or California Register of Historical Resources (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" (Public Resources Code 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 Public Resources Code Section 5024.1[q]), it is a historical resource and is presumed to be historically or culturally significant for the purposes of CEQA (Public Resources Code Section 21084.1; 14 CCR 15064.5[a]).

A review of historical topographic maps and aerial photographs indicate that the Project site has remained vacant and undeveloped since at least 1952 with minimal disturbances caused by off-site vehicle use, illegal dumping, the installation of Hoover Dam Transmission Line Tower at the northwest corner of the Project site and associated dirt access/maintenance roads, underground pipelines along the perimeter with evidence of discrete grading, including natural aeolian and alluvial activities.

The CHRIS records search identified three previously recorded cultural resources that either overlap or are adjacent to the Project site and/or off-site improvements. These resources consist of two historic period roads (P-36-009360/CA-SBR-009360H and P-36-012649/CA-SBR-12348H), and one historic transmission line

(P-36-010315/CA-SBR-10315H). The cultural resource pedestrian survey re-visited the mapped locations of the previously recorded resources. Resource P-36-010315/CA-SBR-10315H was previously evaluated and determined eligible; however, no impacts to this resource are anticipated as a result of Project construction. Resources P-36-009360/CA-SBR-009360H and P-36-012649/CA-SBR-12348H were previously evaluated and found ineligible for NR, CR, or Local designation through survey evaluation. The intensive-level pedestrian survey resulted in the identification of one newly identified archaeological site, Stoddard-H-1, which has been found eligible for listing in the CRHR or local register as a significant archaeological resource as it does not meet any of the criteria and has been assigned a California Historical Resource Status Code of 6Z (found ineligible for the NRHP, CRHR, or local designation through survey evaluation). As such, site Stoddard-H-1 is not a historical/significant or unique archaeological resource under CEQA. Resource Stoddard-H-1 has been documented on Department of Parks and Recreation (DPR) 523 forms. The DPR for Stoddard-H-1 is provided in confidential Appendix C in Appendix D in this Draft EIR[2]. No further cultural considerations are required for this resource.

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 (archaeological in nature) to exist within native soils to the depths of proposed ground disturbance is unknown. In the event that unanticipated cultural resources are encountered during Project implementation, an assessment and evaluation of the resource by a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, 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 **MM-CUL-1** through **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 respond to and address any inadvertent discoveries and conduct spot monitoring. **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** through **MM-CUL 3,** potentially significant impacts to yet unknown 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 Impact with Mitigation Incorporated. A CHRIS database records search, Native American Heritage Commission (NAHC) Sacred Lands File (SLF) search, background research, including a review of a geotechnical report, and archaeological pedestrian surveys were conducted for the Project site and off-site improvements. The NAHC's SLF search result was positive, however, the SLF record is maintained at a Public Land Survey System Section level, which indicates a recorded sacred site could be anywhere within this 1-square-mile (640-acre) area and therefore, does not necessarily equate to the existence of resources within the specific area occupied by the Project site. The CHRIS database search identified three resources that either overlap or are adjacent to the Project site and/or off-site improvements and include two historic period roads (P-36-009360/CA-

[2] The confidential records search results which contains sensitive information related to the location of cultural sites is on file with the Town and is available for review by eligible individuals

SBR-009360H and P-36-012649/CA-SBR-12348H) that are now paved, and one historic transmission line that is a built environment resource (P-36-010315/CA-SBR-10315H). As stated in Threshold A above, resources P-36-009360/CA-SBR-009360H and P-36-012649/CA-SBR-12348H were previously evaluated and found ineligible for NR, CR, or Local designation through survey evaluation. Additionally, these resources are roads which do not typically and there is no evidence that these include a subsurface component. Considering the original condition of these resources has been significantly altered, the Project does not pose a potential for adverse change outside of what has already occurred.

In addition to the previously identified cultural resources, an additional resource, Stoddard-H-1, was newly identified during the pedestrian survey conducted in support of the Project. Stoddard-H1 consists of three (3) rock-lined features and a historic-period artifact scatter located atop a terrace in the northeastern quadrant of the Project site. Neither the features nor the artifact scatter appear to include subsurface components. Based on the analysis of the diagnostic artifacts, the period of association for the artifacts date between 1903 and 1920. However, given that rock features do not appear to serve a practical function or indication that they are prehistoric or historic in age or associated with the artifacts identified and because the artifacts identified are not unique archaeological resources, site Stoddard-H-1 does not appear eligible for listing in the CRHR or local register as a significant or unique archaeological resource under any of the criteria. Furthermore, the Project site exhibits evidence of consistent recreational use of the landscape exposing Stoddard-H-1 to significant disturbance. As a result, the Project would not pose a potential for adverse change outside of what has already occurred.

Finally, results of the geotechnical report indicate that native younger and older alluvial soils extend within the Project site 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) of native soils that in 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. Consequently, the potential for intact archaeological deposits to exist within native soils to the depths of assumed ground disturbance is unknown. If yet unknown archaeological resources were encountered inadvertently as a result of Project implementation and those resources were determined to meet the criteria of a unique archaeological resource or historical resource, there is potential for the Project to cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.

Thus, mitigation is required to address impacts related to the inadvertent discovery of archaeological resources, as outlined in **MM-CUL-1** through **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 respond to and address any inadvertent discoveries and conduct spot monitoring. **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** through **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 Impact. No prehistoric or historic period burials, within or outside of formal cemeteries, were identified within the Project site or off-site improvement areas as a result of the CHRIS records search or pedestrian survey. Although the NAHC's SLF search result was positive, it is important to note that the results of the SLF

provided by the NAHC relate to the general regional area within and surrounding the Project site and don't necessarily equate to the existence of resources or human remains within the specific Project site. In the event that human remains are inadvertently encountered during ground disturbing activities, they would be treated consistent with state and local regulations including California Health and Safety Code Section 7050.5, California Public Resources Code Section 5097.98, and the California Code of Regulations Section 15064.5(e). In accordance with these regulations, if human remains are found, the County Coroner must be immediately notified of the discovery. No further excavation or disturbance of the Project site or off-site improvement areas or any nearby (no less than 100 feet) area reasonably suspected to overlie adjacent remains can occur until the County Coroner has determined if the remains are potentially human in origin. If the County Coroner determines that the remains are, or are believed to be, Native American, he or she is required to notify the NAHC that shall notify those persons believed to be the most likely descendant. The most likely descendant shall determine, in consultation with the property owner, the disposition of the human remains. Compliance with these regulations would ensure that impacts to human remains resulting from the Project 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 Impact with Mitigation Incorporated**.** No previously recorded archaeological resources of Native American origin or TCRs listed in the CRHR or a local register were identified within the Project site through the SCCIC records. Although a search of the NAHC's SLF database for the Project site was positive for the presence of reported Native American cultural resources, the SLF record is maintained at a PLSS Section level, which indicates a recorded sacred site could be anywhere within this one square mile (640 acre) area of the Project site. Further, at this time, no TCRs have been identified by California Native American tribes as part of the Town's AB 52 notification and consultation process that would warrant discretionary designation of a resource as a TCR. Therefore, the Project would not adversely affect TCRs that are listed or eligible for listing in the state or local register and the Town determined that no substantial evidence has been presented that would demonstrate a significant TCR (pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1) exists within the Project site or off-site improvement areas. Notwithstanding, MM-CUL-3 is required to help ensure the proper treatment of TCRs that may be inadvertently encountered during ground-disturbing activities. With incorporation of MM-CUL-3, and MM-CUL-4 through MM-CUL-8, 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 Impact with Mitigation Incorporated. 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 (California Geological Survey [CGS] 2002). According to surficial geological mapping by Dibblee (1960a, b) at a 1:62,500 scale and the geological time scale of Cohen et al. (2022), the Project area is underlain by Holocene (< 11,700 years ago) alluvial deposits (map unit Qa) and Pleistocene (approximately 11,700 years ago – 2.58 million years ago) older alluvial deposits (map unit Qoa). Holocene alluvial deposits are typically an unconsolidated mixture of clay, silt, sand, and gravel. Pleistocene older alluvial deposits are typically weakly consolidated alluvial gravel, sand, and silt.

No unique geologic features, such as unique erosional features or rock outcrops, have been identified on the Project site by land surveyors, cultural resource teams, and other field staff that have conducted surveys of the Project site. As such, the Project would not directly or indirectly destroy a unique geological feature.

With regard to paleontological resources, Dudek requested a paleontological records search from the Natural History Museum of Los Angeles County (NHMLA) on August 11, 2022 and the results were received on August 14, 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 on the surface and at depth (Pleistocene alluvial deposits and the Pleistocene Shoemaker Gravel). Fossil locality, LACM (Los Angeles County Museum) VP (Vertebrate Paleontology) 1224 produced a fossil camel (Camelidae) from the Shoemaker Gravel north of Hesperia in southern Victorville from an unknown depth below the ground surface (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. From between 10 and 11 feet bgs in Pleistocene alluvial deposits, a fossil vole (*Microtus mexicanus*) (LACM VP 7786) was recovered near the Southern California Logistics Airport in Victorville. Finally, the NHMLA reported a locality, LACM VP CIT 209, produced a mammoth (*Mammuthus*) and horse (*Equus*) from an unknown depth bgs in the Shoemaker Gravels northwest of Victorville, in bluffs on the west side of the Mojave River.

The Holocene alluvial deposits, aged less than 11,700 years ago, have not been shown to produce any fossil resources due to their young age and therefore, these deposits have low paleontological sensitivity.

The Pleistocene older alluvial deposits in this area are late to latest Irvingtonian North American Land Mammal Age (approximately 250,000 years ago). In addition to the localities listed in the records search, a composite assemblage located at the San Bernardino County Museum (SBCM 1.114.29, 1.114.7, 1.114.3, 1.114.6-1.114.24, 1.114.25-1.114-26, 1.114.27-1.114.28) has produced fossils from the following taxa: tortoise, several types of rodents, multiple types of camels, multiple types of horses, mammoths, deer, bison, and rabbits (Jefferson 1991 a, b; Jefferson 2012). Pleistocene older alluvial sediments have high paleontological sensitivity.

No paleontological resources were identified within the Project site as a result of the institutional records search or desktop geological and paleontological review. In addition, the Project site is not anticipated to be underlain by unique geologic features. Areas of the Project site underlain by Holocene alluvial deposits (within the Mountain Wash Drainage) have low paleontological sensitivity increasing to moderate or high with depth, and the Pleistocene older alluvial deposits within the majority of the Project area have high paleontological sensitivity. If intact

paleontological resources are located onsite, ground-disturbing activities associated with construction of the Project, such as grading during site preparation and trenching for utilities, have the potential to destroy a unique paleontological resource or site. As such, the Project site is considered to be potentially sensitive for paleontological resources, and without mitigation, the potential damage to paleontological resources during project construction is considered a potentially significant impact. Given the proximity of past fossil discoveries in the surrounding area within Pleistocene alluvial deposits and/or the Shoemaker Gravel, the Project site is highly sensitive for supporting paleontological resources below the depth of fill and weathered, Pleistocene alluvial deposits. However, upon implementation of **MM-CUL-9**, impacts would be reduced to below a level of significance. Impacts of the Project are considered **less than significant with mitigation incorporated** during construction**.**

Threshold G: Would the Project result in a cumulatively considerable impact to cultural, tribal cultural, or paleontological resources?

Less than Significant Impact 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 of undeveloped areas, which could potentially contain significant, buried archaeological, paleontological, or tribal cultural resources. 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 incorporation of mitigation measures (MM-CUL-1 through MM-CUL-9). 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 potentially significant impact with regard to historical resources. With implementation of MM-CUL-1 through MM-CUL-3, impacts associated with potential historical 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 shall be briefed regarding unanticipated discoveries prior to the start of construction activities. A basic presentation shall 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 shall 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 shall 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 shall 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, shall 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 shall be responsible for maintaining monitoring logs. Following the completion of construction, the qualified archaeologist shall provide an archaeological monitoring report to the lead agency and the SCCIC with the results of the cultural 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 shall 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 (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 compliance with Section 7050.5 of the California Health and Safety Code and Section 5097.98 of the California Public Resources Code, 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.

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, and MM-CUL-4 through MM-CUL-8, impacts associated with TCRs would be **less than significant with mitigation incorporated.**

MM-CUL-4 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 consulting Tribe(s) shall be contacted, as detailed within MM-CUL-7, 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.

MM-CUL-5 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 consulting Tribe(s) 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-6 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-7 The consulting Tribe(s) shall be notified, as detailed in MM-CUL-4, 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 consulting Tribe(s), and all subsequent discoveries shall be subject to this Plan. This Plan shall allow for a monitor to be present representing the consulting Tribe(s) for the remainder of the Project, should the consulting Tribe(s) elect to place a monitor on site.

MM-CUL-8 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 consulting Tribe(s). The Lead Agency and/or applicant shall, in good faith, consult with the consulting Tribe(s) 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 with regard to the potential to destroy a unique paleontological resource. With implementation of **MM-CUL-9**, impacts associated with unique paleontological resources would be **less than significant**.

MM-CUL-9 Paleontological Resources Impact Mitigation Program. Prior to commencement of any grading activity on-site, the applicant shall retain a qualified paleontologist per the Society of Vertebrate Paleontology (SVP) (2010) guidelines. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the project. The PRIMP shall be consistent with the SVP (2010) guidelines and should outline requirements for preconstruction meeting attendance and worker environmental awareness training, where monitoring is required within the Project site based on construction plans and/or geotechnical reports, procedures for adequate paleontological monitoring and discoveries treatment, and paleontological methods (including sediment sampling for microvertebrate fossils), reporting, and collections management. The qualified paleontologist shall attend the preconstruction meeting and a qualified paleontological monitor shall be on-site during all rough grading and other significant ground-disturbing activities (including augering) in previously undisturbed, fine-grained Pleistocene alluvial deposits. In the event that paleontological resources (e.g., fossils) are unearthed during grading, the paleontological monitor will temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery will be roped off with a 50-foot radius buffer. Once documentation and collection of the find is completed, the monitor will remove the rope and allow grading to recommence in the area of the find. Salvaged fossils deemed to be significant shall be donated to an accredited repository with retrievable storage such as the San Bernardino County Museum, Natural History Museum of Los Angeles County, or the Western Science Center. Costs for preparing the fossils for accessioning into the accredited repository and any associated curation fees shall be paid by the project proponent.

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-9**, cumulative Project impacts would be **less than significant with mitigation incorporated**.

4.4.6 References Cited

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4.5 Energy

This section describes the existing energy conditions of the Apple Valley 143 (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, prepared by Dudek in November 2022 (Appendix B-1).

4.5.1 Existing Conditions

Electricity

According to the U.S. Energy Information Administration (EIA), 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 EIA, California used approximately 2,154,030 million cubic feet of natural gas in 2019 (EIA 2021b). 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).

Natural gas service for the Town is provided by the Southwest Gas Holdings, Inc. (Southwest Gas). Southwest Gas provides natural gas service to more than 2 million customers in Arizona, Nevada, and portions of California. According to the Town's Climate Action Plan 2019 Update, Townwide natural gas demand in Apple Valley in 2019 was 15,526,732 therms.

Petroleum

According to the EIA, 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 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 U.S. Environmental Protection Agency 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 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. 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 around California's energy demand outlook and plan for increases in energy demand resulting from growth in plug in electric vehicles (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)

Senate Bill (SB) 1078 established the California Renewable 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), 100 (2018), and 1020 (2022)

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.

SB 1020 (September 2022) revises the standards from SB 100, requiring the following percentage of retail sales of electricity to California end-use customers come from eligible renewable energy resources and zero-carbon resources:

- 90% by December 31, 2035
- 95% by December 31, 2040
- 100% by December 31, 2045

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 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 Building Standards Code (CALGreen) 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 electric vehicle (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.

CALGreen 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.

The CALGreen 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 2019, the EPA and NHTSA published the Safer Affordable Fuel-Efficient Vehicles Rule Part One: One National Program (SAFE-1) (84 Fed. Reg. 51310), which revoked California's authority to set its own GHG emissions standards and set zero-emission vehicle (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 zero-emission vehicles (ZEV) 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.

The ACC II rulemaking package was adopted by CARB on August 25, 2022.

Executive Order N-79-20

EO N-79-20 (2020) sets the goal for the State that 100% of in-state sales of new passenger cars and trucks will be zero-emission by 2035. EO-N-79-20 also sets goals for transition to 100% zero emission all medium- and heavy-duty vehicles by 2045, zero emission drayage trucks by 2035, and zero emission off-road vehicles and equipment by 2035, where feasible. Among other directives to further this executive order, for passenger cars and trucks, the Governor directed CARB to develop and propose regulations requiring increasing volumes of new zero-emission vehicles sold in the State towards the target of 100% of in-state sales by 2035. The Governor also directed the Governor's Office of Business and Economic Development to develop a Zero-Emissions Vehicle Market Development Strategy, which was completed in February 2021. The executive order also directs updates and assessments to ensure zero-emission vehicle infrastructure is in place to support the levels of electric vehicle adoption required by the order.

Advanced Clean Trucks Program

The purpose of the ACT Regulation (June 2020) is to accelerate the market for zero-emission vehicles 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

Town of Apple Valley General Plan

The Energy and Mineral Resources Element of the Town of Apple Valley contains the following goals and policies pertaining to energy for the Project (Town of Apple Valley 2009).

Energy and Mineral Resources Element

Goal. Assure the long-term availability and affordability of energy and mineral resources through conservative consumption, efficient use, and environmentally sensitive management practices.

Policy 1.A. The community and all economic sectors shall be urged to conserve energy, with particular focus on the inclusion of energy saving measures in transport systems, and in the planning and construction of urban uses.

Policy 1.B. Promote building design and construction that integrates alternative energy systems, including but not limited to solar, thermal, photovoltaics and other clean energy systems.

Policy 1.C. Proactively support state and federal legislation and regulations and long-term strategies that assure affordable and reliable production and delivery of electrical power to the community. The Town will encourage and facilitate the exploitation of local renewable resources by supporting public and private initiatives to develop and operate alternative systems of electricity generation, using wind, solar and other renewable energies.

Policy 1.D. The Town will encourage and facilitate the exploitation of local renewable resources by supporting public and private initiatives to develop and operate alternative systems of electricity generation, using wind, solar and other renewable energies.

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 (CAPCOA) and other California air districts, including the Mojave Desert Air Quality Management District, released the latest version, at the time of project analysis, of the 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 2025 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, haul 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 typically 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

Fuel consumption from construction equipment was estimated by converting the total CO_2 emissions from CalEEMod for each construction phase (see Appendix B-1) 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 2022). Heavy-duty construction equipment, haul trucks, 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 truck 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), off-road equipment, stationary sources, 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, and electric forklifts. CalEEMod version 2020.4.0 was used to analyze electrical usage, other than electric equipment, during operation; the default value for electricity consumption for the proposed warehouse land uses was applied for the Project (CAPCOA 2021). 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 151 electric forklifts (i.e., 50% of total lifts) operating at 24 hours a day for 365 days of the year. 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 Southwest Gas. 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 4,855 trips per day, which were assumed 7 days per week. 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 B-1), the Project would generate an estimated 18,098,297 annual VMT along area roadways for all worker vehicles and 21,451,860 annual VMT for trucks. In total, the Project is anticipated to generate 39,550,156 annual VMT at final buildout. Regarding diesel-fueled off-road equipment, on-site modeled operational equipment includes a total of 151 diesel-fueled forklifts (i.e., 50% of total lifts) and 9 diesel-fueled yard tractors operating at 24 hours a day for 365 days of the year. Finally, the Project would potentially operate three diesel-fueled 500-horsepower (hp) generators (one at each warehouse building). These generators were assumed to operate one-hour a day for up to 50-hours a year for routine testing and maintenance. Details of these calculations and assumptions are provided in 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 electric forklifts as described above. CalEEMod was used to estimate Project emissions from electricity uses (see Appendix B-1). 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.

Table 4.5-1. Project Annual Operational Electricity Demand Summary - Unmitigated

Electricity Demand	kWh/year
Warehouse Buildings	20,017,290.00
Electric Off-road Equipment	4,056,998.40
Total Project Electricity Demand	**24,074,288.40**

Source: Appendix B-1.
Note: kWh = kilowatt hour

As shown in Table 4.5-1, the Project is anticipated to consume approximately 24,074,288 kWh 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. Notably,

although not necessitated for this impact or accounted for in Table 4.5-1, the Project would also implement measures that would further reduce electricity demand, such as **MM-GHG-1**, whereby the Project would 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.[1] Finally, the Project would be required to comply with the applicable Title 24 standards applicable at that time, 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 - Unmitigated

Natural Gas Demand	kBTU/year
Warehouse Buildings	23,845,470.00
Total Project Natural Gas Demand	**23,845,470.00**

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 23,845,470 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.

[1] Although electrification of all off-road equipment during operations (as specified in MM-AQ-3) would increase electricity demand, this would be more than off-set by the solar and energy efficiency requirements of MM-GHG-1, with a total electricity demand of 15,569,337 kWh per year for the mitigated scenario (for an overall reduction of 8,504,951 kWh per year as compared to unmitigated).

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 on-road trucks 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, haul trucks, 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 - Unmitigated

Project	Off-road Equipment (diesel)	Haul Trucks (diesel)	Vendor Trucks (Diesel)	Worker Vehicles (gasoline)
	Gallons			
On-Site				
Site Preparation	706.28	65.32	49.21	164.70
Mass Grading	11,930.77	43,737.94	196.82	494.12
Building Construction	58,458.86	0.00	142,473.81	79,803.66
Architectural Coating	3,225.98	0.00	0.00	7,356.74
Fine Grading	4,004.86	14,322.60	97.05	159.93
Concrete Laydown	5,516.30	0.00	19,410.27	639.72
On-Site Total	**83,843.06**	**58,125.86**	**162,227.16**	**88,618.87**
Off-Site				
Road Removal/ Pipeline Install	8,515.16	770.92	154.64	821.28
Paving	8,091.07	0.00	267.86	709.17
Restriping	2,834.17	0.00	275.95	365.24
Pipeline Testing	138.39	0.00	0.00	15.99
Off-Site Total	**19,578.80**	**770.92**	**698.46**	**1,911.67**
Project Construction Total	**103,421.85**	**58,896.78**	**162,925.62**	**90,530.55**
			Total Petroleum	**415,774.80**

Source: Appendix B-1.

In summary, construction of the Project is conservatively anticipated to consume approximately 415,775 gallons of petroleum in total, including on-site development and off-site improvements. 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 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, fuel consumption resulting from the Project would involve the use of motor vehicles traveling to and from the Project site, diesel-fueled off-road equipment, and stationary sources (i.e., routine testing and maintenance of the diesel emergency generators). Fuel demand estimates for the Project are provided in Table 4.5-4.

Table 4.5-4. Operational Petroleum Demand - Unmitigated

Project	Employee Vehicles (gasoline)	Haul Trucks (diesel)	Off-Road Equipment (diesel)	Stationary Sources (diesel)
	Gallons			
Operations	1,475,393.83	1,503,848.13	1,378,639.86	3,831.83
			Total Petroleum	**4,361,713.66**

Source: Appendix B-1.

As summarized on Table 4.5-4, the unmitigated Project would result in an estimated annual fuel demand of approximately 4,361,714 gallons of fuel. Fuel would be provided by current and future commercial vendors. Trip generation, VMT, off-road equipment, and stationary sources associated with 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 activities, nor associated excess and wasteful vehicle energy consumption. In addition, although not accounted for in Table 4.5-4, the Project would also implement measures that would further reduce petroleum demand, such as **MM-AQ-3**, which requires all cargo handling equipment to be electrically powered, establishes anti-idling measures, and specifies EV charging stations for passenger vehicles and heavy-duty trucks. Finally, 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. 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

As part of the Project's design process, the Project applicant considered how the project could potentially increase its reliance on renewable energy sources to meet the Project's energy demand. Renewable energy sources that were considered for their potential to be used to power the Project, consistent with the California Energy

Commission's (CEC's) definition of eligible renewables, include biomass, geothermal, solar, wind, and small hydroelectric facilities.

Given the Project's location and the nature of the project, there are considerable site constraints including incompatibility with surrounding land uses for large scale power generation facilities, unknown interconnection feasibility, compatibility with utility provider systems, and no known water or geothermal resources to harness, that would eliminate the potential for biomass, geothermal, wind, and hydroelectric renewable energy to be installed onsite.

The Project would comply with all applicable Title 24 code provisions, such as the solar ready building mandatory requirements. Beyond that, as stated in **MM-GHG-1**, the Project would 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. While the Project does not propose battery storage at the time, the Project does not preclude installation of battery storage in the future if determined to be a feasible and compatible land use of the site.

In summary, the Project includes the onsite renewable energy source (i.e., solar) that was determined to be feasible for the site and does not include the onsite renewable energy sources that were determined to be infeasible.

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 CALGreen. CALGreen 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. 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 energy 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.

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4.6 Greenhouse Gas Emissions

This section describes the existing greenhouse gas (GHG) conditions of the Apple Valley 143 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 November 2022 (Appendix B-1)
- Apple Valley 143 Transportation Impact Analysis, prepared by Dudek in November 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 near the Earth's surface (troposphere). 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. CH_4 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., 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:** SF6 is a colorless gas soluble in alcohol and ether and slightly soluble in water. SF6 is used for insulation in electric power transmission and distribution equipment, is used in semiconductor manufacturing and the magnesium industry, and is used as a tracer gas for leak detection.
- **Nitrogen Trifluoride:** NF3 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 include 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's (CARB's) regulations pertaining to diesel engines, diesel fuels, and burning activities, CARB estimates that annual black carbon emissions in California have reduced by 70% between 1990 and 2010, with 95% control expected by 2020 (CARB 2014). CARB's 2022 Scoping Plan Update (CARB 2022) identifies that in 2017 the inventory was approximately 8 million metric tons (MMT) of CO_2 equivalent (MT CO_2e) of black carbon and that under current strategies black carbon from transportation is expected to be reduced by over 60% by 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). 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 (MT) of 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

Global Inventory

Anthropogenic GHG emissions worldwide in 2019 totaled approximately 52,400 MMT of CO_2e, excluding land use change and forestry (PBL 2020). The top six GHG emitters include China, the United States, the Russian Federation, India, Japan, and the European Union, which accounted for approximately 62% of the total global emissions, or approximately 32,500 MMT CO_2e (PBL 2020). Table 4.6-1 presents the top GHG-emissions-producing countries.

Table 4.6-1. Six Top Greenhouse-Gas-Producer Countries and the European Union

Emitting Countries (listed in order of emissions)	Greenhouse Gas Emissions (MMT CO_2e)
China	14,000
United States	6,600
European Union	4,300
India	3,700
Russian Federation	2,500
Japan	1,400
Total	**32,500**

Source: PBL 2020.
Note: MMT CO_2e = million metric tons of carbon dioxide equivalent

National Inventory

Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990 to 2019 (EPA 2021), total United States GHG emissions were approximately 6,558.3 MMT CO_2e in 2019 (EPA 2021). The primary GHG emitted by human activities in the United States was CO_2, which represented approximately 80.1% of total GHG emissions (5,255.8 MMT CO_2e). The largest source of CO_2, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 92.4% of CO_2 emissions in 2019 (4,856.7 MMT CO_2e). Relative to 1990, gross United States GHG emissions in 2019 were 1.8% higher; however, the gross emissions were down from a high of 15.6% above

1990 levels in 2007. GHG emissions decreased from 2018 to 2019 by 1.7% (113.1 MMT CO_2e) and overall, net emissions in 2019 were 13% below 2005 levels (EPA 2021).

State Inventory

According to California's 2000–2019 GHG emissions inventory (2021 edition), California emitted approximately 418 MMT CO_2e in 2019, including emissions resulting from out-of-state electrical generation (CARB 2021a). 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. Table 4.6-2 presents California GHG emission source categories and their relative contributions to the emissions inventory in 2019.

Table 4.6-2. Greenhouse Gas Emissions Sources in California

Source Category	Annual GHG Emissions (MMT CO_2e)	Percent of Total[a]
Transportation	166.1	39.7%
Industrial	88.2	21.1%
Electric power	58.8	14.1%
Commercial and residential	43.8	10.5%
Agriculture	31.8	7.6%
High global-warming potential substances	20.6	4.9%
Recycling and waste	8.9	2.1%
Total	**418.2**	**100%**

Source: CARB 2021a.
Notes: GHG = greenhouse gas; MMT CO_2e = million metric tons of carbon dioxide equivalent; GWP = global warming potential. Emissions reflect 2018 California GHG inventory.
[a] Percent of total has been rounded, and total does not sum due to rounding.

Between 2000 and 2019, per-capita GHG emissions in California have dropped from a peak of 14.0 MT CO_2e per person in 2001 to 10.5 MT CO_2e per person in 2019, representing an approximate 25% decrease. In addition, total GHG emissions in 2019 were approximately 7 MMT CO_2e lower than 2018 emissions (CARB 2021a).

Local Inventory

The Town has an adopted Climate Action Plan (CAP), which was approved in July 2010. The Town of Apple Valley adopted a 2019 CAP Update in 2021, which includes the following 2019 GHG emissions inventory (Town of Apple Valley 2021):

Table 4.6-3. Town of Apple Valley Greenhouse Gas Emissions Summary by Sector – Year 2019

Source Category	Annual GHG Emissions (MT CO_2e)	Percent of Total[a]
Community		
Residential	118,327	19.80%
Commercial	31,071	5.20%
Industrial	10,371	1.74%

Table 4.6-3. Town of Apple Valley Greenhouse Gas Emissions Summary by Sector – Year 2019

Source Category	Annual GHG Emissions (MT CO_2e)	Percent of Total[a]
On-Road Transportation	405,797	67.90%
Solid Waste	17,229	2.88%
Off-Road Vehicles	11,479	1.92%
Subtotal	*594,274*	*99.43%*
Municipal		
Buildings and Facilities	1,332	0.22%
Employee Commute	195	0.03%
Municipal Fleet	286	0.05%
Police Fleet	685	0.11%
Solid Waste	909	0.15%
Subtotal	*3,407*	*0.57%*
Town-Wide Total	**597,681**	**100.00%**

Source: Town of Apple Valley 2021
Notes: GHG = greenhouse gas; MT CO_2e = metric tons of carbon dioxide equivalent
Emissions reflect 2019 Town of Apple Valley GHG inventory.
[a] Percent of total has been rounded, and total does not sum due to rounding.

As shown on Table 4.6-3, approximately 68% of the Town's GHG emissions in 2019 were attributed to transportation sources. All other sources combined accounted for about 32% of the Town's GHGs in 2019.

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.

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—CO2, CH4, N2O, HFCs, PFCs, and SF6—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—CO2, CH4, N2O, 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).

On December 21, 2021, NHTSA finalized the CAFE Preemption rulemaking to withdraw its portions of the Part One Rule. The final rule concluded that the Part One Rule overstepped the agency's legal authority and established overly broad prohibitions that did not account for a variety of important state and local interests. Then, in March 2022, NHTSA established new fuel economy standards that would require an industry-wide fleet average of approximately 49 miles per gallon for passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8% annually for model years 2024 and 2025, and 10% annually for model year 2026.

The Inflation Reduction Act of 2022

The Inflation Reduction Act was signed into law by President Biden in August 2022. The bill includes specific investment in energy and climate reform and is projected to reduce GHG emissions within the United States by 40% 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, 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 (AB) 32. In furtherance of the goals established in EO S-3-05, the legislature enacted 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 (2017 Scoping Plan) (CARB 2017). The 2017 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%.

The Final 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) was issued on November 16, 2022 (CARB 2022) and approved on December 15, 2022. The 2022 Scoping Plan lays out a path not just to carbon neutrality by 2045 but also to the 2030 GHG emissions reduction target. The 2022 Scoping Plan analyzed four scenarios, with the objective of informing the most viable path to remain on track to achieve the 2030 GHG reduction target. The scenario modeling indicates that, if the plan described in the Proposed Scenario is fully implemented, and done so on schedule, the State would cut GHG emissions by 85% below 1990 levels, result in a 71% reduction in smog-forming air pollution, reduce fossil fuel consumption by 94%, create 4 million new jobs, among other benefits (CARB 2022).

The 2022 Scoping Plan details "Local Actions" in Appendix D of the Scoping Plan. The Local Actions includes recommendations intended to build momentum for local government actions that align with the State's climate goals, with a focus on local GHG reduction strategies (commonly referred to as climate action planning) and approval of new land use development projects, including through environmental review under CEQA. The recommendations provided in Appendix D are non-binding and should not be interpreted as a directive to local governments, but rather as evidence-based analytical tools to assist local governments with their role as essential partners in achieving California's climate goals.[3] Appendix D of the Scoping Plan recognizes consistency with a CEQA-qualified GHG reduction plan such as a Climate Action Plan as a preferred option for evaluating potential GHG emission impacts under CEQA. Absent a qualified GHG reduction plan, Appendix D of the Scoping Plan provides recommendations for key attributes that residential and mixed-use projects should achieve that would align with the State's climate goals (CARB 2022). Projects that achieve all key attributes are considered clearly consistent with the State's climate and housing goals and would have a less-than-significant GHG impact under CEQA (CARB 2022). However, projects that do not achieve all attributes are not necessarily considered to result in a potentially significant GHG emission impact. Additional potential threshold options identified when a CEQA-qualified GHG reduction plan is not available included a net-zero threshold and use of air district recommended thresholds of significance.

The 2022 Scoping Plan 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.

The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32, SB 32, and the EOs; it also establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. A project is considered consistent with the statutes and EOs if it would meet the general policies in reducing GHG emissions to facilitate the achievement of the state's goals and would not impede attainment of those goals.

CARB's Regulations for the Mandatory Reporting of Greenhouse Gas Emissions. CARB's Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (17 CCR 95100–95157) incorporated by reference certain requirements that EPA promulgated in its Final Rule on Mandatory Reporting of Greenhouse Gases (Title 40, CFR, Part 98). Specifically, Section 95100(c) of the Mandatory Reporting Regulation incorporated those requirements that EPA promulgated in the Federal Register on October 30, 2009; July 12, 2010; September 22, 2010; October 28, 2010; November 30, 2010; December 17, 2010; and April 25, 2011. In general, entities subject to the Mandatory Reporting Regulation that emit over 10,000 MT CO_2e per year are required to report annual GHGs through the California Electronic GHG Reporting Tool. Certain sectors, such as refineries and cement plants, are required to report regardless of emission levels. Entities that emit more than the 25,000 MT CO_2e per-year threshold are required to have their GHG emission report verified by a CARB-accredited third party.

[3] The threshold approaches outlined in the 2022 Scoping Plan, Appendix D, are recommendations only and are not requirements; they do not supplant lead agencies' discretion to develop their own evidence-based approaches for determining whether a project would have a potentially significant impact on GHG emissions.

EO B-18-12. EO B-18-12 (April 2012) directed state agencies, departments, and other entities under the governor's executive authority to take action to reduce entity-wide GHG emissions by at least 10% by 2015 and 20% by 2020, as measured against a 2010 baseline. EO B-18-12 also established goals for existing state buildings for reducing grid-based energy purchases and water use.

SB 605 and SB 1383. 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.

EO 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 (SB) 32 and AB 197. SB 32 and AB 197 (enacted in 2016) are companion bills. SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, in order to provide ongoing oversight over implementation of the state's climate policies. AB 197 also added two members of the Legislature to the 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.

EO 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."

AB 1279. The Legislature enacted AB 1279, the California Climate Crisis Act, in September 2022. The bill declares the policy of the state to achieve net zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter. Additionally, the bill requires that by 2045, statewide anthropogenic GHG emissions be reduced to at least 85% below 1990 levels.

AB 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, Section 25402[b][1]). The regulations receive input from members of industry, as well as the public, with the goal of "reducing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy" (California Public Resources Code, Section 25402). These regulations are carefully scrutinized and analyzed for technological and economic feasibility (California Public Resources Code, Section 25402[d]) and cost effectiveness (California Public Resources Code, Sections 25402[b][2] and [b][3]). As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment. The 2019 Title 24 standards are the currently applicable building energy efficiency standards, and became effective on January 1, 2020.

The 2022 Title 24 standards will improve upon the 2019 standards for new construction of, and additions and alterations to, residential and nonresidential buildings. 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 Building Standards Code (CALGreen) 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 electric vehicle (EV) charging options whenever they choose to adopt those technologies
- Expanding solar photovoltaic (PV) system and battery storage standards to make clean energy available on site and complement the state's progress toward a 100% clean electricity grid
- Strengthening ventilation standards to improve indoor air quality

Title 24, Part 11. In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as CALGreen and establishes minimum mandatory standards 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. CALGreen 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 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.

The 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.

SB 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.

AB 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.

AB 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 by 25% for indoor commercial lighting.

Renewable Energy and Energy Procurement

SB 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).

SB 1368. SB 1368 (September 2006) required the CEC to develop and adopt regulations for GHG emission performance standards for the long-term procurement of electricity by local publicly owned utilities.

EO S-14-08. EO S-14-08 (November 2008) focused on the contribution of renewable energy sources to meet the electrical needs of California while reducing the GHG emissions from the electrical sector. This EO required that all retail suppliers of electricity in California serve 33% of their load with renewable energy by 2020.

EO S-21-09 and SB 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.

SB 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).

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

SB 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 (AB 1493 and EO 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 also explained above, 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.

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).

EO S-1-07. EO S-1-07 (January 2007, implementing regulation adopted in April 2009) sets a declining LCFS for GHG emissions measured in CO_2e grams per unit of fuel energy sold in California. The target of the LCFS is to reduce the carbon intensity of California passenger vehicle fuels by at least 10% by 2020 (17 CCR 95480 et seq.). 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.

SB 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 (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 zero-emission vehicles (ZEV) that contributes to both types of emission reductions (CARB 2021b). 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 percent 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, which was adopted in August 2022, established 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 2021b). The main objectives of ACC II are as follows:

- Maximize criteria and GHG emission reductions through increased stringency and real-world reductions.
- Accelerate the transition to ZEVs through both increased stringency of requirements and associated actions to support wide-scale adoption and use.

The ACC II rulemaking package was adopted by CARB on August 25, 2022.

AB 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.

EO N-79-20. EO N-79-20 (September 2020) requires CARB to develop regulations as follows: (1) Passenger vehicle and truck regulations requiring increasing volumes of new ZEVs sold in the State towards the target of 100% of in-state sales by 2035; (2) medium- and heavy-duty vehicle regulations requiring increasing volumes of new zero-emission trucks and buses sold and operated in the State towards the target of 100% of the fleet transitioning to zero-emission vehicles by 2045 everywhere feasible and for all drayage trucks to be zero emission by 2035; and (3) strategies, in coordination with other State agencies, the EPA and local air districts, to achieve 100% zero-emission from off-road vehicles and equipment operations in the State by 2035. EO N-79-20 called for the development of a Zero-Emissions Vehicle Market Development Strategy, which was released February 2021, to be updated every 3 years, that ensures coordination and implementation of the EO and outlines actions to support new and used ZEV markets. In addition, the EO specifies identification of near-term actions, and investment strategies, to improve clean transportation, sustainable freight, and transit options; and calls for development of strategies, recommendations, and actions by July 15, 2021, to manage and expedite the responsible closure and remediation of former oil extraction sites as the State transitions to a carbon-neutral economy.

Advanced Clean Trucks Regulation. The Advanced Clean Trucks (ACT) Regulation was also approved by CARB in 2020. The purpose of the ACT Regulation is to accelerate the market for zero-emission vehicles in the medium- and heavy-duty truck sector and to reduce air pollutant emissions generated from on-road mobile sources (CARB 2021c). The regulation has two components including (1) a manufacturer sales requirement and (2) a reporting requirement:

- 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.
- 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.

Solid Waste

AB 939, AB 341, AB 1826, and SB 1383. In 1989, AB 939, known as the Integrated Waste Management Act (California Public Resources Code, Sections 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board, 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.

SB 1383 (2016) requires a 50% reduction in organic waste disposal from 2014 levels by 2020, and a 75% reduction by 2025—essentially requiring the diversion of up to 27 million tons of organic waste—to reduce GHG emissions. SB 1383 also requires that not less than 20% of edible food that is currently disposed be recovered for human consumption by 2025.

Water

EO B-29-15. In response to the ongoing drought in California, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25% relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have become permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the California Department of Water Resources has modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

EO 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 Department of Water Resources 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.

EO N-10-21. In response to a state of emergency due to severe drought conditions, EO N-10-21 (July 2021) called on all Californians to voluntarily reduce their water use by 15% from their 2020 levels. Actions suggested in EO N-10-21 include reducing landscape irrigation, running dishwashers and washing machines only when full, finding and fixing leaks, installing water-efficient showerheads, taking shorter showers, using a shut-off nozzle on hoses, and taking cars to commercial car washes that use recycled water.

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]).

EO S-13-08. EO S-13-08 (November 2008) is intended to hasten California's response to the impacts of global climate change, particularly sea-level rise. Therefore, the EO directs state agencies to take specified actions to assess and plan for such impacts. The final 2009 California Climate Adaptation Strategy report was issued in December 2009 (CNRA 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 4.12, 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.

Town of Apple Valley General Plan

The Town of Apple Valley General Plan contains the following goals and policies applicable to GHGs and the Project (Town of Apple Valley 2009):

Air Quality Element

Goal. To preserve and enhance local and regional air quality.

Policy 1.E. The use of clean and/or renewable alternative energy sources for transportation, heating and cooling, and construction shall be encouraged by the Town.

Policy 1.F. The Town shall support, encourage, and facilitate the development of projects that enhance the use of alternative modes of transportation, including pedestrian-oriented retail and activity centers, dedicated bicycle paths and lanes, and community-wide multi-use trails.

Policy 1.G. Future residential, commercial, and industrial development and remodeling projects, shall strive to exceed Title 24 standards by 15% and/or achieve LEED certification or similar performance standards for buildings.

Policy 1.H. Residential, commercial, and industrial projects that reduce vehicle miles traveled (VMTs) by providing alternative transportation options, home office and live/work spaces, and/or promote employees living close to work are preferred.

Policy 1.I. The Town shall continue to reduce waste generation, enhance recycling or reuse programs, and expand grey water systems for landscape irrigation.

Policy 1.J. The Town shall promote the use of solar and alternative energies and give priority to projects that include the use of solar cells and other alternative energy sources in their designs.

Policy 1.K. The Town shall participate in regional GHG reduction planning efforts.

Energy and Mineral Resources Element

Goal: Assure the long-term availability and affordability of energy and mineral resources through conservative consumption, efficient use, and environmentally sensitive management practices.

Policy 1.A. The community and all economic sectors shall be urged to conserve energy, with particular focus on the inclusion of energy saving measures in transport systems, and in the planning and construction of urban uses.

Policy 1.B. Promote building design and construction that integrates alternative energy systems, including but not limited to solar, thermal, photovoltaics and other clean energy systems.

Policy 1.C. Proactively support state and federal legislation and regulations and long-term strategies that assure affordable and reliable production and delivery of electrical power to the community. The Town will encourage and facilitate the exploitation of local renewable resources by supporting public and private initiatives to develop and operate alternative systems of electricity generation, using wind, solar and other renewable energies.

Policy 1.D. The Town will encourage and facilitate the exploitation of local renewable resources by supporting public and private initiatives to develop and operate alternative systems of electricity generation, using wind, solar and other renewable energies.

Town of Apple Valley Climate Action Plan

As described previously, the Town adopted a CAP in July 2010, with the 2019 CAP Update adopted in 2021 as the most recent update. The 2019 CAP Update supports the Town's GHG emission reduction targets of 15% below 2005 levels by 2020, 40% below 2005 levels by 2030, and 80% below 2005 levels by 2050 and identifies measures to reduce municipal and community GHG emissions in the following categories: transportation, energy efficiency, renewable energy, and solid waste management (Town of Apple Valley 2021).

4.6.3 Thresholds of Significance

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

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 Town 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 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 EPAs 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 CO2e 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 CO2e per year), commercial projects (1,400 MT CO2e per year), and mixed-use projects (3,000 MT CO2e per year). Under option 2, a single numerical screening threshold of 3,000 MT CO2e 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 CO2e per service population for project level analyses and 6.6 MT CO2e 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 Town has not adopted a numeric significance threshold, the 3,000 MT CO_2e per year threshold has been applied herein to evaluate the potential for the Project to resut in a significant GHG emissions impact under CEQA because it is more stringent than the MDAQMD threshold and the SCAQMD is also 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 percent of the GHG emissions form the above-described uses, consistent with EO S-3-05 target of reducing GHGs to 80 percent below 1990 levels by 2050. Finally, the SCAQMD specifically recommended that the 3,000 MT CO_2e per year threshold be used by lead agencies for not only residential and commercial projects, but also industrial parks and warehouses as well (SCAQMD 2008).

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 (CAPCOA 2021).[4] CalEEMod input parameters, including

[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.

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.

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 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 Sources (landscape and site maintenance activities)
- Energy Sources (combustion emissions associated with natural gas and electricity)
- Mobile Sources (on-road vehicles)
- Off-road Equipment
- Stationary Sources
- Solid Waste
- Water Supply, Treatment, and Distribution

Area Sources

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 default assumptions provided in CalEEMod.

Energy Sources

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. 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 Sources

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 National Highway Traffic Safety Administration 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 CalEEMod for motor vehicles in 2025.

Off-Road Equipment

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. 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 302 forklifts (forklifts and pallet jacks, with a mix of 50% diesel and 50% electric) and 9 diesel-fueled yard tractors operating at 24 hours a day for 365 days of the year. See Appendix B-1 for detailed calculations.

Stationary Sources

The Project would potentially operate three diesel-fueled 500-horsepower (hp) generators (one at each warehouse building). These generators were assumed to operate one-hour a day for up to 50-hours a year for routine testing and maintenance.

Solid Waste

Industrial land uses will result in the generation and disposal of solid waste. 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. The default water demand in CalEEMod was adjusted to match the Water Supply Assessment (Appendix J) prepared for the Project.

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 4.6-4.

Table 4.6-4. Estimated Annual Construction GHG Emissions

Year	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
2024	944.62	0.09	0.10	975.67
2025	3,170.98	0.25	0.27	3,256.25
Total	**4,115.60**	**0.34**	**0.36**	**4,231.92**
			Amortized Construction Emissions	*141.06*

Notes: GHG = greenhouse gas; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent.
See Appendix B-1 for complete results.

As shown in Table 4.6-4, total estimated GHG emissions generated during construction of the Project are approximately 4,232 MT CO_2e. Estimated Project-generated construction emissions amortized over 30 years would be approximately 141 MT CO_2e per year.

Operation of the Project would generate GHG emissions from area sources (landscape maintenance equipment operation), energy use (natural gas combustion and utility generation of electricity consumed by the project), mobile sources (vehicular traffic), off-road equipment (electric and diesel-fueled equipment), stationary sources (emergency diesel generator testing and maintenance), solid waste disposal, generation of electricity associated with water supply, treatment, and distribution and wastewater treatment, and TRU operation. The estimated operational GHG emissions are shown in Table 4.6-5. Detailed operational model outputs are presented in Appendix B-1.

Table 4.6-5. Estimated Annual Operation GHG Emissions - Unmitigated

Emissions Source	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Area	0.05	<0.01	0.00	0.05
Energy	4,822.45	0.32	0.06	4,848.33
Mobile	28,302.27	0.84	3.48	29,360.03
Off-Road Equipment - Diesel	14,075.91	4.55	0.00	14,189.72
Off-Road Equipment - Electric	719.49	0.06	0.01	723.20
Stationary	39.12	0.01	0.00	39.26
Waste	480.56	28.40	0.00	1,190.57
Water/Wastewater	28.22	0.35	0.01	39.57
Transport Refrigeration Units	0.86	0.00	0.00	0.86
Total	**48,468.94**	**34.54**	**3.55**	**50,391.59**
			Amortized Construction Emissions	*141.06*
			Operations with Amortized Construction GHG Emissions	**50,532.66**

Source: See Appendix B-1 for complete results.
Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent.

As shown in Table 4.6-5, the Project would result in approximately 50,533 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 are required to minimize operational-related GHG impacts. Implementation of MM-AQ-3 (identified in Section 4.2) includes the requirement for all off-road cargo handling equipment to be zero-emission, which would reduce the long-term GHG emissions substantially. In addition, implementation of MM-GHG-1 through MM-GHG-3 would reduce GHG emissions associated with energy efficiency, solid waste disposal, and water conservation. However, the effectiveness of MM-AQ-2 (pertaining to construction equipment) to reduce GHGs cannot be accurately quantified at this time and neither the Project Applicant nor the Town can substantively or materially affect reductions in Project on-road mobile source emissions beyond what is already required by regulation. Table 4.6-6 summarizes the mitigated annual operational emissions associated with the Project. Detailed operational model outputs are presented in Appendix B-1.

Table 4.6-6. Estimated Annual Operation GHG Emissions - Mitigated

Emissions Source	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Area	0.02	<0.01	0.00	0.03
Energy	2,159.98	0.10	0.03	2,172.12
Mobile	28,308.25	0.84	3.48	29,366.27
Off-Road Equipment - Diesel	0.00	0.00	0.00	0.00
Off-Road Equipment - Electric	1,874.43	0.16	0.02	1,884.10
Stationary	39.12	0.01	0.00	39.26
Waste	120.14	7.10	0.00	297.64
Water/Wastewater	22.58	0.28	0.01	31.66
Transport Refrigeration Units	0.86	0.00	0.00	0.86
Total	**32,525.38**	**8.49**	**3.54**	**33,791.93**
			Amortized Construction Emissions	*141.06*
			Operations with Amortized Construction GHG Emissions	**33,932.99**

Source: See Appendix B-1 for complete results.
Notes: CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent.
Includes implementation of MM-AQ-3 and MM-GHG-1 through MM-GHG-3.

As depicted in Table 4.6-6, the Project would still exceed the applied threshold of 3,000 MT CO_2e per year after mitigation. No feasible mitigation measures beyond those already identified exist that would reduce these emissions to levels that are less than significant. Therefore, even with the incorporation of mitigation, long-term impacts associated with a cumulatively considerable increase in GHG emissions 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 with Mitigation Incorporation. As previously stated, pursuant to Section 15064.4(a) 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 AB 1279 (2022 Scoping Plan), the Town's CAP, and with SCAG's RTP/SCS are discussed below. Although the Town's 2019 CAP Update does not include a clear mechanism for CEQA streamlining and is not a qualified plan under CEQA, it is included in this discussion for informational purposes.

Project Potential to Conflict with State Reduction Targets and CARB's Scoping Plan

As discussed in Section 4.6.2, the California State Legislature passed AB 32 to provide initial direction to limit California's GHG emissions to 1990 levels by 2020 and initiate the state's long-range climate objectives. Since the passage of AB 32, the State has adopted GHG emissions reduction targets for future years beyond the initial 2020 horizon year. CARB is required to develop the Scoping Plan, which provides the framework for actions to achieve the State's GHG emission targets. While the Scoping Plan is not directly applicable to specific projects, nor is it intended to be used as the sole basis for project-level evaluations, it is the official framework for the measures and regulations that will be implemented to reduce California's GHG emissions in alignment with the adopted targets. Therefore, a project would be found to not conflict with the statutes if it would meet the Scoping Plan policies and would not impede attainment of the goals therein.

For the Project, the relevant GHG emissions reduction targets include those established by SB 32 and AB 1279, which require GHG emissions be reduced to 40% below 1990 levels by 2030, and 85% below 1990 levels by 2045, respectively. In addition, AB 1279 requires the state achieve net zero GHG emissions by no later than 2045 and achieve and maintain net negative GHG emissions thereafter. CARB's 2017 Scoping Plan update was the first to address the state's strategy for achieving the 2030 GHG reduction target set forth in SB 32 (CARB 2017), and the most recent CARB 2022 Scoping Plan update outlines the state's plan to reduce emissions and achieve carbon neutrality by 2045 in alignment with AB 1279 and assesses progress is making toward the 2030 SB 32 target (CARB 2022). As such, given that SB 32 and AB 1279 are the relevant GHG emission targets, the 2017 and 2022 Scoping Plan updates that outline the strategy to achieve those targets, are the most applicable to the Project.

The 2017 Scoping Plan included measures to promote renewable energy and energy efficiency (including the mandates of SB 350), increase stringency of the LCFS, measures identified in the Mobile Source and Freight Strategies, measures identified in the proposed Short-Lived Climate Pollutant Plan, and increase stringency of SB 375 targets. The 2022 Scoping Plan builds upon and accelerates programs 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; and displacement of fossil-fuel fired electrical generation through use of renewable energy alternatives (e.g., solar arrays and wind turbines) (CARB 2022). Many of the measures and programs included in the Scoping Plan would result in the reduction of Project-related GHG emissions with no action required at the project-level, including GHG emission reductions through increased energy efficiency and renewable energy production (SB 350), reduction in carbon intensity of transportation fuels (LCFS), and the accelerated efficiency and electrification of the statewide vehicle fleet (Mobile Source Strategy).

Table 4.6-7 summarizes the Project's potential to conflict with the applicable *2017 Scoping Plan*.

Table 4.6-7. Project Potential to Conflict with 2017 Scoping Plan

Action	Responsible Parties	Potential to Conflict
Implement SB 350 by 2030		
Increase the Renewables Portfolio Standard to 50% of retail sales by 2030 and ensure grid reliability.	CPUC, CEC, CARB	*No conflict*. 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.		*No conflict*. 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 2022 Building and Energy Efficiency Standards and the 2022 California Green Building Standards requirements. In addition, MM-GHG-1 specifies that the Project would 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, as well as install Energy Star-rated heating, cooling, lighting, and appliances.
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.		
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	*No conflict*. 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.		*No conflict*. 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.

Table 4.6-7. Project Potential to Conflict with 2017 Scoping Plan

Action	Responsible Parties	Potential to Conflict
Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean cars regulations.		*No conflict*. 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.		*No conflict*. 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.
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.		*No conflict*. This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB cleaner last mile delivery trucks in California. 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. In addition, MM-AQ-3 requires the Project to install conduit for electric truck charging stations, as well as at least four heavy-duty truck vehicle charging stations on-site by 2030.

Table 4.6-7. Project Potential to Conflict with 2017 Scoping Plan

Action	Responsible Parties	Potential to Conflict
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	*No conflict*. 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.
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	*No conflict*. 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	*No conflict*. 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.
Adopt a Low Carbon Fuel Standard with a Carbon Intensity reduction of 18%.	CARB	*No conflict*. This measure, which was increased to 20% reduction in carbon intensity by 2030, applies to all fuel purchased and used by the Project in the state. The Project would not obstruct or interfere with agency efforts to implement a Low Carbon Fuel Standard.

Table 4.6-7. Project Potential to Conflict with 2017 Scoping Plan

Action	Responsible Parties	Potential to Conflict
By 2018, develop Integrated Natural and Working Lands Implementation Plan to secure California's land base as a net carbon sink		
Utilize wood and agricultural products to increase the amount of carbon stored in the natural and built environments		*No conflict*. To the extent appropriate for the proposed industrial buildings, wood products would be used in construction, including for the roof structure.

Source: CARB 2017.

Table 4.6-8 highlights the measures from the 2022 Scoping Plan that are relevant to the Project.

Table 4.6-8. Project Potential to Conflict with 2022 Scoping Plan

Sector	Action	Potential to Conflict
GHG Emissions Reductions Relative to the SB 32 Target	40% below 1990 levels by 2030	*No conflict*. While the SB 32 GHG emissions reduction target is not an Action that is analyzed independently, it is included in Table 2-1 of the 2022 Scoping Plan for reference. The Project would not obstruct or interfere with agency efforts to meet the SB 32 reduction goal.
Smart Growth / VMT	VMT per capita reduced 25% below 2019 levels by 2030, and 30% below 2019 levels by 2045	*No conflict*. The Project would not obstruct or interfere with agency efforts to meet this regional VMT reduction goal, including through implementation of SB 375. As detailed below, the Project would be consistent with the SCAG 2020–2045 RTP/SCS, which is the 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
Light-duty Vehicle (LDV) Zero Emission Vehicles (ZEVs)	100% of LDV sales are ZEV by 2035	*No conflict*. As this action pertains to LDV sales within California, the Project would not obstruct or interfere with its implementation. Furthermore, the Project would support the transition from fossil fuel LDV to ZEV through its provision of Level 2 (or faster) EV chargers (MM-AQ-3).

Table 4.6-8. Project Potential to Conflict with 2022 Scoping Plan

Sector	Action	Potential to Conflict
Truck ZEVs	100% of medium-duty vehicle (MDV)/ heavy-duty vehicle (HDV) sales are ZEV by 2040	*No conflict*. As this action pertains to MDV and HDV sales within California, the Project would not obstruct or interfere with its implementation. Furthermore, the Project would support the transition from fossil fuel MDV and HDV to ZEV through its installation of conduit in tractor trailer parking areas to support future truck charging stations, as well as installation of at least four heavy-duty truck charging stations (by 2030) (MM-AQ-3).
Electricity Generation	Sector GHG target of 38 million metric tons of carbon dioxide equivalent ($MMTCO_2e$) in 2030 and 30 $MMTCO_2e$ in 2035 Retail sales load coverage[1] 20 gigawatts (GW) of offshore wind by 2045 Meet increased demand for electrification without new fossil gas-fired resources	*No conflict*. As this Action pertains to the statewide procurement of renewably generated electricity, the Project would not obstruct or interfere with its implementation. However, the Project would support increased usage of renewable electricity through the installation of on-site solar panels sufficient to meet at least 75% of the Project's total operational energy requirements from within the building envelope (MM-GHG-1).
New Residential and Commercial Buildings	All electric appliances beginning 2026 (residential) and 2029 (commercial), contributing to 6 million heat pumps installed statewide by 2030	*No conflict*. The Project would not obstruct or interfere with agency efforts to meet the all-electric appliance and heat pump goals.
Construction Equipment	25% of energy demand electrified by 2030 and 75% electrified by 2045	*No conflict*. As this Action pertains to the electrification of off-road equipment across California, the Project would not obstruct or interfere with its implementation. However, the Project would support the Action through the requirement that all cargo handling and landscaping equipment to be zero-emission (MM-AQ-3).
Low Carbon Fuels for Transportation	Biomass supply is used to produce conventional and advanced biofuels, as well as hydrogen	*No conflict*. The Project would not obstruct or interfere with agency efforts to increase the provision of low carbon fuels for transportation.

Table 4.6-8. Project Potential to Conflict with 2022 Scoping Plan

Sector	Action	Potential to Conflict
Low Carbon Fuels for Buildings and Industry	In 2030s biomethane blended in pipeline Renewable hydrogen blended in fossil gas pipeline at 7% energy (~20% by volume), ramping up between 2030 and 2040 In 2030s, dedicated hydrogen pipelines constructed to serve certain industrial clusters	*No conflict*. The Project would not obstruct or interfere with agency efforts to increase the provision of low carbon fuels for use in buildings and industry.
High GWP Potential Emissions	Low GWP refrigerants introduced as building electrification increases, mitigating HFC emissions	*No conflict*. The Project would not obstruct or interfere with agency efforts to introduce low GWP refrigerants.

Source: CARB 2022.
Notes:
[1] As noted in Table 2-1 of the 2022 Scoping Plan, SB 100 speaks only to retail sales and state agency procurement of electricity (i.e., wholesale or non-retail sales and losses from storage and transmission and distribution lines are not subject to the law).

Based on the analysis in Table 4.6-7 and Table 4.6-8, the Project would be consistent with the applicable strategies and measures in the 2017 Scoping Plan and 2022 Scoping Plan, respectively.

The 2045 carbon neutrality goal required CARB to expand proposed actions in the 2022 Scoping Plan to include those that capture and store carbon in addition to those that reduce only anthropogenic sources of GHG emissions. However, the 2022 Scoping Plan emphasizes that reliance on carbon sequestration in the state's natural and working lands will not be sufficient to address residual GHG emissions, and achieving carbon neutrality will require research, development, and deployment of additional methods to capture atmospheric GHG emissions (e.g., mechanical direct air capture). Given that the specific path to neutrality will require development of technologies and programs that are not currently known or available, the Project's role in supporting the statewide goal would be speculative and cannot be wholly identified at this time.

Overall, the Project would comply will all regulations adopted in furtherance of the Scoping Plan to the extent applicable and required by law. As demonstrated above, the Project would not conflict with CARB's 2017 or 2022 Scoping Plan updates and with the state's ability to achieve the 2030 and 2045 GHG reduction and carbon neutrality goals.

Potential to Conflict with the Town Climate Action Plan

As previously stated, the 2019 CAP Update presents a number of strategies that will make it possible for the Town to meet the recommended GHG emissions targets that are consistent with the reduction targets of the state. As described in the 2019 CAP Update:

> Section IV.ii provide, in broad terms, policies that may contribute to GHG reductions. These measures are intended as a menu for existing and future development, any combination of which can be implemented to reach reduction targets on a project-by-project basis.

The Project's consistency with applicable 2019 CAP Update strategies is therefore based on the overarching categories described within the 2019 CAP Update, rather than the entire menu of policies. Without mitigation, the Project would not be consistent with many of these strategies. However, with implementation of mitigation, specifically MM-AQ-3 and MM-GHG-1 through MM-GHG-3, the Project would be consistent with all strategies and would support the Town's CAP.

- **Transportation Measures.** The Project would require measures that would support reducing GHGs through the transportation sector. Specifically, implementation of MM-AQ-3 would require installation of Level 2 (or faster) EV chargers, install conduit in tractor trailer parking areas to support future truck charging stations, and install at least four heavy-duty truck charging stations (by 2030). In addition, MM-AQ-3 requires the establishment of transportation demand management programs for occupants with more than 250 employees in order to reduce employee commute vehicle emissions, as well as requirements to limit idling. Finally, although the requirement for all cargo handling and landscaping equipment to be zero-emission would not specifically be in the transportation sector, this aspect of MM-AQ-3 would also substantially reduce GHG emissions.
- **Energy Efficiency Measures.** The Project would require measures that would support energy efficiency, as specified in MM-GHG-1. These would include, but not limited to, the installation of on-site solar panels sufficient to meet at least 75% of the Project's total operational energy requirements from within the building envelope, the installation of Energy Star-rated heating, cooling, lighting, and appliances. In addition, although not specifically focused on energy efficiency, MM-GHG-3 would require the implementation of a Water Conservation Strategy and demonstrate a minimum 20% reduction in indoor and outdoor water usage when compared to baseline water demand. As water conveyance and treatment generates GHGs indirectly due to the electricity involved in the process, reducing water demand would also reduce the amount of electricity required.
- **Renewable Energy Measures.** The Project would require the generation of renewable energy through the installation of on-site solar panels sufficient to meet at least 75% of the Project's total operational energy requirements from within the building envelope, as described in MM-GHG-1.
- **Solid Waste Management Measures.** The Project would be consistent with the Solid Waste Management Measures of the 2019 CAP Update due to MM-GHG-2, which requires a 75% waste diversion program in order to reduce the amount of waste disposed at landfills.

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 4.9-1 Consistency with 2020–2045 RTP/SCS Goals within Section 4.9, Land Use and Planning).

- **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. 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, MM-AQ-3 would require that all cargo handling and landscaping equipment to be zero-emission, as well as require the installation of Level 2 (or faster) EV chargers, conduit in tractor trailer parking areas to support future truck charging stations, and at least four heavy-duty truck charging stations (by 2030).
- **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-1.

Based on the analysis above, with mitigation, the Project would be consistent with the SCAG 2020-2045 RTP/SCS.

Summary

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, SB 32, and AB 1279. Additionally, the Project would be consistent with the Town's 2019 CAP Update and the SCAG 2020–2045 RTP/SCS, with implementation of MM-AQ-3 and MM-GHG-1 through MM-GHG-3.

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 4.6-6, the Project would result in GHG emissions in exceedance of the SCAQMD significance threshold, even after the implementation of all feasible mitigation. 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. Implementation of **MM-AQ-2** would reduce construction equipment GHGs, and implementation of **MM-AQ-3** would reduce operational off-road equipment and on-road vehicle GHG emissions, to the extent feasible. The following mitigation

measures **MM-GHG-1** through **MM-GHG-3** would also reduce GHG emissions associated with energy, solid waste, and water conservation; however, impacts would remain **significant and unavoidable**.

MM-GHG-1 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.

MM-GHG-2 In order to reduce the amount of waste disposed at landfills, the Project would implement a 75% waste diversion program. 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.

MM-GHG-3 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). 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.

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 with implementation of mitigation**.

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-AQ-2, MM-AQ-3, and MM-GHG-1 through MM-GHG-3 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, including wildfire, and hazardous materials conditions of the Apple Valley 143 Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures (MM) 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:

- Geotechnical Feasibility Study, prepared by Southern California Geotechnical, in December 2021 (Appendix E)
- Phase I Environmental Site Assessment performed on 143.41-Acre Tract (Undeveloped), prepared by Consolidated Consulting Group LLC, in November 2021 (Appendix F)

4.7.1 Existing Conditions

Project Site Conditions

The Project consists of an approximately 143-acre site, which consist 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 Project site has been 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. Surface elevation within the Project site is relatively flat, ranging between approximately 2,920 and 3,000 feet above mean sea level. The local topographic gradient is approximately 3% downward towards the south.

The Project site is underlain by alluvial soils, consisting of medium dense silty sands with varying gravel content. On-site exploratory drilling did not encounter groundwater within 30 feet below ground surface. In addition, the nearest groundwater monitoring well is located approximately 0.5 miles southeast of the site. Water level readings within this monitoring well indicate a high groundwater level of approximately 153 feet below ground surface (Appendix E).

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 Town of Apple Valley (Town) and County of San Bernardino (County) Environmental Health Department and Building Inspection Department and the San Bernardino County/Town of Apple Valley Fire Department (Appendix F).

Project Site

The Project site was not identified on government databases pertaining to the storage and disposal of petroleum products and 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, multiple scrap tires were also observed. No staining or other obvious evidence of petroleum product/hazardous substance releases were observed in or around the debris. Consolidated Consulting Group considers the observed debris (including scrap tires) to represent a de minimis[1] condition in connection with the Project site (Appendix F).

Surrounding Areas

The Phase I ESA did not identify any environmental concerns within current or past adjacent sites (Appendix F). Land uses surrounding the Project site primarily consist of vacant land. Specific land uses located in the immediate vicinity of the Project site include the following:

- **North:** Johnson Road and vacant land
- **East:** vacant land and Grasshopper Road
- **South:** Stoddard Wells Road and a planned travel center
- **West:** I-15

4.7.2 Relevant Plans, Policies, and Ordinances

Federal

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

[1] De minimis conditions are defined by the ASTM 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."

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 Pollution Discharge Elimination System (NPDES) permit program was established in the Clean Water Act to regulate municipal and industrial discharges to surface waters of the United States. Discharge from any point source is unlawful unless the discharge is in compliance with an NPDES permit. 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.

State

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 Certified Unified Program Agencies (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 Town of Apple Valley, 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

Local

Town of Apple Valley General Plan

The Hazardous and Toxic Materials Element of the General Plan identifies, establishes, and sets forth policies to address hazards within the municipality. Goals or policies related to hazards and hazardous materials in the General Plan (Town of Apple Valley 2009) include the following:

Goal. Ensure that the environment and all residents, workers, and visitors are protected from exposure to hazardous materials and wastes.

Policy 1.A. The Town shall cooperate with regulators and encourage the enforcement of laws that require all users, producers, and transporters of hazardous materials and wastes to clearly identify such materials, and notify the appropriate county, state and/or federal agencies as required by law.

Policy 1.B. The County Sheriff's Department shall work with the Town Engineer, Caltrans, and California Highway Patrol, to regulate the transport of hazardous materials along local roadways, state highways and routes, and interstates in the Town or the vicinity.

Policy 1.D. The Town shall require all business that use, store, or produce hazardous material to comply with the County's Business Plan.

Program 1.D.1. As part of the development approval process, new businesses handling hazardous materials shall be required to submit a Business Plan for handing, storing, transporting, and disposing of hazardous materials and wastes.

Policy 1.E. The Town shall maintain documentation of known hazards to public health and safety and shall make this information available to government officials and organizations, emergency response personnel, and the general public.

Policy 1.F. The Town shall thoroughly evaluate development proposals for lands directly adjacent to sites known to be contaminated with hazardous or toxic materials, or sites that use or contain potentially hazardous or toxic materials.

Policy 1.G. Require and facilitate an efficient cleanup of contaminated sites identified within the Town of Apple Valley.

Program 1.G.1. Coordinate with responsible county, state, and federal agencies to initiate cleanup procedures, and monitor the status of cleanup efforts.

Policy 1.H. Designate appropriately managed access routes to facilitate the transport of hazardous and toxic materials.

Program 1.H.1. The Town shall maintain an Emergency Response Program, which provides for evacuation routes, and emergency services in the event of a hazardous spill or airborne release.

Policy 1.J. Land use designations that may involve the production, storage, transportation, handling, or disposal of hazardous materials will be located at a safe distance from land uses that may be adversely impacted by such activities.

Town of Apple Valley Emergency Operations Plan

The Town of Apple Valley has developed an Emergency Operations Plan (EOP) to incorporate and coordinate all the facilities and personnel of the Town into an efficient organization capable of responding to any emergency, including hazardous material incidents. The EOP is compliant with the California Standardized Emergency Management System (SEMS), which enables a multiple agency response to an incident, and the National Incident Response Management System (NIMS), which is intended to standardize agency response across federal, state and local jurisdictions.

Apple Valley Local Hazard Mitigation Plan

The Town updated its Local Hazard Mitigation Plan (LHMP) in 2017 in an effort to identify hazards, determine their likely impacts, and set mitigation goals and strategies, to expedite the recovery from a disaster to normalcy and increase the Town's resiliency to disasters. The LHMP focused on six hazards that were determined to be most significant to the Town: wildfire, flood, earthquake, erosion, flooding and climate change. The LHMP included a vulnerability assessment and identified mitigation goals and actions for each of the six hazards and those that apply to all hazards such as improving emergency services management capability through implementation of a public notification system and ensuring continual power supply at the Emergency Operations Center.

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. Result in a cumulatively considerable impact with regard to hazards and hazardous materials.

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.

Based on observed debris on the Project site, Consolidated Consulting Group recommends the removal and disposal of on-site tires and debris from the Project area in accordance with all applicable local, state, and federal guidelines. MM-HAZ-1 requires the removal and disposal of on-site tires and debris from the Project area in accordance with all applicable local, state, and federal guidelines. 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 Town and the Apple Valley Fire Protection District 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 Apple Valley Fire Protection District.

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 the 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. 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 Bell Mountain 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. 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 BRECs were identified.

Based on observed debris on the Project site, Consolidated Consulting Group recommends the removal and disposal of on-site tires and debris. MM-HAZ-1 would require the removal and disposal of on-site tires and debris from the Project area in accordance with all applicable local, state, and federal guidelines. 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 the SBCFD's CUPA requirements, the owner/operator must complete and submit an HMBP to the California Environmental Reporting System. Completion of an HMBP 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; and (4) hazardous materials inventory and response planning reports would be filed with the Town 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. The California Department of Forestry and Fire Protection's (CAL FIRE) Fire Hazard Severity maps have determined that the Project site is not in or near land classified as a Very High Fire Hazard Severity Zone, and impacts associated with wildfire in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones are not anticipated (see Figure 4.7-1, Fire Hazard Severity Zones; CAL FIRE 2022). The Project site is located in an area that is generally flat, lacking any steep slopes, and characterized as vacant land; these factors are not typically associated with the uncontrolled spread of wildfire.

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 Town 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 Town 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 Town'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). 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 wildfires in the immediately surrounding area are not common (see Figure

4.7-2, Wildfire History), 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: Would the Project result in cumulatively considerable impacts with regard to hazards and hazardous materials?

Less than Significant Impact. 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. These contaminants, if improperly handled, could expose the public environment to pollutants. However, water quality enhancement components of the Project, including the implementation of a SWPPP and stormwater BMPs 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. This would ensure that in the event that an emergency spill response and containment plan is in place in the event of hazardous spills. 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.

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 debris 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?

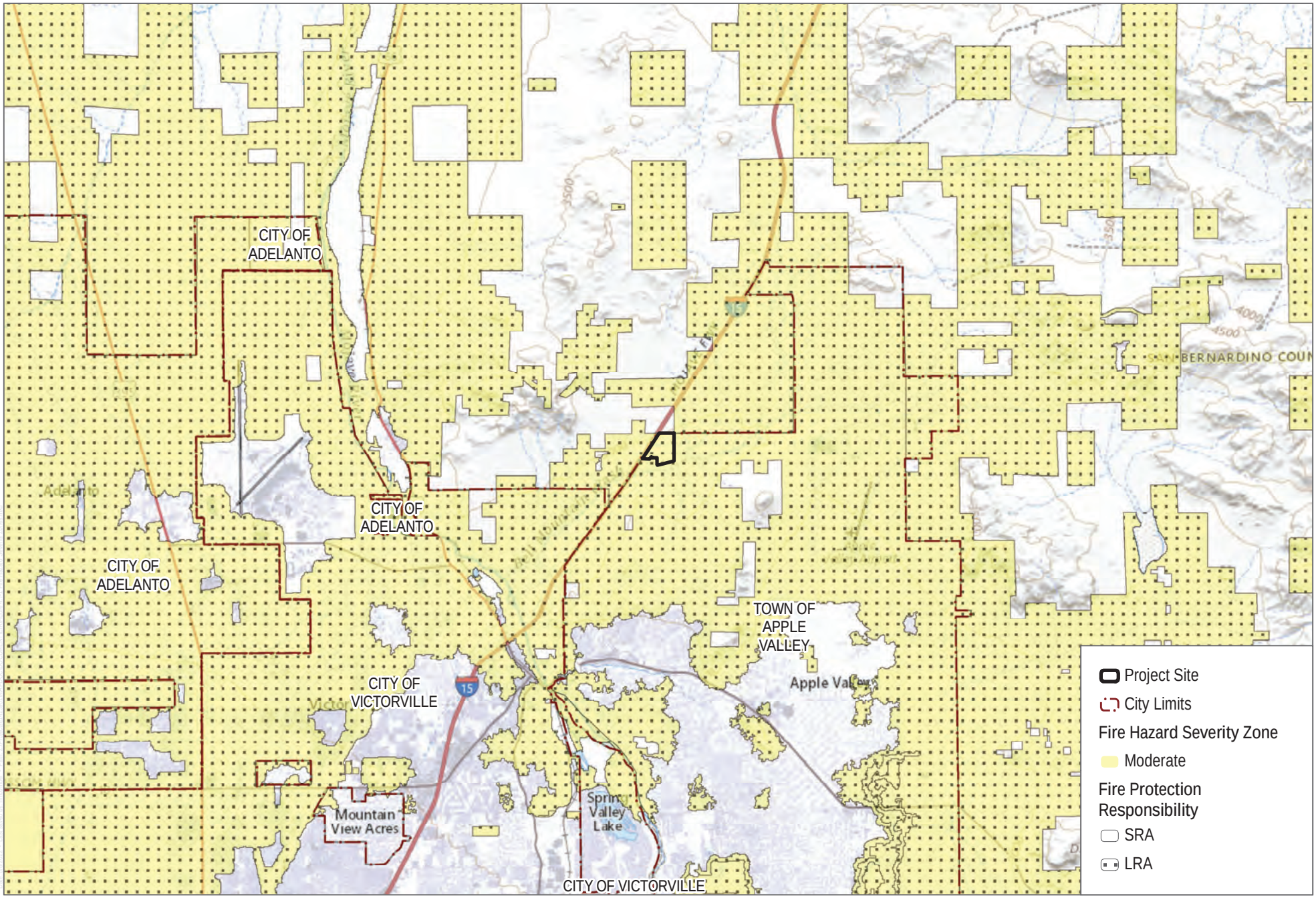
The Project would result in **less-than-significant impacts** associated with exposing people or structures to a significant risk of loss, injury, or death involving wildland fires. No mitigation is required.

Threshold H: Would the Project result in cumulatively considerable impacts with regard to hazards and hazardous materials?

The Project would result in **less-than-significant impacts** with regard to cumulative hazards and hazardous materials impacts. No mitigation is required.

4.7.6 References Cited

CAL FIRE (California Department of Forestry and Fire Protection). 2022. California Fire Hazard Severity Zones Viewer. Updated June 2, 2022. https://gis.data.ca.gov/maps/31219c833eb54598ba83d09fa0adb346/explore?location=34.548814%2C-117.162158%2C10.96.



SOURCE: USGS Topo Series (accessed 2022); San Bernadino County 2021; CAL FIRE 2021

DUDEK

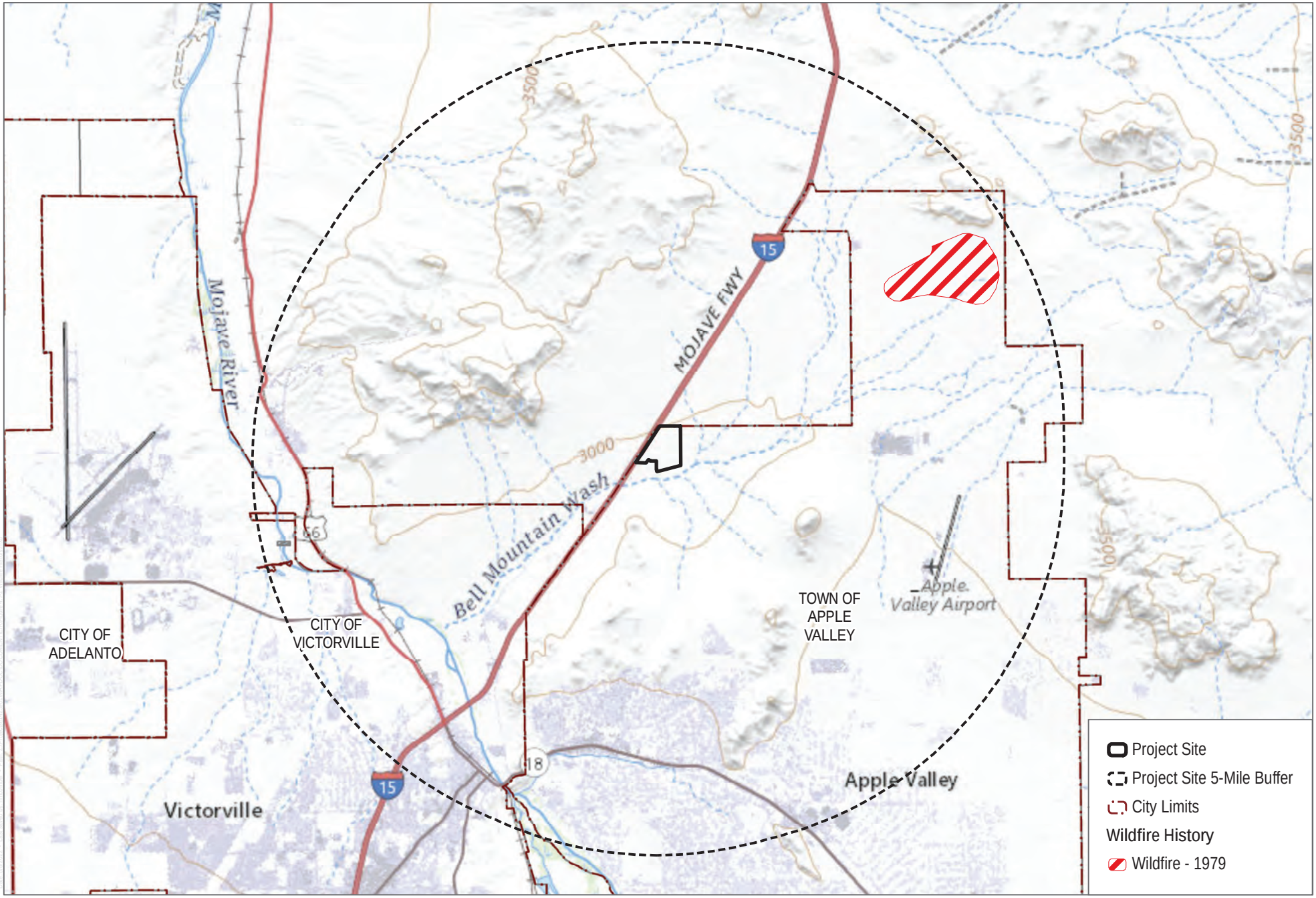
0 6,250 12,500 Feet

FIGURE 4.7-1

Fire Hazard Severity Zones

Apple Valley 143 Project

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SOURCE: USGS Topo Series (accessed 2022); San Bernadino County 2021; CAL FIRE 2021

DUDEK

0 4,450 8,900 Feet

FIGURE 4.7-2

Wildfire History

Apple Valley 143 Project

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4.8 Hydrology and Water Quality

This section describes the existing hydrology and water quality conditions of the Apple Valley 143 (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), the following analysis is based, in part, on the following sources:

- Preliminary Drainage Report, prepared by Q3 Consulting in September 2022 (Appendix G-1).
- Preliminary Water Quality Management Plan, prepared by Q3 Consulting in September 2022 (Appendix G-2).
- Water Supply Assessment for the Apple Valley 143 San Bernardino County, California, prepared by Dudek in July 2022 (Appendix J).

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). At its closest point to the Project site, the Mojave River is located approximately 4.5 miles to the southwest 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 within the Upper Mojave subwatershed.

Regional Groundwater

The Project site is located with the Upper Mojave River Valley Groundwater Basin (DWR Basin No. 6-042) as mapped by the California Department of Water Resources (DWR). The Upper Mojave River Valley Groundwater Basin has been divided into 5 management subareas: Este, Oeste, Alto, Centro, and Baja. The Project site is located in the Alto Subarea. The Alto Subarea was subsequently further divided to create the Alto Transition Zone (Transition Zone), a sub-management unit used to better assess groundwater and surface flows from Alto to Centro. Each subarea is composed of a unique set of hydrologic and hydrogeologic conditions and land and water demand profiles. The subareas are also hydraulically inter-related to varying degrees based on their respective location to the Mojave River and the distribution of water use in the basin (Mojave Water Agency 2015). The Basin is an adjudicated groundwater basin and is exempt from the requirements of developing a Groundwater Sustainability

Plan (GSP) as it is designated as a very-low priority basin by the California Department of Water Resources. The groundwater basin is bounded on the north from basement rock outcrops near Helendale to those in 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 a contact between alluvium and basement rocks that form the Shadow Mountains. (DWR, 2004). Unconsolidated basin fill deposits in the Mojave River Basin have been delineated into two aquifer systems: the Floodplain Aquifer and Regional Aquifer (Mojave Water Agency 2015).

Topography and Drainage

The Project site is currently undeveloped with the only improvements including a couple of dirt roads graded for maintenance of the culverts owned and maintained by Caltrans. Native vegetation consists of Desert Scrubs with poor cover. The site's surface elevation ranges between approximately 2,920 and 3,000 feet above mean sea level. The local topographic gradient is approximately 3% downward towards the south (Figure 3-5, Topographic Map).

Drainage at the Project occurs as sheet flow that originate from numerous dry desert washes tributary to a a series of seven culverts that convey runoff from the southern slopes of Silver Mountain Range across I-15. Runoff fromt eh seven culverts ultimately discharge onto or adjacent the Project site (Appendix G-1). Most of these watercourses are ephemeral, in that they rarely contain surface water flow and generally have poorly defined banks. Wider desert washes are present downstream of the seven culvert that originate from Silver Mountain.

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 Town of Apple Valley 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 United States Environmental Protection Agency (USEPA) 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 2017).

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. Only one TMDL has been established for the Mojave River Watershed. A TMDL for the Mojave Forks Reservoir Outlet to the Upper Narrows segment of the Mojave River has been established for fluoride (SWRCB 2017).

Regional Watershed Water Quality

The Mojave River was selected as a priority or "focus" watershed by the State Water Resource 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 (Lahontan 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 systems (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 (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.

Water Supply

The Project is within the water service area established for Liberty Utilities (Liberty Utilities 2021). Liberty Utilities currently supplies water to the nearby Walmart Distribution Center that is the proposed source of water tie-in for the Project. Liberty Utilities is an investor-owned public utility, thus considered a Public Water System. Liberty Utilities provides water service primarily within the Town of Apple Valley. As of 2020, Liberty Utilities provides approximately 21,000 municipal connections. (Liberty Utilities, 2021).

Groundwater is the only source of water supply for the Liberty Utilities' distribution system and the only source proposed for the Project. Liberty Utilities provides domestic water from potable supply wells within its service area and provides water for agricultural purposes from groundwater wells which are separate from Liberty Utilities' potable water system.

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 Town's water service area. The WSA concluded the following (Appendix J):

> There is adequate water available to supply the proposed Project. Although the future business that is conducted in the warehouses will impact water demand, water supply should not be an issue even on the higher end of the spectrum according to other existing and planned future uses, under normal-year, single-dry-year, and multiple-dry-year conditions over a 20-year projection.

Groundwater Quality

The Upper Mojave River Valley Basin has numerous groundwater quality issues with key contaminants including arsenic, nitrates, iron, manganese, Chromium-6, and total dissolved solids (TDS) (Mojave River Agency 2015). Groundwater has been contaminated with trichloroethane (TCE) at the former George Air Force Base, now a federal Superfund site. In addition, leaking underground storage tanks in and around Victorville have introduced fuel additives benzene, toluene, ethlybenzene, xylene, and methyl tertiary butyl ether (MTBE) into groundwater (DWR, 2004). However, there are no groundwater quality issues present in local groundwater delivered for potable use by Liberty Utilities (Liberty Utilities 2021).

Flood Hazards

Floods are natural and recurring events that only become hazardous when human improvements encroach onto floodplains, modifying the landscape and building structures in the areas meant to convey excess water during floods. Unfortunately, floodplains have been attractive to development throughout history, since they provide level ground and fertile soils suitable for agriculture, as well as access to water supplies and transportation routes. However, flood hazards are one of the most destructive natural hazards in the world, responsible for more deaths per year than any other geologic hazard. As the population in the area increases, there is an increased pressure to build on flood-prone areas, and in areas upstream of previously developed land. The construction of impervious surfaces, such as asphalt, associated with increased development means that water that used to be absorbed into the ground becomes runoff to downstream areas. Areas that have not flooded in the past may be subject to flooding in the future if drainage channels that convey storm waters are not designed or improved to carry these increased flows. Developments near the base of the mountains and downstream from canyons that have the potential to convey mudflows are particularly susceptible (Town of Apple Valley 2009).

Portions of Apple Valley are still vulnerable to inundation during the 100-year flood. These areas occur along the Mojave River and Desert Knolls Wash, and within the Apple Valley Dry Lake. Except for Desert Knolls Wash, most of the FEMA flood-prone areas are relatively undeveloped, or in the case of Apple Valley Dry Lake, development is minimal. Rock Springs Road is a major roadway and Mojave River crossing in the planning area. This roadway, as well as numerous secondary roads (mostly in the Dry Lake area), would be flooded and impassable as a result of the 100-year storm (Town of Apple Valley 2009).

The Federal Emergency Management Agency Flood Map Service Center identifies the Project site as Zone D, which is classified as an area of undetermined flood hazard (FEMA 2008). Floodwaters in the dry washes that cross the Project site are intended to cross Stoddard Wells Road at two existing culverts located near the interchange. However, the two existing culverts were judged to be undersized to convey the existing 10- and 100-year peak discharges from the cumulative 1,923 acres of tributary drainage area (Appendix G-1). As such, floodwaters at the current site are expected to break the roadway at numerous locations (Appendix G-1). The presence of native soils that are conducive to infiltration are only present along the southeast portion of the proposed Project.

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 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 Act (California Water Code Section 13000 et seq.; California Code of Regulations, Title 23, Chapter 3, Chapter 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. Porter–Cologne 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. USEPA 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

Formerly known as the California Green Building Standards Code, Title 24, Part 11, of the California Code of Regulations, CALGreen is designed to improve public health, safety, and general welfare by utilizing design and construction methods that reduce the negative environmental impact of development and to encourage sustainable construction practices. CALGreen provides mandatory direction to developers of all new construction and renovations of residential and non-residential structures with regard to all aspects of design and construction, including, but not limited to, site drainage design, stormwater management, and water use efficiency. Required measures are accompanied by a set of voluntary standards designed to encourage developers and cities to aim for a higher standard of development.

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

USEPA has established water quality criteria for certain toxic substances via the California Toxics Rule. The California Toxics Rule established acute (i.e., short-term) and chronic (i.e., long-term) standards for bodies of water, such as inland surface waters and enclosed bays and estuaries, that are designated by each RWQCB as having beneficial uses protective of aquatic life or human health.

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—AB 1739 (Dickinson), Senate Bill (SB) 1168 (Pavley), and SB 1319 (Pavley)—collectively known as SGMA. This Act requires governments and water agencies of high- and medium-priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over-drafted basins, sustainability should be achieved by 2040. For the remaining high- and medium-priority basins, 2042 is the deadline. Through the SGMA, the CDWR provides ongoing support to local agencies through guidance, financial assistance, and technical assistance. SGMA empowers local agencies to form Groundwater Sustainability Agencies (GSAs) to manage basins sustainably, and requires those GSAs to adopt GSPs 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 CDWR every 5 years for review and approval. The Project site is within the area addressed by Liberty Utilities – Apple Valley 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 water supply assessment (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.

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 Storm Water 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

Town of Apple Valley General Plan

The Town of Apple Valley General Plan contains the following goals and policies related to hydrology and water quality:

Water Resources Element

Goal**.** A dependable supply of safe, high-quality domestic water to meet the needs of all segments of the community.

Policy 1.A**.** The Town shall coordinate land development and assure a balance of development and water supply that ensures the long-term maintenance of an adequate supply of water, and its continued high quality.

Policy 1.B. To ensure that overall and per capita water demand from new development is reduced, the Town shall continue to require the use of drought-tolerant, low water consuming landscaping, intelligent irrigation controllers, and other water-conserving strategies and technologies in irrigated areas.

Policy 1.C. The Town shall continue to coordinate with the Building Industry Association and other members of the building industry to encourage the use of faucets, showerheads and appliances that exceed Titles 20 and 24 water efficiency requirements.

Policy 1.D. To the greatest extent practicable, the Town shall direct new development to provide irrigation systems that are able to utilize reclaimed water, when available, for use in common area and streetscape landscaping.

Policy 1.E. To the greatest extent practicable, the Town shall continue to require new development to connect to the community sewer system. Where sewer service is not available and lots are created of less than one (1) acre in size, the Town shall require the installation of "dry sewers" and the payment of connection fees for future sewer main extensions.

Policy 1.F. Consistent with community design standards and local and regional drainage plans, the Town shall provide development standards and guidelines for the construction of on-site storm water retention facilities.

Policy 1.H. The Town shall confer with appropriate water agencies and purveyors, as necessary, to assure adequate review and mitigation of potential impacts of proposed development on local water resources.

Flooding and Hydrology Element

Goal. Protect lives and property from flooding hazards through a comprehensive system of flood control facilities throughout the Town.

Policy 1.C. The Town shall actively cooperate with FEMA regarding amendments to local Flood Insurance Rate Maps, recognizing the importance of redesignation of the 100-year and 500-year flood plains within the Town boundaries as facility improvements are completed.

Policy 1.D. All new development within the Town shall be required to incorporate adequate flood mitigation measures, including the adequate siting of structures located within flood plains, grading that prevents adverse drainage impacts to adjacent properties, and on-site retention of runoff.

Policy 1.E. Assure that adequate access is maintained during major storm events, and that safe all-weather crossings over drainage facilities and flood control channels are provided where necessary.

Policy 1.F. Pursue all credible sources of funding for local and regional drainage improvements needed for adequate flood control protection.

Water, Wastewater and Utilities Element

Goal. The provision of a range of water, wastewater and other utility services and facilities that is comprehensive and adequate to meets the Town's near and long-term needs in a cost-effective manner.

Policy 1.A. The Town shall coordinate with the various domestic water service providers to ensure that local and regional domestic water resources and facilities are protected from over-exploitation and contamination.

Policy 1.D. The Town shall confer and coordinate with service and utility providers to ensure the timely expansion of facilities so as to minimize or avoid environmental impacts and disturbance of existing improvements. Planning efforts shall include design and siting of support and distribution facilities.

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.

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. Note that flooding hazards are also discussed in Threshold C.IV.

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 Town of Apple Valley is a co-permittee under the San Bernardino County Municipal NPDES MS4 Phase II Stormwater permit. The NPDES MS4 Permit requires the Town 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. To comply with the regulatory requirements of the SWMP, the Town requires the implementation of an ESCP for projects that include soil disturbance during construction. Implementation of an ESCP would ensure that construction-related BMPs are implemented during all phases of construction 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 (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 Town are necessary prior to the issuance of grading permits for Project development.

Under the NPDES MS4 Phase II Stormwater 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 and the Mojave River Watershed Storm Water Management Program 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 and operation of 3 industrial/warehouse buildings totaling approximately 2,520,000 square feet on approximately 143 acres (Figure 3-10). Building 1, the southernmost building, would be approximately 615,000 square feet, Building 2, the center building, would be approximately 1,222,500 square feet, and Building 3, the northernmost building, would be approximately 682,500 square feet. The

Project would involve associated improvements, including loading docks, truck and vehicle parking, and landscaped areas. 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 potential pollutants onsite from the impervious surface areas where, without proper stormwater controls and BMPs, those pollutants could enter the storm drain system before eventually being discharged into a tributary of Bell Mountain 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 Phase II Stormwater Permit requires the Town to implement a Post-Construction Storm Water Management Program 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 Town requires the incorporation of LID features into new development and redevelopment projects as specified in the Mojave River Watershed Technical Guidance Document for Water Quality Management Plans. In accordance with the NPDES permit, the Town 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 Watershed Technical Guidance Document for Water Quality Management Plans,* with the goal of reducing the number of pollutants in stormwater and urban runoff. The Project-specific Preliminary Water Quality Management Plans for the proposed Project (Appendix G-2) determined that one underground infiltration basin downstream of Storm Drain Line A,, and one detention basin downstream of Storm Drain Line B would be sufficient to address on-site stormwater water quality-related issues consistent with permit requirements (Appendix G-2).

Post-construction, the Project area would be graded to mimic existing drainage patterns and designed to collect stormwater runoff for offsite discharge to the southwest corner of the site. As noted above, the proposed onsite storm drain infrastructure would consist of an infiltration basin (344,173 cubic-feet) downstream of Storm Drain Line A and one extended detention basin downstream of Storm Drain Line B (1,183,090 cubic-feet). Areas draining to Storm Drain Line A would include Warehouse 1 building, the south parking lots, the south Underground Infiltration Basin (Basin 1), parking lots on the east side of Warehouse 2, Warehouse 3 building and all north parking lots. Surface runoff from the east half of north parking lots, and all of parking lots on the east sides of the three warehouses would sheet flow in a south-easterly direction and would be collected by Storm Drain Line A and routed to the Basin 1. Surface runoff from the west half of the north parking lots will sheet flow in a south westerly direction and will be collected by local storm drain Lateral A-2 located between Warehouses 2 and 3 and routed to Infiltration Basin 1.

Areas draining to Storm Drain Line B (Warehouse 2, central parking lot except for the east side of the warehouse, and two adjacent extended detention basins on the west side of the proposed site) would be collected by the onside drain line and routed to the extended detention basin which would fully biotreat runoff through a network of underdrain pipes.

In accordance with the San Bernardino County Hydrology Manual, the infiltration and 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. 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 10-year storm, meaning no runoff would be discharged off-site, and more than 95% of the 100-year volume consistent with the Town's requirements (Appendix G-1). The combination of the underground infiltration basin and the extended detention basins would capture the design capture volume, the hydromodification volume, and both peak discharge and runoff volumes from the 10-year 24-hour and the 100-year 24-hour storm events. Post-development hydrologic conditions would effectively be reduced to levels below those that have been calculated for existing or pre-development hydrologic conditions (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 the infiltration and detention basins would be able to meet retention time requirements for water quality purposes in accordance with San Bernardino County requirements. 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/detention systems designed to retain 100% of the volume generated from up to a 10-year storm event and at least 95% of the 100-year storm event. Detained stormwater would infiltrate through the bottom of the infiltration basins and into the underlying soils. 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 attributed to development of the site would be less than significant.

Groundwater Supply

Less-than-Significant Impact. Liberty Utilities sources all of its water supply from groundwater and only extracts the amount of water necessary to meet its demand in any given year. The source of groundwater for Liberty Utilities is within the Alto Subarea subbasin of the Upper Mojave River Valley Groundwater Basin. The basin is adjudicated and thus has a managed groundwater extraction rate (Appendix J). 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 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.

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 Town's water service area (Appendix J). Liberty Utilities has a history of meeting all of its demands even during recent periods of drought and has a water shortage contingency plan in place in the event of severe drought. The WSA concluded that the 2020 UWMP has already accounted for increased development and that the proposed demand from the proposed project would not likely adversely affect the water supply for Liberty Utilities (Appendix J). The 2020 has demonstrated that Liberty Utilities has projected supply and demand estimates under normal-year, single-dry-year, and multiple-dry-year conditions over a 30-year projection that can be met without adversely affecting sustainable groundwater management of the basin. See also Section 4.13, Utilities and Service Systems.

Therefore, the proposed Project would not substantially decrease groundwater supplies and would not impede sustainable groundwater management of the basin and 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. Construction of the proposed Project would result in the introduction of new impervious surfaces, including warehouse buildings, parking lots, access roads and walkways. As discussed under Threshold A, construction activities would be required to implement BMPs as part of a SWPPP that would include erosion control measures for all exposed soils. Once developed, the buildings, paved surfaces, other on-site improvements, and drainage control features would stabilize and help retain on-site soils. The remaining portions of the Project site containing pervious surfaces would primarily consist of landscaped areas including 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 drainage system would include catch basins and an underground infiltration basin as well as an extended detention basins to retain and infiltrate water onsite and address the Hydromodification Performance Criteria required for the proposed Project in accordance with MS4 Phase II Storm Water permit requirements. The stormwater drainage systems would be based on preliminary engineering considerations, including the minimum setback from structures as recommended by the geotechnical engineer. The adherence to water quality control requirements consistent with MS4 Phase II Storm Water permit requirements would ensure that the proposed changes to drainage patterns would result in less than significant impacts related to erosion or siltation in runoff on- or 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;

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 for volume control consistent with the Mojave Watershed Technical Guidance Document and required LID and Hydromodification Performance Criteria in accordance with the 2013 Phase II Small MS4

Permit. The proposed Project improvements would be designed to convey runoff as sheet flows away from buildings, and allow onsite infiltration through the remaining landscaped pervious areas as well as the subsurface infiltration and detention basins. The proposed drainage system would be designed to fully capture the 10-year 24-hour storm event and more than 95% of the 100-year storm such that the potential for flooding on- or off-site would be reduced to less than significant levels.

The Project-specific Preliminary Drainage Report (Appendix G-1) included an 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., the Mojave River). In accordance with the San Bernardino County Hydrology Manual, the rational method and unit hydrograph were used to calculate the 10-year and 100-year peak discharges for the proposed Project conditions with and without the proposed improvements (i.e., infiltration and detention basins). Table 4.8-1 presents the existing and proposed hydrology summary.

Table 4.8-1. Proposed Hydrology Summary

	10-Year Storm Event (No basins)	10-Year Storm Event (with basins)	Amount Captured/ Retained (%)	100-Year Storm Event Volume[1] (no basins)	100-Year Storm Event Volume[1] (no basins)	Amount Reduced/ Captured (%)
Storm Drain Line A – Peak Discharge[1]	86.2 cfs	0 cfs	100	158.2 cfs	19.1 cfs	87.9
Storm Drain Line A – Runoff Volume	12.1 AF	0 AF	100	20.4 AF	1.0 AF	95.1
Storm Drain Line B – Peak Discharge	79.6 cfs	0.5[2] cfs	>99%	150.4 cfs	1.0 cfs	99.3
Storm Drain Line B – Runoff Volume	9.4 AF	9.4 AF	0, but discharge reduced to low flows only[2]	16.3 AF	16.3 AF	0, but discharge reduced to low flows only[2]

Source: Appendix G-1
Notes:
1 Peak Discharge in cubic feet per second (cfs); Volume in acre-feet (AF).
2 For Storm Drain Line B, the extended detention basin sits on soils that do not facilitate infiltration but designed to reduce discharge flows to low flows only.

As depicted in Table 4.8-1, the stormwater drainage system basins would be sized and designed to prevent flooding from a 10-year or 100-year storm with a design retention/detention volume consistent with the Hydromodification Performance Criteria. The infiltration basin for Storm Drain Line A would be designed to capture the entire volume generated from a 10-year storm and over 95% of the 100-year storm, with post-development hydrologic conditions reduced to levels below those in the pre-developed conditions (Appendix G-1). The extended detention basin for Storm Drain Line B would be located on soils that do not facilitate infiltration and so there would be no volume retained onsite, however they would be designed to permit only low flows of discharge which is also consistent with the Hydromodification Performance Criteria.

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 Town of Apple Valley and the County of San Bernardino WQMP and SWMP requirements. In addition, the Project would incorporate LID features, including on-site infiltration/retention and detention 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 Federal Emergency Management Agency Flood Map Service Center identifies the Project site as Zone D, which is classified as an area of undetermined flood hazard but still an area where flooding is possible (FEMA 2008). However, as previously discussed, although onsite drainage patterns would be 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 10- year or 100-year storm events with volumes either fully captured or at least resulting in discharges reduced to very low flows. 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. Compliance with these regulatory drainage control requirements are consistent with Lahontan Basin Plan policies and water quality objectives which 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 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, Liberty Utilities would be supplying water for the proposed Project and sources its water from groundwater in the Alto Subarea of the Upper Mojave River Valley Basin. Historical practices lead to declining water levels in the Basin which resulted in the adjudication of the Basin in 1996 in order to manage groundwater supplies and regulate extraction. Since adjudication, the Mojave Basin Area has been well managed as evidenced by stabilized water levels and reliable supply (Liberty Utilities 2021). The WSA prepared for the

proposed Project which relied in part on the 2020 UWMP for Apple Valley, determined that demand of the Project can be met in normal, single year dry, and multiple dry year scenarios (Appendix J). 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 for surface water and the Upper Mojave River Valley Groundwater Basin for groundwater. Cumulative development in the watershed and groundwater basin could add new sources of stormwater runoff that could adversely affect surface water or groundwater quality. 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 region would be subject to the existing regulatory requirements to protect water quality and minimize increases in stormwater runoff as has been described for the proposed Project. For example, Part 1, Section I of the MS4 Phase II NPDES Permit requires the Town of Apple Valley as well as other co-permittees 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 MS4 Phase II NPDES Permit requires the Town to control discharges to and from municipal sewer systems, so as to comply with the NPDES permit and to specifically prohibit certain discharges identified in the 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 local jurisdictions located within San Bernardino County are co-permittees under the San Bernardino County MS4 Phase II 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 Liberty Utilities for which their 2020 UWMP contains detailed information about the urban water supplier's water supply and demand projections out to 2045. The water demand for the cumulative projects are accounted for in the UWMP because they are consistent with the existing general plan

designation and zoning that was established in the plan. According to the Town's General Plan, the land use and zoning designations for the project site are Regional Commercial (C-R). Additionally, the Project site is located within the Warehouse Distribution Regional Commercial (C-R) Overlay. Given much of Liberty Utilities' service area is already built out, the Project's additional water demand reasonably fits within this projected increase. The UWMP indicates that Liberty Utilities can meet water demands during normal years, single dry years, and a five consecutive year drought period over the next 25 years (Liberty Utilities 2021). This is because although the underlying basin is adjudicated, there is no hard limit on the amount of groundwater that can be produced annually, however the Judgement requires Liberty Utilities to pay the Watermaster for any overages above their allocation to be used for purchasing SWP replacement water. Liberty Utilities can also meet its obligation by transferring unused allocations from other parties in the Alto Subarea. Therefore, because it has historically been able to meet demands during historical 5-year droughts, has a water shortage contingency plan, and planned demand/supply management measures in place, it is projected to meet all demands projected out to 2045 (Liberty Utilities 2021). As such, there is no cumulative impact and 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 Project-specific WSA (Appendix J) which considered existing demands and available as well as projected supplies, concluded that the total projected water supplies available to Liberty Utilities during normal, single-dry, and multiple-dry water years over the next 25 years should be sufficient to meet the projected water demands for projected growth within the service area. These projections consider land use, water development programs and projects, and water conservation. 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, alter the existing storm drain system, and/or require the construction of new or expanded facilities. All new development and redevelopment 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. Cumulative projects would also be subject to existing stormwater regulatory requirements including the completion of drainage analyses to ensure that excessive on- or off-site flooding and runoff would not occur. Similar to the proposed Project, cumulative projects are required to be designed such that any increases in stormwater runoff are retained and infiltrated for the full 10-year storm event and at least 95% of the 100-year storm event. As such, the Project would substantially reduce the volume of stormwater that is discharged offsite and thus would not contribute to adverse effects related to stormwater volumes. Potential impacts to drainages associated with the Project would not contribute considerably to cumulative impacts and the 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.

4.8.6 References Cited

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4.9 Land Use and Planning

This section describes the existing land use and planning conditions of the Apple Valley 143 (Project) site and vicinity, identifies associated regulatory requirements and evaluates potential impacts. Information contained in this section is based on review of local, regional, and statewide policies and regulations encompassing the Project site, including:

- Southern California Association of Government's (SCAG) Regional Transportation Plan/Sustainable Communities Plan (RTP/SCS; Connect SoCal)
- Town of Apple Valley General Plan
- Town of Apple Valley Municipal Code

Other sources consulted are listed in Section 4.9.6, References Cited.

4.9.1 Existing Conditions

Existing Project Site Conditions

The approximately 143-acre, irregularly-shaped Project site consists of vacant, undeveloped land. The Project site is bordered to the west by I-15, which runs northeast-southwest, and to the southwest by another parcel, which gives the site its roughly trapezoidal shape. The Project site is vacant and undeveloped, relatively flat land characterized by desert landscape, and has been disturbed by illegal dumping (resulting in several debris piles throughout the site).

Surrounding Conditions

Surrounding land uses are composed primarily of vacant land and scattered development. The area surrounding the Project site is zoned for Regional Commercial (C-R), Office Professional (O-P), and Estate Residential (R-E) uses. Land use immediately adjacent to the facility consists of vacant land followed by a Walmart and Big Lots Distribution Centers to the east, I-15 to the west, a Solar Energy plant to the southwest, and completely undeveloped land to the north and west. The nearest populated areas are the southern parts of the Town of Apple Valley, located approximately three miles to the south of the Project site.

4.9.2 Relevant Plans, Policies, and Ordinances

Federal

There are no federal plans, policies, or ordinances applicable to the land use considerations of the Project.

State

California Planning and Zoning Law

The legal framework under which California cities and counties exercise local planning and land use functions is set forth in California Planning and Zoning Law, Government Code Sections 65000-66499.58. Under State planning law, each city and county must adopt a comprehensive, long-term general plan. State law gives cities

and counties wide latitude in how a jurisdiction may create a general plan, but there are fundamental requirements that must be met. As stated in Section 65302 of the California Government Code, "The general plan shall consist of a statement of development policies and shall include a diagram or diagrams and text setting forth objectives, principle, standard, and plan proposals." While a general plan will contain the community vision for future growth, California law also requires each plan to address the mandated elements listed in Section 65302. The mandatory elements for all jurisdictions are land use, circulation, housing, conservation, open space, noise, and safety. Each of the elements must contain text and descriptions setting forth objectives, principles, standards, policies, and plan proposals.

Senate Bill 743

On September 27, 2013, Governor Brown signed Senate Bill (SB) 743, which became effective on January 1, 2014. The purpose of SB 743 is to streamline the review under the California Environmental Quality Act (CEQA) to balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions. An in-depth discussion of SB 743 is provided in Section 4.12, Transportation. In summary, SB 743 changes the focus of environmental review of transportation impacts. In the past, environmental review of transportation impacts focused on the delay that vehicles experience at intersections and on roadway segments, which is often measured using levels of service (LOS). Under SB 743, LOS can no longer be used to determine significant transportation impacts under CEQA. The State CEQA Guidelines were updated in 2018 to require use of the vehicle miles traveled (VMT) methodology for assessing transportation impacts.

Regional

Regional Transportation Plan/Sustainable Communities Strategy

Southern California Association of Governments (SCAG) is the designated Metropolitan Planning Organization (MPO) for six Southern California counties (Los Angeles, Ventura, Orange, San Bernardino, Riverside, and Imperial), and is federally mandated to develop plans for transportation, growth management, hazardous waste management, and air quality. The Town of Apple Valley is one of the many jurisdictions that fall under SCAG.

The 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (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.

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).

The Project's consistency with MDAQMD was analyzed in Section 4.2, Air Quality.

San Bernardino County Congestion Management Program

The *San Bernardino County Congestion Management Plan* (CMP) was prepared by the San Bernardino Associated Governments (SANBAG) to more directly link land use, transportation, and air quality planning and to prompt reasonable growth management programs that would more effectively utilize new and existing transportation funds to alleviate traffic congestion and related impacts and improve air quality. The *San Bernardino County CMP* was first adopted in November 1992 and has since been updated 12 times, with the most recent comprehensive update in June 2016. The Project's consistency with the *San Bernardino County CMP* is discussed in detail in Section 4.12, *Transportation*.

Local

Town of Apple Valley General Plan

The Apple Valley General Plan establishes the long-term vision for the Town and fulfills the requirements of California Government Code Section 65302 requiring local preparation and adoption of General Plans. The General Plan includes the following mandated and optional elements: Land Use Element, Circulation Element, Parks and Recreation Element, Housing Element, Water Resources Element, Open Space and Conservation Element, Biological Resources Element, Archaeological and Historic Resources Element, Air Quality Element, Energy and Mineral Resources Element, Geotechnical Element, Flooding and Hydrology Element, Noise Element, Hazardous and Toxic Materials Element, Water, Wastewater and Utilities Element, Public Building and Facilities Element, Schools and Libraries Element, Police and Fire Protection Element, and Emergency Preparedness Element.

Apple Valley Development Code

The Apple Valley Development Code implements the goals and objectives of the General Plan by regulating the location and use of structures and land through various zoning designations. It is intended to assure orderly and beneficial development, reduce hazards resulting from the inappropriate location or use of improvements, and maintain the Town's distinctive character. The Zoning Map assigns zoning designations to all parcels in the Town. It is consistent with the General Plan and directly corresponds to General Plan land use designations.

4.9.3 Thresholds of Significance

The July 2022 Initial Study (Appendix A) for the proposed Project included an analysis of the following significance criteria based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.).

It was concluded in the Initial Study that there was a less than significant impact for the following significance criterion. Therefore, the following significance criterion is not included as part of this EIR:

A. Would the project physically divide an established community?

The following significance criteria, included for analysis in this EIR, is based on Appendix G of the State CEQA Guidelines (14 CCR 15000 et seq.), and will be used to determine the significance of potential land use and planning impacts. Impacts to land use and planning would be significant if the Project would:

B. Conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.
C. Result in cumulatively considerable impacts with regard to land use.

4.9.4 Impacts Analysis

Threshold B: Would the Project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less Than Significant Impact. The Project would not result in a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, as further discussed below.

Town of Apple Valley Land Use Plans, Policies, and Regulations

General Plan

According to the Town's General Plan, the land use designation for the Project site is Regional Commercial (C-R). Additionally, the Project site is located within the Warehouse Distribution Regional Commercial (C-R) Overlay. The overlay would only apply to 978 acres within the CR District located immediately west of the I-15 freeway, Dante Road to the south and Caplet Street to the north, and the CR District's boundary to the east. Since the Project site is within this overlay, the proposed warehouse facility is an allowable use under the existing general plan land use designation. As such, the proposed Project would be consistent with applicable land use policies and regulations, and impacts related to consistency with the Town's General Plan would be less than significant.

Zoning Ordinance

The Apple Valley Zoning Ordinance classifies the Project site as being within Regional Commercial (C-R) with Warehouse Distribution Regional Commercial (C-R) Overlay. Since the warehouse facility is an allowed use under the current zoning designation, development of the proposed Project would not introduce an incompatible land use in the Town. As such, the proposed Project would be consistent with applicable land use policies and regulations, and impacts related to consistency with the zoning ordinance would be less than significant.

Regional Transportation Plan/Sustainable Communities Strategy

The 2020-2045 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) 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. The TRP/SCS established goals

for the region and identifies transportation investments that address the region's growing population, as well as strategies to reduce traffic congestion and GHG emissions. In addition, the RTP/SCS is supported by a combination of transportation and land use strategies that help the region achieve state GHG emission reduction goals and federal Clean Air Act requirements, preserve open space areas, improve public health and roadway safety, support the region's vital goods movement industry, and utilize resources more efficiently (SCAG 2020).

Consistency with the 2020-2045 RTP/SCS goals, below, demonstrates that the Project would not conflict with the applicable goals in the RTP/SCS adopted for the purpose of avoiding or mitigating an environmental effect. Table 4.9-1 demonstrates how the Project promotes consistency with the guiding principles and policies of the RTP/SCS.

Table 4.9-1. Consistency with 2020-2045 RTP/SCS Goals

RTP/SCS Goal	Project Applicable Component(s)	Consistency
Goal 1 Encourage regional economic prosperity and global competitiveness.	The Project would involve construction of three industrial warehouse buildings. Thus, the Project would generate jobs and tax revenue for the Town and its residents. Once operational, the Project would add to the Town's business tax base and would employ approximately 2,108 workers, helping the Town better meet its jobs/housing balance, while also providing regional commercial use that will help the Town offer a more balanced array of land uses throughout the broader Project area.	**Consistent**
Goal 2 Improve mobility, accessibility, reliability, and travel safety for people and goods.	The Project would include construction and operation of three industrial warehouse buildings that would be easily and efficiently accessible to I-15, which would help to facilitate regional goods movement throughout Southern California.	**Consistent**
Goal 3 Enhance the preservation, security, and resilience of the regional transportation system.	A traffic impact analysis was prepared to determine the Project's potential effect on the regional and local circulation system. Improvements to adjacent roadway facilities that are identified in the traffic impact analysis will be implemented as part of the Project (and will be made a condition of Project approval), as to accommodate for street capacity and effectiveness of the regional circulation system during operation of the Project. Further, the Town 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 Town growth. As such, the Project Applicant will be subject to the Town's DIF fee program and will pay the requisite Town DIF fees at the rates then in effect.	**Consistent**
Goal 4 Increase person and goods movement and travel choices within the transportation system.	The Project would include construction and operation of three industrial warehouse buildings, which would be easily and efficiently accessible to I-15 and would help to facilitate regional goods movement throughout Southern California.	**Consistent**
Goal 5	The Project would involve development of an industrial use that inherently involves the emission of GHG and air contaminant emissions. However, the Project would	**Consistent**

Table 4.9-1. Consistency with 2020-2045 RTP/SCS Goals

RTP/SCS Goal	Project Applicable Component(s)	Consistency
Reduce greenhouse gas emissions and improve air quality.	incorporate all feasible mitigation measures to reduce impacts to air quality and GHG emissions. In addition, according to the Southern California Association of Governments 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), thereby reducing the need for longer distance trips which could result in additional air pollutant and GHG emissions. Additionally, the Project would employ approximately 2,108 workers, helping the Town better meet its jobs/housing balance, which should shorten commute distances of Town residents who choose to work on the Project site, which would have a direct positive effect on tailpipe GHG and air contaminant emissions.	
Goal 6 Support healthy and equitable communities.	The Project would involve development of an industrial use that inherently involves the emission of GHG and air contaminant emissions. However, the Project would incorporate all feasible mitigation measures to reduce impacts to air quality and GHG emissions. As discussed in Section 4.2, Air Quality, the Project would result in a significant and unavoidable impact to sensitive receptors because operation of the Project could result in exceedances of MDAQMD significance thresholds for NO_x and PM_{10}. Additionally, as discussed in Section 4.2, Air Quality, health risk assessments were prepared for the Project, which concluded that the Project would not have a significant adverse effect on the health of the local community with the incorporation of MM-AQ-3. In addition, according to the Southern California Association of Governments 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), 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, thereby eliminating the need for truck traffic to take longer routes through residential or commercial/retail areas. The Project	Consistent

Table 4.9-1. Consistency with 2020-2045 RTP/SCS Goals

RTP/SCS Goal	Project Applicable Component(s)	Consistency
	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.	
Goal 7 Adapt to a changing climate and support an integrated regional development pattern and transportation network.	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. However, the Project would incorporate all feasible mitigation measures to reduce impacts to air quality and GHG emissions to the maximum extent practicable. In addition, according to the Southern California Association of Governments 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), thereby reducing the need for longer distance trips which could result in additional GHG emissions.	**Consistent**
Goal 8 Leverage new transportation technologies and data-driven solutions that result in more efficient travel.	Development of the Project at the Project site would provide quick and efficient access to I-15, thereby eliminating the need for truck traffic to take longer routes through residential or commercial/retail areas. In addition, according to the Southern California Association of Governments 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), thereby reducing the need for longer distance trips which could result in additional air pollutant and GHG emissions.	**Consistent**
Goal 9 Encourage development of diverse housing types in areas that are supported by multiple transportation options.	The Project site is not zoned for housing, but rather for regional commercial with warehouse uses. Thus, this goal is not applicable.	**Not Applicable**

Table 4.9-1. Consistency with 2020-2045 RTP/SCS Goals

RTP/SCS Goal	Project Applicable Component(s)	Consistency
Goal 10 Promote conservation of natural and agricultural lands and restoration of habitats.	The Project would be located on an area zoned for regional commercial with warehouse uses. The Project site does not support agriculture. Mitigation measures have been outlined in this EIR to offset potentially significant impacts to suitable on-site habitat, sensitive plant and wildlife species, and Joshua Tree Woodland. See Section 4.3, Biological Resources, for further detail.	**Consistent**

As described above, the Project would be consistent with the applicable goals and policies set forth by the General Plan, the Town's Municipal Code, and SCAG in regard to the RTP/SCS. Therefore, impacts would be less than significant.

Threshold C: Would the Project result in cumulatively considerable impacts with regard to land use?

Less Than Significant Impact. Implementation of the proposed Project, combined with the development of ongoing projects and future industrial projects in the greater project area, could potentially result in cumulative impacts associated with land use and planning if these projects collectively conflict with either existing land uses or other future projects in the area. The anticipated impacts of the Project in conjunction with cumulative development in the area of the Project would result in the development of vacant land. However, potential land use impacts require evaluation on a case-by-case basis because of the interactive effects of a specific development and its immediate environment. As described above, the proposed Project would be consistent with the goals and policies of the Apple Valley General Plan. In addition, the proposed Project would be an allowable use and would not conflict with the Town's land use or zoning classifications. Therefore, the Project would be consistent with the goals and policies of the Apple Valley General Plan and the Zoning Ordinance and would therefore not contribute to a cumulatively considerable impact regarding land use.

Furthermore, all related projects would be required to undergo environmental review on a case-by-case basis in accordance with the requirements of CEQA. Each related project would also be required to demonstrate consistency with all applicable planning documents governing the Project site, including the Apple Valley General Plan and the Zoning Ordinance, and any applicable Specific Plans. Should potential impacts be identified, appropriate mitigation would be prescribed that would likely reduce potential impacts to less-than-significant levels. Therefore, the proposed Project would not result in a cumulatively considerable impact related to land use.

4.9.5 Mitigation Measures and Level of Significance After Mitigation

Threshold B: Would the Project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The Project would result in less-than-significant impacts with regard to a conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. No mitigation is required.

Threshold C: Would the Project result in cumulatively considerable impacts with regard to land use?

The Project would result in less-than-significant cumulative impacts with regard to a land use. No mitigation is required.

4.9.6 References

Town of Apple Valley. 2009. Town of Apple Valley General Plan. Adopted August 11, 2009. https://www.applevalley.org/services/planning-division/2009-general-plan.

Town of Apple Valley. 2019. Zoning Map. Revised September 24, 2019. https://www.applevalley.org/home/showpublisheddocument/31600/637757741520900000.

Town of Apple Valley. 2022. Town of Apple Valley Municipal Code. Updated September 7, 2022. https://library.municode.com/ca/apple_valley/codes/code_of_ordinances?nodeId=TOAPVACAMUCO.

SCAG (Southern California Association of Governments). 2020. 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy. Adopted September 2020. https://scag.ca.gov/read-plan-adopted-final-plan.

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4.10 Noise

This section describes the existing noise conditions of the Apple Valley 143 Project (Project) site and vicinity, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures (MM) 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:

- *Field Noise Data*, prepared by Dudek in April 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 November 2022 (Appendix H-3)
- *On-Site Noise Modeling Data*, prepared by Dudek in November 2022 (Appendix H-4)
- *Transportation Impact Analysis*, prepared by Dudek in November 2022 (Appendix I)

4.10.1 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 4.10-1 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 4.10-1. 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)
Noisy urban area, daytime gas lawn mower at 30 meters (100 feet)	70	Vacuum cleaner at 3 meters (10 feet)

Table 4.10-1. Typical Sound Levels in the Environment and Industry

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
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. 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 residential uses located to the east and east-northeast. These sensitive receptors represent the nearest land uses with the potential to be impacted by construction and operation of the Project. Noise-sensitive receptors located farther from the Project site in the surrounding community would be less impacted by noise and vibration levels than the above-listed sensitive receptors.

Existing Noise Conditions

Currently, the Project site is vacant and undeveloped; thus, little to no noise is currently generated on site. However, the surrounding area is subject to traffic noise associated with adjacent roadways, specifically Interstate (I-)15 and Stoddard Wells Road. There are no other major noise sources in the Project vicinity.

Noise measurements were conducted near the Project Site on April 7, 2022, to characterize the existing noise levels. The measurements were made using a calibrated SoftdB Piccolo integrating sound level meter. The sound level meter meets the current American National Standards Institute standard for a Type 2 (general purpose) sound level meter. The accuracy of the sound level meter 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 in the vicinity of the Project site. These locations are depicted as receivers ST1–ST3 on Figure 4.10-1, Noise Measurement and Modeling Locations. The measured energy-averaged (L_{eq}) and maximum (L_{max}) noise levels are provided in Table 4.10-2. The primary noise sources at the measurement sites consisted of traffic along adjacent roadways; distant barking dogs and birds represented secondary noise sources. As shown in Table 4.10-2, the measured sound levels ranged from approximately 62 dBA L_{eq} at ST2 to 66 dBA L_{eq} at ST3. The field noise data sheets are provided in Appendix H

Table 4.10-2. Measured Noise Levels

Receptors[1]	Location	Date	Time	L_{eq} (dBA)	L_{max} (dBA)
ST1	East of Project site, adjacent to residence at 19227 Stoddard Wells Road	4/7/2022	11:03 a.m.–11:23 a.m.	63.2	79.4
ST2	East-Northeast of Project site, adjacent to residence at 19414 Stoddard Wells Road	4/7/2022	11:42 a.m.–12:03 p.m.	61.6	83.2
ST3	East-Northeast of Project site, adjacent to residence at 19350 Dale Evans Parkway	4/7/2022	12:29 p.m.–12:49 p.m.	66.1	84.6

Source: Appendix H.
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 4.10-1, Noise Measurement and Modeling Locations.

4.10.2 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 4.10.3, 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 Town of Apple Valley, 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 2020a) 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 2020a).

Local

Town of Apple Valley General Plan

Applicable policies and standards governing environmental noise in the Town are contained in the Town of Apple Valley General Plan Noise Element (Town of Apple Valley 2009). The Town's Noise Element (contained within Chapter IV, Environmental Hazards, of the General Plan) 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 residents to excessive noise, the Noise Element contains the following goals:

Goal. Noise levels that are consistent with the Town's rural character and high quality of life.

To satisfy this goal, the Town's Noise Element identifies the following implementation policies:

Policy 1.A. The Town shall adhere to the standards of "Land Use Compatibility for Community Environments.

The State of California's Land Use Compatibility Plan (Table IV-4 in the Town's General Plan Noise Element, provided here as Table 4.10-3) lists land use categories and the acceptable and unacceptable levels of community noise exposure. The compatibility criteria shown in Table 4.10-3 provides the Town 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 4.10-3. Town of Apple Valley/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	NA	50–70	NA	65–85
Sports Arenas, Outdoor Spectator Sports	NA	50–75	NA	70–85
Playgrounds, Neighborhood Parks	50–70	NA	67.5–75	72.5–85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50–75	NA	70–80	80–85
Office Buildings, Business Commercial and Professional	50–70	67.5–77.5	75–85	NA
Industrial, Manufacturing, Utilities, Agriculture	50–75	70–80	75–85	NA

Source: Town of Apple Valley 2009.
Notes: CNEL = Community Noise Equivalent Level; NA = 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.

Program I.A.I

The Town shall continue to maintain and enforce its Noise Control Ordinance.

Responsible Agency: Planning Division, Code Enforcement, Police Department

Schedule: Ongoing

Program 1.A.2

The Town shall include noise attenuation in its development review process when development projects are proposed. Design techniques that can alleviate noise include, but are not limited to building setbacks, the installation of wall and window insulation, sound walls and earthen berms.

Responsible Agency: Planning Division, Planning Commission, Town Council

Schedule: Ongoing

Program 1.A.3

The mechanical equipment associated with commercial and industrial development, including compactors, trash disposal areas, heating and air conditioning systems shall be located as far as practicable from adjacent sensitive receptors, or from lands designated on the Land Use map for noise sensitive uses.

Responsible Agency: Planning Division

Schedule: Continuous

Town of Apple Valley Municipal Code

The Town of Apple Valley's Municipal Code Noise Ordinance (Chapter 9.73 – Noise Control) has the stated purpose of reducing unnecessary, excessive and annoying noise and vibration within the Town. Thus, in Section 9.73.050 (External and Internal Noise Standards) the Town limits outdoor noise levels at various types of receptors in Table 9.73.050-A Exterior Noise Limits (provided here as Table 4.10-4) with noise levels being restricted in single-family residential areas to 50 dBA from 7 a.m. to 10 p.m. and 40 dBA from 10 p.m. to 7 a.m.

Table 4.10-4. Exterior Noise Limits (not to be exceeded more than 30 minutes in any hour)

Receiving Land Use Category	Time Period	Noise Level (dBA)
Single Family Residential	10 p.m. - 7 a.m.	40
	7 a.m. - 10 p.m.	50
Multiple Dwelling Residential, Public Space	10 p.m. - 7 a.m.	45
	7 a.m. - 10 p.m.	50
Limited Commercial & Office	10 p.m. - 7 a.m.	55
	7 a.m. - 10 p.m.	60
General Commercial	10 p.m. - 7 a.m.	60
	7 a.m. - 10 p.m.	65
Light Industrial	Any Time	70
Heavy Industrial	Any Time	75

Source: Town of Apple Valley Municipal Code, Table 9.73.050-A

Section 9.73.050 subsection (F) of the Municipal Code has specific limits on noise from construction and demolition activities, as follows:

1. Operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work between weekday hours of 7 p.m. and 7 a.m., or at any time on weekends or holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial real property line, except for emergency work of public service utilities or by variance issued by the Town.
2. Noise Restrictions at Affected Properties. Where technically and economically feasible, construction activities shall be conducted in such a manner that the maximum noise levels at affected properties will not exceed those listed in the following schedule (Table 9.73.060-A Maximum Noise Levels, provided here as Table 4.10-5):

Table 4.10-5. Construction Noise Limits

At Residential Properties

Mobile Equipment: Maximum noise levels for nonscheduled intermittent, short-term operation (less than 10 days) of mobile equipment:

	Type I Areas Single-Family Residential	Type II Areas Multi-Family Residential	Type III Areas Semi Residential/ Commercial
Daily, except Sundays and Legal Holidays, 7 a.m. to 7 p.m.	75 dBA	80 dBA	85 dBA
Daily, 7 p.m. to 7 a.m. and all day Sunday and Legal Holidays	60 dBA	65 dBA	70 dBA

Stationary Equipment: Maximum noise levels for repetitively scheduled and relatively long-term operation (periods of 10 days or more) of stationary equipment:

	Type I Areas Single Family Residential	Type II Areas Multi-Family Residential	Type III Areas Semi Residential/ Commercial
Daily, except Sundays and Legal Holidays, 7 a.m. to 7. p.m.	60 dBA	65 dBA	70 dBA
Daily, 7 p.m. to 7 a.m. and all day Sunday and Legal Holidays	50 dBA	55 dBA	60 dBA

Mobile Equipment: Maximum noise levels for nonscheduled, intermittent, short-term operation of mobile equipment:
Daily, including Sundays and legal holidays, all hours: maximum of 85 dBA.

Stationary Equipment: Maximum noise levels for repetitively scheduled and relatively long-term operation of stationary equipment:

Daily, including Sundays and legal holidays, all hours: maximum of 75 dBA.

Source: Town of Apple Valley Municipal Code, Table 9.73.060-A

3. All mobile or stationary internal combustion engine powered equipment or machinery shall be equipped with suitable exhaust and air intake silencers in proper working order.

Section 9.73.050 subsection (G) of the Municipal Code restricts vibration, requiring that no person unnecessarily make, continue, or cause to be made or continued any vibration which is above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property or at 150 feet from the source if on a public space or public right-of-way. The vibration perception level is defined in Section 9.73.020 (34) of the Municipal Code (Definitions) as a motion velocity of 0.01 ips over the range of 1 to 100 Hz.

4.10.3 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 4.10.2 as well as those of federal agencies and are listed below.

- **Construction Noise:** During Project-related construction activities, an exceedance of the Town's Municipal Code construction noise standards as summarized in Table 4.10-5 is considered a significant noise impact.
- **On-Site Operational Noise:** A noise impact from Project operation would be considered significant if noise from typical operation of heating, ventilation and air conditioning (HVAC) and other electro-mechanical systems or other on-site operational noise associated with the Project (such as parking lot and loading dock activities noise) if the applicable Town Municipal Code standards as summarized in Table 4.10-4 are exceeded.
- **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 4.10-6 are expected to result in equal changes in annoyance at sensitive land uses. Although the

[1] As discussed in Section 4.10.1, the L_{dn} and CNEL noise metrics are very similar and often used interchangeably.

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]

Table 4.10-6. 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 dB	+ 5 dB or more
60–65 dB	+ 3 dB or more
>65 dB	+ 2 dB or more

Source: FICON 1992.

- **Construction Vibration:** Groundborne vibration from construction and operation of the Project would be considered significant if the Project resulted in vibration levels exceeding Section 9.73.050 subsection (G) of the Municipal Code as summarized in Section 4.10.2 above or Caltrans recommendations (for construction).

4.10.4 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 between the hours of 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 Apple Valley 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 existing 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 4.2-5 (Construction Scenario Assumptions) of this EIR (Section 4.2, Air Quality).

[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 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.

Construction Noise – Project Site Assessment

With the construction equipment noise sources identified in Table 4.2-5, a noise analysis was performed using a spreadsheet version of 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 for the inputs used in the RCNM model and the detailed results.

Sensitive receptors in the vicinity of the Project site include residential uses located to the east and east-northeast (shown as receivers M1 and M2 in Figure 4.10-1). Of these, receiver M1 (near the noise measurement location ST1) is nearest to the project site and thus represents the nearest residential land use with the potential to be impacted by construction associated with the Project. Project construction would take place both near and far from existing land uses. For example, construction would take place as near as approximately 1,100 feet from the nearest residence east of the Project boundary, but (because of the Project's size) construction work would also take place as far as 3,800 feet from the same residence. Most construction activities associated with the Project would occur at an average distance of approximately 2,500 feet from the nearest residential use to the east, which represents activities both near and far, as is typical for construction projects. Similarly, the construction noise estimates for the offsite construction work associated with the Project were calculated for both the nearest construction activity/receiver distances and for typical construction activity/receiver distances.

The results of the onsite Project site construction noise analysis using the RCNM are summarized in Table 4-10-7. As shown, the noise levels from construction are predicted to range from approximately 50 dBA L_{eq} (during the architectural coating phase) to 59 dBA L_{eq} (during the mass grading and fine grading phases) at the nearest noise-sensitive receiver (a single-family residence approximately 1,100 feet from the nearest construction work). Typical construction noise levels would be lower, ranging from approximately 43 dBA L_{eq} (during the architectural coating phase) to 55 dBA L_{eq} (during the mass grading phase) at the nearest noise-sensitive receiver. Construction noise levels at other noise-sensitive receivers in the Project vicinity would be less, because the distance to other noise-sensitive receivers from the Project site is greater. These noise levels would be less than measured ambient noise levels in the area and would be lower than the Town of Apple Valley's construction noise standard at single-family residences for construction work taking place for periods of 10 days or more of 60 dBA L_{eq}. Therefore, noise from Project site construction would be less than significant. No noise mitigation is necessary.

Construction Noise – Off-Site Street and Utilities Assessment

As shown in Figures 3-11A-C (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 receiver to the off-site construction activities (and thus the receiver the most affected) would be the residence to the east of the Project site and south of Stoddard Wells Road, during utilities installation within the Stoddard Wells Road alignment, specifically the residences identified as M1 in Figure 4.10-1. Noise levels at other locations would be lower because they would be further from the construction work. As shown in Table 4.2-5 (Construction Scenario Assumptions), equipment that is anticipated to be used for off-site improvement work includes a concrete saw, an excavator, a backhoe, a forklift, a generator, and a pump. 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

Table 4.10-7. 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})						Applicable Noise Standard[1] (dBA L_{eq})	Applicable Noise Standard Exceeded?
			Site Preparation	Mass Grading	Building Construction	Architectural Coating	Fine Grading	Concrete Laydown		
Residential	M1 - East of the Project Site	Nearest Construction Activity/Receiver Distance (1,100)	54.2	59.3	57.7	49.8	58.9	58	60	No
		Typical Construction Activity/Receiver Distance (2,500)	47.2	54.9	53.5	43.1	54	53.6	60	No

Source: Appendix H.
Note: L_{eq} = equivalent continuous sound level (time-averaged sound level); dBA = A-weighted decibel.
1 Applicable noise standard per Town of Apple Valley Municipal Code Table 9.73.060-A, shown in Table 4.10-5.

Table 4.10-8. Off-Site Improvements 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})				Applicable Noise Standard[1] (dBA Leq)	Applicable Noise Standard Exceeded?
			Road Removal/ Pipeline Install	Paving	Restriping	Pipeline Testing		
Residential	M1 - East of the Project Site	Offsite Nearest Construction Activity/Receiver Distance (280)	67.1	51	47.2	42.1	75	No
		Typical Construction Activity/Receiver Distance (2,000)	52.7	46.4	42	36.9	75	No

Source: Appendix H.
Note: L_{eq} = equivalent continuous sound level (time-averaged sound level); dBA = A-weighted decibel.
1 Applicable noise standard per Town of Apple Valley Muncipal Code Table 9.73.060-A, shown in Table 4.10-5.

short (typically, one to two days for open-trench pipeline installation). The resulting noise levels are summarized in Table 4.10-8. As shown, the noise levels from off-site improvements work at the nearest noise-sensitive receiver (a residence approximately 280 feet from the nearest construction work) are estimated to range from approximately 42 dBA L_{eq} during pipeline testing to 67 dBA L_{eq} during road removal/pipeline installation. Typically, utilities installation would take place further away (an average distance of approximately 2,000 feet from the nearest residence) and thus construction noise levels would be substantially lower, ranging from approximately 37 to 53 dBA L_{eq}. These noise levels would be lower than the Town of Apple Valley's construction noise standard at single-family residences for construction work taking place for periods of less than 10 days of 75 dBA L_{eq}. Therefore, noise impacts from off-site construction activities would be less than significant. No noise mitigation is necessary.

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 750 (i.e., 375 round trips), occurring during the building construction phase. The highest average daily number of vendor one-way trips would be 884 (442 round trips), also occurring during building construction; and the highest number of average daily haul truck one-way-trips would be 536 (268 round trips)[3], occurring during the grading phase. Project-related trucks would be restricted to the Town-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 Interstate 15 (I-15). Based upon the most recent available traffic census data from Caltrans (Caltrans 2020b), I-15 has an average daily traffic volume of 59,000 in the Project vicinity, with a truck percentage of approximately 24 percent. Even if the highest daily number of worker trips, vendor trips and haul truck trips occurred during the same phase of construction (which they do not), the incremental increase in traffic from the Project would be approximately 4 percent ([750 + 884 + 536 = 2,170] / 59,000 = 3.6%) . Based upon the fundamentals of acoustics, a doubling (a 100 % increase) would be needed to result in a 3 decibel increase in noise levels, which is the level corresponding to an audible change to the typical human listener (Caltrans 2013). The resultant traffic noise increase would be less than 1 dB (based on the Traffic Roadway Noise Model; Appendix H-3), 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 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 4,855 daily trips. During the AM peak-hour, implementation of the Project would result in a total of 239 passenger vehicles and 101 trucks. During the PM peak-hour, implementation of the Project would result in a total of 257 passenger vehicles and 108 trucks. The majority of the passenger vehicle and truck trips would access and exit the Project site to the west, via Stoddard Road to the I-15 on- and off-ramps. Very few trucks would utilize Stoddard Road east of the Project site, or other local roads 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, Opening

[3] Assumes 16,072 total haul truck trips over a 30-working day grading period.

Year (2025), Opening Year (2025) plus Project, Horizon Year (2040), and Horizon Year (2040) plus Project traffic volumes. Noise levels were modeled at representative noise-sensitive receivers (i.e., the nearest existing residences located to the east of the Project site) as well as at adjacent zoned commercial, professional and residential 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 4.10-1.

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 4.10-9. The input and output files for the Traffic Noise Model are provided in Appendix H.

As Table 4.10-9 shows, with the exception of modeled receiver R5 (vacant land zoned as Office Professional), the Project would increase the traffic noise levels along the nearby arterial roadways by 0 to 2 dBA (when rounded to whole numbers). A change (either an increase or a decrease) of 2 dB or less is not an audible change in the context of community noise (i.e., outside of a controlled test environment). At both of the nearest existing noises-sensitive receivers (M1 and M2, located east of the Project site by approximately 1,100 feet and 4,800 feet respectively), the Project would result in an increase in traffic noise of 0 dBA when rounded to whole numbers. At modeled receiver M5, located just east of the Project site, the Project is estimated to increase local traffic noise by up to 6 decibels; however, the land represented by M5 is currently vacant and is zoned as Office Professional, which is not noise sensitive. Furthermore, as shown in Table 4.10-9, the Project would not cause noise levels to exceed applicable Town noise standards at any of the modeled receivers. 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.

Table 4.10-9. Summary of Off-Site Existing and Future (Years 2025 and 2040) Traffic Noise Levels (dBA CNEL)

Modeled Receptor	Existing	Existing plus Project	Opening Year (2025)	Opening Year (2025) plus Project	Horizon Year (2040)	Horizon Year (2040) plus Project	Maximum Project-Related Noise Level Increase (dB)	Applicable Noise Standard[1]	Applicable Noise Standard Exceeded?
M1 - Existing Residential	53	53	53	53	56	56	0	70	No
M2 - Existing Residential	62	62	62	62	66	66	0	70	No
M3 - Regional Commercial Zoning	61	63	61	63	65	66	2	77.5	No
M4 - Estate Residential Zoning	61	62	61	62	65	65	1	70	No
M5 - Office Professional Zoning	53	59	53	59	55	60	6	77.5	No

Source: Appendix H.
Note: dBA = A-weighted decibel; CNEL = Community Noise Equivalent Level; dB = decibel.
Traffic noise levels are rounded to the nearest whole numbers.
[1] Applicable noise standard per Town of Apple Valley General Plan Noise Element compatibility standards, shown in Table 4.10-3.

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.

Outdoor Mechanical Equipment and Truck Loading Dock / Truck Yard Activity

The noise from Project-related onsite mechanical equipment and truck loading dock / truck yard activities was modeled using commercially available Datakustik CadnaA software. CadnaA incorporates relevant International Organization of Standardization (ISO) 9613-2 algorithms and reference data that are generally considered to be industry standard for outdoor noise modeling. Key modeling assumptions and parameters are as follows:

- The model calculation area encompasses the Project and surrounding land uses that adjoin its boundary.
- Acoustical ground absorption of the Project site and the surrounding topography (conservatively modeled as flat, which generally approximates the site terrain characteristics) is set at 0.90, which on a zero (reflective) to one (absorptive) scale approximates a combination of the grass-covered soils that generally surround the Project area and any anticipated loosely graveled Project site cover.
- Meteorological conditions presume “calm” wind conditions (i.e., less than 0.5 meters per second in any direction) and average air temperature and relative humidity of 68 degrees Fahrenheit and 70%, respectively.
- The model “configuration” settings include reflection order set to “1”, which can be interpreted to mean that a sound emission path from a source will continue to be analyzed after impingement upon and reflection from the first intervening structure or barrier.
- Project building cooling loads and minimum outside air ventilation needs were estimated from gross square footage (GSF) values and industry techniques (Loren Cook 1999), which informed approximate quantities and general types of anticipated noise-producing rooftop air-handling units (AHU) and air-cooled chillers.
- It was assumed that 15% pf each of the three warehouse buildings would include a cold-storage component, with associated mechanical equipment (i.e., air-cooled chillers). It was also assumed that each of the main offices within the three warehouse buildings would have heating, ventilation and air conditioning.
- Octave-band center frequency (OBCF) reference A-weighted sound power level (LwA) data from sample ACC manufacturers (e.g., Daikin, Bryan) and fan noise estimation algorithms (Bies & Hansen 1996) for the aforementioned outdoor-exposed HVAC equipment.
- During a daytime scenario, peak-hour truck volumes were assumed.
- Sound power for a single truck at the loading dock was calculated from sound levels (dBA) of truck air brakes, truck backup alarms, truck idling, truck engine ignition and airbrakes, and truck acceleration from stop (CMS 2014).
- Sound power for a single truck pass-by along a linear sound source route along the length of the building was calculated from truck passby (CMS 2014). Peak-hour truck volumes were assumed.
- During a nighttime model scenario, the sound power of rooftop HVAC sources from the three Project buildings remained unchanged; and, up to 25% of peak-hour onsite truck traffic would occur during a typical nighttime hour of facility operation.

As shown in Table 4.10-10, which summarizes the results of the modeling for mechanical equipment and truck loading dock/truck yard activity noise, the resulting noise levels would not exceed the applicable noise standards for daytime or nighttime noise. Additionally, the estimated noise levels from the Project would be well below the existing measured daytime ambient noise levels in the Project vicinity, which ranged from approximately 62 to 66 dBA L_{eq}.

Table 4.10-10. Mechanical Equipment and Truck Loading Dock / Truck Yard Activity Noise

Modeled Receptor	Daytime (7 a.m. to 10 p.m.) Noise Level (dBA L_{eq})	Nighttime (10 p.m. to 7 a.m.) Noise Level (dBA L_{eq})	Applicable Daytime/Nighttime Noise Standard[1] (dBA L_{eq})	Applicable Standard Exceeded ?
M1 - Existing Residential	35	32.9	50/40	No
M2 - Existing Residential	21.9	20.7	50/40	No
M3 - Regional Commercial Zoning	44.2	40.4	60/55	No
M4 - Estate Residential Zoning	40.3	37.8	50/40	No
M5 - Office Professional Zoning	43.8	40.6	60/55	No

Source: Appendix H.
Notes: dBA = A-weighted decibel; L_{eq} = equivalent continuous sound level (time-averaged sound level).
1 Applicable noise standard per Town of Apple Valley Municipal Code Table 9.73.050-A, provided here as Table 4.10-4).

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 (Baltrënas 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 L_{eq} at 1 meter (3.28 feet) from the outside boundary of the parking lot. During off-peak time periods, especially during nighttime hours (10 p.m. to 7 a.m.), noise levels from parking lot activities would be substantially lower. The parking lots would function as an area source for noise, which means that noise would attenuate at a rate of 3 dBA with each doubling of distance. The nearest employee parking lot to existing noise-sensitive receivers (a residence to the east) is proposed to be situated on the east side of Building 1, approximately 1,150 feet from the residential property boundary. At a distance of 1,150 feet, parking lot noise levels would be approximately 34 dBA, which would be below both the daytime (7 a.m. to 10 p.m.) single-family residential noise standard of 50 dBA L_{eq} and the nighttime (10 p.m. to 7 a.m.) noise standard of 40 dBA L_{eq}. The nearest employee parking lot to zoned future noise-sensitive receivers (residentially-zoned property to the southeast) is proposed to be situated on the east side of Building 1, approximately 180 feet from the residential property boundary. At a distance of 180 feet, parking lot noise levels

would be approximately 38 dBA, which would be below both the daytime (7 a.m. to 10 p.m.) single-family residential noise standard of 50 dBA L_{eq} and the nighttime (10 p.m. to 7 a.m.) noise standard of 40 dBA L_{eq}.

To summarize, impacts associated with on-site operational noise 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 because there would not be any heavy machinery or manufacturing processes that would generate vibration. 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 2020a). Information from Caltrans indicates that continuous vibrations with a PPV of approximately 0.1 ips begin to annoy people. Additionally, the Town's Municipal Code Section 9.73.050 subsection (G) of the Municipal Code restricts vibration to 0.01 ips over the range of 1 to 100 Hz at or beyond the property boundary of the source if on private property.

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 (a residence located to the east – ST1) to where construction activity would be occurring on the Project site (approximately 1,100 feet), and with the anticipated construction equipment, the PPV vibration level would be approximately 0.0003 ips. At the closest sensitive receptors, vibration levels would be well below the vibration threshold of potential annoyance of 0.1 ips; additionally, the vibration level would be less than the Town's Municipal Code standard of 0.01 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 Project construction would be approximately 0.0003 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. No private airstrips exist in the Project vicinity. The nearest airport is the Apple Valley Airport, located approximately 3.55 miles southeast of the Project site. Based on the Town of Apple Valley Comprehensive Airport Land Use Compatibility Plan (Town of Apple Valley 1995), the Project site would be approximately 3.5 miles away from the airport's 60 dBA CNEL noise contour. Therefore the Project would not expose people residing or working in the Project area to excessive noise levels related to airports or airstrips.

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 in the Project vicinity as a result of implementation of the proposed Project. The Project transportation analysis considered the addition of traffic trips from cumulative projects as identified by the Town.

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 4.10-9 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 except at modeled receiver R5 (vacant land zoned as Office Professional). At R5, the Project is estimated to result in an increase of 5 dB when Year 2040 plus Project noise levels are compared to Year 2040 without Project noise levels. Because the planned future land uses represented by receiver R5 are commercial and thus not noise-sensitive, noise impacts would be less than significant. Traffic noise would not be cumulatively considerable.

4.10.5 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?

The Project would result in less-than-significant impacts associated with the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards as a result of the Project during construction and operation. 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 associated with groundborne vibration during construction and operation. 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 noise from airports or airstrips. No mitigation is required.

Threshold D: Would the Project result in cumulatively considerable noise impacts?

The Project would not result in cumulatively considerable noise impacts. No mitigation is required.

4.10.6 References Cited

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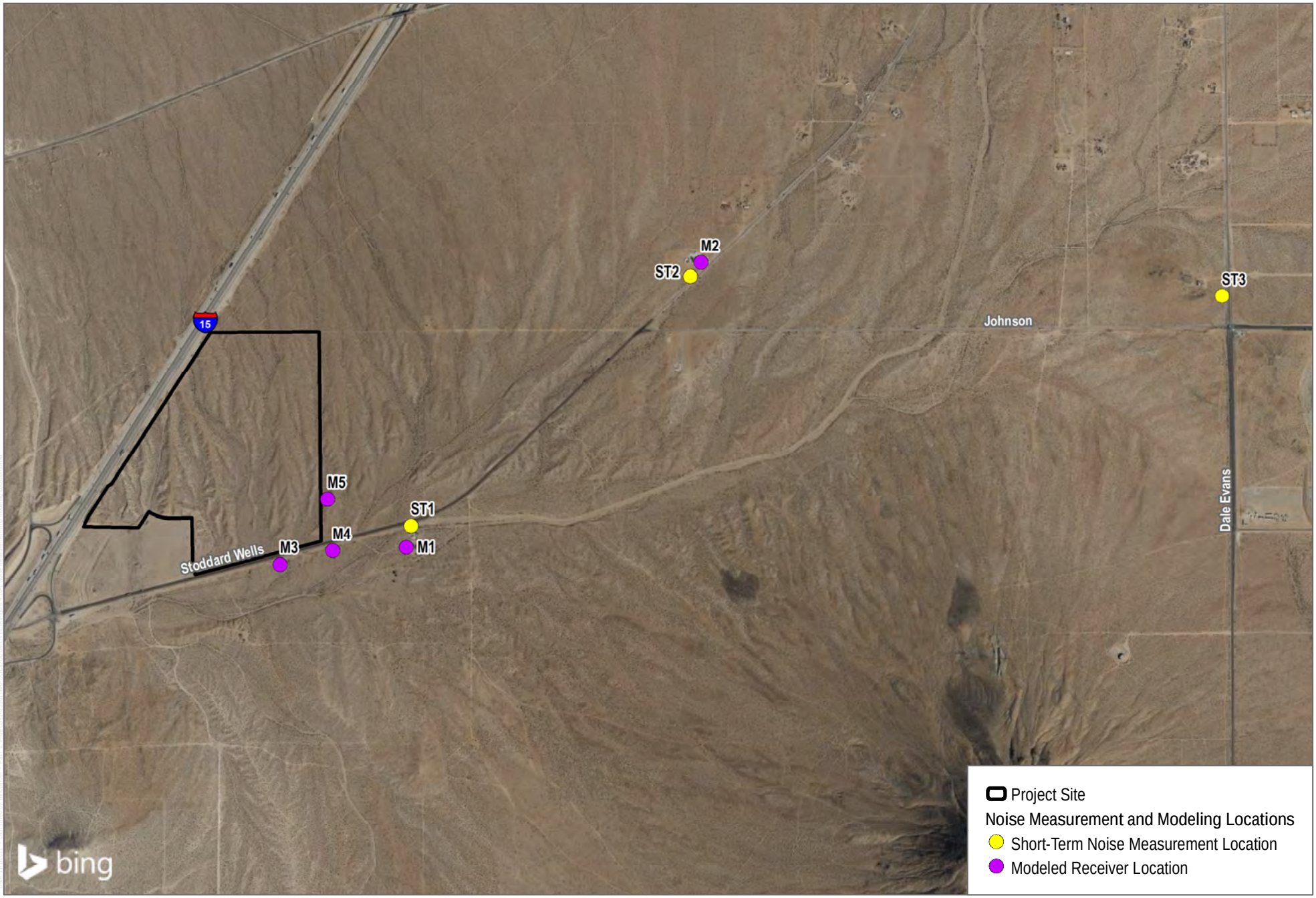
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Town of Apple Valley. 1995. Town of Apple Valley Airport Comprehensive Land Use Compatibility Plan. March 1995.

Town of Apple Valley. 2009. General Plan Noise Element (Chapter IV, Environmental Hazards). 2009.



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

DUDEK

0 800 1,600 Feet

FIGURE 4.10-1

Noise Measurement and Modeling Locations

Apple Valley 143 Project

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4.11 Public Services

This section describes the existing public services 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 Apple Valley 143 Project.

4.11.1 Existing Conditions

Fire Protection

Fire protection and emergency response services for the Project site are provided by the Apple Valley Fire Protection District (the Fire Protection District). The Fire Protection District operates seven fire stations within the Town, with the closest being Station 332 (18857 Highway 18), located approximately 4 miles south of the Project site (Town of Apple Valley 2009). The Town is considering the construction of an eighth fire station on approximately 12 acres at the northeast corner of Johnson Road and Navajo Road, which would be located approximately 3 miles east of the Project site (Town of Apple Valley 2009).

The Fire Protection District maintains a mutual aid agreement with Victorville, San Bernardino County Fire Department, and the Bureau of Land Management. The mutual aid agreements provide a mechanism for coordinated strategic and facilities planning between fire departments in the region to actively support one another regardless of geographic or jurisdictional boundaries. A joint dispatch center is located in Victorville that serves the mutual aid agencies. The Apple Valley Fire Marshal provides project review services for all new development (Town of Apple Valley 2009).

Police Protection

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 Town, Apple Valley Patrol Station (14931 Dale Evans Parkway), which is located approximately 5 miles southeast of the Project site. The Sheriff's Department assigns staff to the Apple Valley Police Department (AVPD). The Apple Valley Patrol Station is comprised of approximately 51 officers and 13 general employees (San Bernardino County Sheriff's Department 2022). The Sheriff's Department prefers a ratio of one police officer per 1,500 population. The average response time for highest priority emergency calls is five minutes (Town of Apple Valley 2009).

4.11.2 Relevant Plans, Policies, and Ordinances

Federal

There are no applicable federal regulations for this issue area.

State

California Fire Code

The California Fire Code is Chapter 9 of Title 24 of the California Code of Regulations. The California Fire Code provides regulations for safeguarding life and property from fire and explosion hazards derived from the storage,

handling, and use of hazardous substances, materials, and devices. The provisions of this code apply to construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure or any appurtenance connected or attached to such building structures throughout the state.

Uniform Fire Code

The Uniform Fire Code contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the code include fire department access, fire hydrants, automatic storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The code contains specialized technical regulations related to fire and life safety.

California Health and Safety Code

State fire regulations are set forth in Section 13000 et seq. of the California Health and Safety Code, including regulations for building standards (also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

California Occupational Safety and Health Administration

In accordance with California Code of Regulations Title 8, Section 1270, Fire Prevention, and Section 6773, Fire Protection and Fire Equipment, the California Occupational Safety and Health Administration has established minimum standards for fire suppression and emergency medical services. The standards include guidelines on the handling of highly combustible materials; fire hose size requirements; restrictions on the use of compressed air; requirements for access roads; and guidelines for testing, maintaining, and using all firefighting and emergency medical equipment.

Mutual Aid Agreements

The California Disaster and Civil Defense Master Mutual Aid Agreement, as provided by the California Emergency Services Act, provides statewide mutual aid between and among local jurisdictions and the state. The statewide mutual aid system exists to ensure that adequate resources, facilities, and other supports are provided to jurisdictions whenever resources prove to be inadequate for a given situation. Each jurisdiction controls its own personnel and facilities but can give and receive help whenever needed.

Local

Town of Apple Valley General Plan

The Town's General Plan contains the following goals and policies applicable to public services.

Police and Fire Protection Element

Goal. The highest possible level of services and quality for fire and police protection to ensure the preservation and protection of the health, welfare and property for all types of development and socio-economic segments of the community.

Policy 1.A. The Town shall review all new development proposals, as well as significant remodeling projects to determine potential impacts to public safety and the provision of police and fire protection services.

Policy 1.B. All proposed development shall be designed to provide unencumbered access for police, fire, and paramedic vehicles, to the satisfaction of the Sheriff's Department and the Fire Marshal.

Policy 1.C. The Town shall remain flexible when considering the most effective means of providing police and fire protection services to the community, and shall conduct periodic reviews to evaluate the level, quality, cost-effectiveness and innovation of those services, including those provided on a contractual basis.

Policy 1.E. The Town shall utilize the process of reviewing development and building plans, and of conducting building inspections, to strictly enforce fire standards and regulations.

Policy 1.G. Special on-site fire protection measures may be required for well-vegetated areas where slopes are 10 percent or greater and which have potential to either lack sufficient water supplies or water pressure, and/or have access problems. These measures shall be specified during project review.

Policy 1.H. The Fire Protection District shall maintain a 6-minute response time, or as close thereto as possible.

Policy 1.I. The Fire Protection District shall maintain a level of service that ensures the provision of 1 fire personnel per 1,500 residents, or as close thereto as possible.

Policy 1.J. New and substantially remodeled development shall incorporate crime prevention design techniques, including the use of "defensible space," high security hardware, optimal site planning and building orientation, and other design approaches to enhance security.

Policy 1.O. The Sheriff's Department shall maintain a level of service that ensures the provision of 1 sworn officers per 1,500 residents, or as close thereto as possible.

Town of Apple Valley Municipal Code

Chapter 3.32 (Fire Suppression Development Fee Program) of the Municipal Code focuses on provide a means to finance the fire suppression facilities, vehicles and equipment which applies to all new construction in the Town of Apple Valley. As per Section 3.32.030 (Imposition and payment of fees) fees must be paid to the Town before the issuance of a building permit to cover the costs associated with fire protection services.

4.11.3 Thresholds of Significance

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

A. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which

could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

- Fire protection
- Police protection

B. Result in cumulatively considerable public service impacts

Schools, parks and other public facilities (under Threshold A) 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.

4.11.4 Impacts Analysis

Threshold A: Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

Fire protection?

Less Than Significant Impact. Fire protection requirements are based on the number of residents and workers in the Fire Protection District service areas. Service demand is primarily tied to population, not building size, because emergency medical calls typically make up the majority of responses provided by the fire department. As the number of residents and workers increases, so does the number of emergency medical calls. There are no residential uses proposed as a part of the Project. Therefore, no residents would occupy the Project site and an increase in service demands as a result of an increase in residential uses would not occur.

Service demands as a result of personnel onsite could occur during construction of the proposed Project. Typically, service demands per employee are less than service demands per resident. Nevertheless, the addition of construction personnel on the Project site would result in an increase in demand for fire protection services. While this would be an increase above existing levels, the presence of construction workers on the site would be temporary, and cease after construction of the proposed warehouse facility is complete. It would therefore not substantially increase the service demand for fire protection services in San Bernardino County.

In addition, the proposed Project would be designed and constructed in accordance with all applicable provisions of the 2019 California Fire Code, which includes requirements for adequate fire flows, width of emergency access routes, turning radii, automatic sprinkler systems, fire alarms, and floor to sky height limits along emergency access routes. As part of the standard development practices, Project plans would be reviewed by the Town and the Fire Protection District, prior to construction. Compliance with fire code standards would reduce the potential demand for fire services by decreasing the likelihood and/or severity of a fire emergency at the site.

Once constructed, the warehouse facility will require full-time personnel for site operations and maintenance. As previously discussed, the nearest Fire Station that would be the first responder to small fire-related incidents at the Project site is Fire Station 332, located at approximately four miles to the south of Project site. As per Policy 1.H of the Police and Fire Protection Element of the Town's General Plan, the Fire Protection District maintains a 6-minute or less of response time. In the event that Fire Station No. 332 could not meet the immediate needs of a call for

services independently or does not have capability to address the full extent of a larger incident, the other fire stations within the Town or the closest available fire stations in neighboring jurisdictions, as well as CAL FIRE, could respond or provide support.

The proposed Project would be subject to the payment of a Development Impact Fees (DIF) as per Chapter 3.32 (Fire Suppression Development Fee Program) of the Town's Municipal Code. This fee would be used for future facility improvements necessary to ensure that the development contributes its fair share of the cost of facilities and equipment determined to be necessary to adequately accommodate new development in the Town. The DIF amount is determined through evaluation of the need for new public service facilities as it relates to the level of service demanded by new development, which varies in proportion to specific land uses. A portion of the DIF would be used exclusively toward fire protection services.

The Project site is located within the Fire Protection District's response area, and the department would provide service to the Project site. With the nearby services of Fire Station No. 332, as well as fire stations in neighboring jurisdictions, the Project would be served by sufficient fire protection services, and it is not anticipated that the Project would hinder the Fire Protection District from meeting its response time targets. Additionally, payment of the DIF would ensure the Project contributes a fair share towards future facility improvements and equipment. Further, an eighth fire station is also being considered on approximately 12 acres at the northeast corner of Johnson Road and Navajo Road. Therefore, the Project would not result in the need for new or expanded fire protection facilities, and impacts would be **less than significant.**

Police protection?

Less Than Significant Impact. As described above in Section 4.11.1, Existing Conditions, police services are provided via contractual agreement with the San Bernardino County Sheriff's Department. Apple Valley Patrol Station (14931 Dale Evans Parkway) located approximately five miles southeast of the Project site would provide primary law enforcement services to the Project site.

The Project site is located in a relatively remote location surrounded by undeveloped land and scattered development. It is therefore unlikely to attract attention that would make Project facilities susceptible to crime. Therefore, a large increase for police protection services is not expected.

Construction activities may temporarily increase traffic volumes along I-15 and nearby roadways during the construction period. The added traffic associated with workers commuting to the Project site, haul routes, deliveries, and other Project-related activities may increase the need for law enforcement services during construction of the proposed Project. However, this would be temporary and would not have a significant adverse effect on the AVPD protective service provision or California Highway Patrol's ability to patrol the highways.

A need for new or expanded public services, such as police facilities, is typically associated with a population increase. The proposed Project does not include the construction of new homes. While the proposed Project would lead to increased employment on site, the proposed Project would not induce substantial population growth. Furthermore, the proposed Project would incorporate operational practices and design elements to increase on-site safety and to reduce the potential for crime to occur. During construction, the contractor would implement temporary security measures including security fencing, lighting, locked entry, and private security officers. During operation, practices to increase safety could include security lighting, alarms, and security cameras. Project design would also employ defensible design, lighting, and landscaping, as well as open fencing. These techniques would minimize spaces that are hidden from public view, which would help prevent loitering and crime. Building entries,

parking areas, and walkways would be sufficiently lit, which would facilitate safe pedestrian movement. These design practices and operational practices would lessen the demand for police protection services at the Project site by reducing the potential for crime to occur.

Police units are continuously mobile, and service calls are responded to by the nearest available mobile unit. As previously discussed, AVPD's average response time for highest priority emergency calls is five minutes. Further, the police service ratio is one police officer per 1,500 population which would not be impacted from the proposed Project. Therefore, it is not anticipated that the Project would hinder the AVPD from continuing to meet or exceed target response times and provide adequate service levels.

Additionally, the proposed Project would be consistent with or would not hinder implementation of the Town's General Plan goals and policies pertaining to police protection services listed in Section 4.11.2. As substantiated in this analysis, the proposed Project is not anticipated to adversely affect service ratios or response times for police services such that new or expanded police facilities would be required. Therefore, the proposed Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered police facilities, or the need for new or physically altered police facilities; impacts would be less than significant.

Threshold B: Would the Project result in cumulatively considerable public service impacts?

Less Than Significant Impact. Cumulative impacts are two or more individual impacts that, when considered together, are considerable or that compound or substantially increase other environmental impacts. Cumulative impacts for a project are considered significant if the incremental effects of the individual projects are considerable when viewed in connection with the effects of past projects, and the effects of other projects located in the vicinity of the Project site. The cumulative study area is based on the service area for each of the fire, sheriff and other governmental offices/facilities serving the Project site. As discussed above, fire and sheriff service impacts related to the proposed Project would be less than significant. Compliance with the appropriate general plan policies regarding service ratios and response times along with the payment of DIFs, any slight contribution to the Project related needs for additional fire or law enforcement protection services would be appropriately funded. Similar to the proposed Project, all other past, present, and reasonably foreseeable future projects located within these fire and sheriff service areas were or would be required to pay this mitigation fee.

In addition, that the proposed Project would not increase demand for local schools, parks, or public facilities. Since impacts were not found to be significant, further analysis was not performed on this issue. Thus, the Project would not cumulatively combine with related projects to have an impact on these facilities. Furthermore, cumulative projects would also be required to undergo environmental review, in compliance with the requirements of CEQA. Should potential impacts to public services be identified, appropriate mitigation would be prescribed that would reduce impacts to less-than-significant levels.

Because the Project would not create a significant impact on public services, and the other related projects would also be expected to avoid or mitigate impacts on public services, the Project would comply with the goals, policies, and implementation measures of the Town's General Plan; thus, cumulatively significant impacts are anticipated to be less than significant. Therefore, the Project would not create a cumulatively considerable impact related to public services and cumulative impacts would be less than significant.

4.11.5 Mitigation Measures and Level of Significance After Mitigation

Threshold A: Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

Fire protection?

The Project would result in **less-than-significant impacts** with regard to fire protection services. No mitigation measures are required.

Police protection?

The Project would result in **less-than-significant impacts** with regard to police protection services. No mitigation measures are required.

Threshold B: Would the Project result in cumulatively considerable public service impacts?

The Project would result in **less-than-significant** cumulative impacts with regard to public services. No mitigation measures are required.

4.11.6 References Cited

San Bernardino County Sheriff's Department. 2022. Apple Valley Patrol Station. Accessed April 2022. https://wp.sbcounty.gov/sheriff/patrol-stations/apple-valley/.

Town of Apple Valley. 2009. Town of Apple Valley General Plan. Chapter 5: Public Services and Facilities. https://www.applevalley.org/home/showpublisheddocument/4895/635611242901270000. Accessed on July 21, 2022.

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4.12 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:

- Transportation Impact Analysis (TIA) prepared by Dudek in November 2022 (Appendix I)

4.12.1 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 Town of Apple Valley using the San Bernardino County Transportation Authority's (SBCTA) San Bernardino Transportation Analysis Model (SBTAM).

Existing Circulation Network

Figure 4.12-1 provides the Town of Apple Valley General Plan Traffic Circulation Plan. Primary access to the site would be provided from I-15 to Stoddard Wells Road and Quarry Road. Characteristics of the primary existing street system roadways within the study area are described below. A map of the Town's designated truck routes is also provided as Figure 4.12-2.

- I-15 is a north-south, divided, four to eight-lane freeway located near the project's western boundary. I-15 is a major interstate freeway that begins near the Mexico—US Border and extends to Alberta, Canada, and serves as a critical connection for many other regional roadways, freeways, and highways. Caltrans classifies I-15 as a designated truck route on the National Network (STAA). The posted speed limit is 65 miles per hour (MPH).
- Stoddard Wells Road is generally aligned in a north-south direction, with two lanes. It is an undivided rural road with unpaved shoulders and a designated truck route in the Town of Apple Valley. Stoddard Wells is proposed to be upgraded from a Major Road to a Major Divided arterial per the Town of Apple Valley General Plan Circulation Element, as noted in Table 4.12-2.
- Quarry Road is a north-south paved two-lane road between Stoddard Wells Road and the I-15 southbound ramps. North of the I-15 ramps, Quarry Road is an unpaved rural road. Additionally, Quarry Road extends east-west from I-15 to the eastern Town boundary, north of the Project site. Upgrades to this section of Quarry Road within the Town limits are identified in Table 4.12-2. There is no posted speed limit.
- Outer I-15 is a north-south two-lane road that parallels I-15 to the east. It terminates at the I-15 northbound ramp intersection at Stoddard Wells Road. No pedestrian or bicycle facilities are located along the road and

there is no posted speed limit. The Project would extend Outer I-15 along the eastern boundary of the Project Site. Once constructed, this would be a public road.

Truck Routes

San Bernardino County has identified two types of truck routes: National Network and Terminal Access. The I-15 freeway is considered part of the National Network. State Route 18 is identified as a Terminal Access route. Terminal Access routes allow travel by trucks meeting Surface Transportation Assistance Act3 standards between National Network routes and access to an operating, destination, origination or handling facility. In addition to the regional truck routes defined by the County of San Bernardino, the Town of Apple Valley has also identified several key truck routes, including Apple Valley Road, Dale Evans Parkway, Navajo Road, Stoddard Wells Road, Quarry Road, Johnson Road, Waalew Road, and Yucca Loma Road.

Rail Service and Transit

The Town of Apple Valley is served by bus services provided by Victor Valley Transit Authority (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 2022). The rail and transit providers are described below, and shown in Figure 4.12-3.

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 2022a). The closest passenger rail station is the Victorville Amtrak Station, located at 16858 South D Street in Victorville, located approximately 5 ½ miles south of the project site. 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 2022b).

Brightline West

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. At full operations, approximately 11 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 2022). The project is expected to break ground in 2023 and could begin moving passengers in 2026 (Town of Apple Valley).

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 Apple Valley, providing bus connections between shopping, the Apple Valley Post Office, schools and colleges, and residential areas. Route 42 shown in Figure 4.12-3, Existing Transit Route 42, is the closest bus route to the project site, with bus stops near the

intersection of Dale Evans Parkway and Johnson Road, approximately 2 ½ miles east of the project site. Route 42 connects Victor Valley College, St. Mary Medical Center, Los Ranchos, the Walmart Distribution Center, the Regional Public Safety Center, and the Juvenile Detention Center. The route operates weekdays, between 6:30 a.m. and 9:00 p.m., Saturday between 7:30 a.m. and 8:00 p.m., and Sunday between 8:30 a.m. and 5:00 p.m. (VVTA 2022)

VVTA also offers paratransit services for persons with special needs on any paved street within Apple Valley 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 (VVT 2022).

Bicycle and Pedestrian Facilities

The project site is located in an undeveloped area of the town with no existing pedestrian or bicycle facilities in the immediate vicinity of the site. The Apple Valley General Plan (Apple Valley 2009) has an adopted Recreation Trail System, which identifies "lifeline" trails for equestrian use and multi-use, as well as recorded bridle trails (for horses). The Town's Recreational Trail System is presented as Figure 4.12-4. A lifeline trail is proposed on Stoddard Wells Road, east of the site, between Johnson Road and Central Road.

The General Plan also identifies proposed bike paths to ensure greater connectivity and access throughout the community, and promote non-motorized modes of travel. The Town's Bike Paths are presented as Figure 4.12-5. A Class II bike lane (on-street painted bike lane) is proposed along Outer Highway I-15 S between Norco Street and Stoddard Wells Road and along Stoddard Wells Road, between the I-15 and Alembic Street. A Class I (separated bicycle path) is proposed along Stoddard Wells Road, between Alembic Street and Central Road, consistent with the lifeline trail identified in the Town's Recreational Trail System.

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 4.12-1 presents the County's baseline for OD VMT per service population (based on the travel demand model). As shown in Table 4.12-1, the project area baseline for VMT per service population is 30.57 and the town-wide VMT per service population is 16.14.

Table 4.12-1. Baseline (2016) Vehicle Miles Traveled Per Service Population

Geographic Area	Total VMT per Service Population
Project Area	30.57
Town-wide	16.14

Note: VMT = vehicle miles traveled;
Source: SBTAM Model Results; Appendix I

4.12.2 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 (PRC Section 21099). Section 21099(d)(1) provides that aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment. In addition, SB 743 mandates that alternative metric(s) for determining impacts relative to transportation shall be developed to replace the use of LOS in CEQA documents.

In the past, environmental review of transportation impacts focused on the delay that vehicles experience at intersections and on roadway segments, often measured using LOS. Mitigation for impacts on vehicular delay often involves increasing capacity such as widening a roadway or the size of an intersection, which in turn encourages more vehicular travel and greater pollutant emissions. Additionally, improvements to increase vehicular capacity can often discourage alternative forms of transportation such as biking and walking. SB 743 directed OPR to develop an alternative metric(s) for analyzing transportation impacts in CEQA documents. The alternative shall promote the state's goals of reducing 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, 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" (State CEQA Guidelines Section 15064.7(c)).

In December 2018, the CEQA Guidelines were updated to add new Section 15064.3, Determining the Significance of Transportation Impacts, that describes specific considerations for evaluating a project's transportation impacts using the VMT methodology.

CEQA Guidelines Section 15064.3(b) is divided into four subdivisions as follows:

1. **Land Use Projects.** Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.
2. **Transportation Projects.** Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with

CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.

3. **Qualitative Analysis.** If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.
4. **Methodology.** A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project.

OPR's regulatory text 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 TIA prepared for the proposed Project and provided to the Town.

Sustainable Communities Strategies: Senate Bill 375

The Sustainable Communities and Climate Protection Act of 2008 (Sustainable Communities Act, SB 375, Chapter 728, Statutes of 2008) supports the state's climate action goals to reduce greenhouse gas emissions through coordinated transportation and land use planning with the goal of more sustainable communities. Under the Sustainable Communities Act, the California Air Resources Board sets regional targets for greenhouse gas emissions reductions from passenger vehicle use. In 2010, the California Air Resources Board established these targets for 2020 and 2035 for each region covered by one of the state's Metropolitan Planning Organizations (MPOs). The California Air Resources Board will periodically review and update the targets, as needed.

Each of California's MPOs must prepare a Sustainable Communities Strategy (SCS) as an integral part of its Regional Transportation Plan (RTP). The SCS contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet its greenhouse gas emission reduction targets. Once adopted by the MPO, the RTP/SCS guides the transportation policies and investments for the region. California Air Resources Board must review the adopted SCS to confirm and accept the MPO's determination that the SCS, if implemented, would meet the regional greenhouse gas targets. If the combination of measures in the SCS would not meet the regional targets, the MPO must prepare a separate alternative planning strategy to meet the targets. The alternative planning strategy is not a part of the RTP. The Project is within the Southern California Association of Governments (SCAG) MPO which has adopted Connect SoCal (2020–2045 Regional Transportation Plan/Sustainable Communities Strategy) 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).

Caltrans

As the owner and operator of the State Highway System, Caltrans implements established state planning priorities in all functional plans, programs, and activities. Caltrans has the responsibility to coordinate and consult with local jurisdictions when proposed local land use planning and development may impact state highway facilities. To comply with SB 743 implementation, the Caltrans Transportation Impact Study Guide (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 in the project study area has been included in the EIR.

Regional

Southern California Association of Governments Regional Transportation Plan/Sustainable Communities Strategy

The Southern California Association of Governments (SCAG) 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 greenhouse gas 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 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.

San Bernardino County Congestion Management Plan (CMP)

The project is located in San Bernardino County and therefore, the San Bernardino County Transportation Authority (SBCTA) Congestion Management Plan (CMP) is applicable. To address the increasing public concern that traffic congestion is impacting the quality of life and economic vitality of the State of California, Proposition 111 created the CMP in 1990. The intent of the CMP is to provide the analytical basis for transportation decisions through the State Transportation Improvement Program (STIP) process. In 1990, the San Bernardino Associated Governments (SANBAG) was designated the CMA for San Bernardino County. Although implementation of the CMP was made voluntary by the passage of AB 2419 (Bowler, 1996), the CMP requirement has been retained in San Bernardino County. The goals of the San Bernardino County CMP are to:

Goal 1. Maintain or enhance the performance of the multimodal transportation system and minimize travel delay.

Goal 2. Assist in focusing available transportation funding on cost-effective responses to subregional and regional transportation needs.

Goal 3. Provide for technical consistency in multimodal transportation system analysis.

Goal 4. Help to coordinate development and implementation of subregional transportation strategies across jurisdictional boundaries.

Goal 5. Anticipate the impacts of proposed new development on the multimodal transportation system, provide consistent procedures to identify and evaluate the effectiveness of mitigation measures and provide for adequate funding of mitigations.

Goal 6. Promote air quality and improve mobility through implementation of land use and transportation alternatives or incentives that reduce both vehicle trips and miles traveled and vehicle emissions

To meet the goals above, the CMP includes a System LOS Element, Performance Measures Element, Land Use/Transportation Analysis Element, Travel Demand Management Element, and a Five-Year Capital Improvement Program.

Local

Town of Apple Valley General Plan Circulation Element

The Circulation Element addresses both the local transportation system within Town, and those segments of the local transportation system that interface with, and serve as extensions of, the regional roadway system connecting the Town of Apple Valley with the broader Victorville Valley region and other communities in Southern California. The Element also describes alternative means of transportation, such as bicycle, equestrian and pedestrian travel through Town. The Circulation Element provides maps to guide the orderly development of all aspects of the transportation system, as well as goals, policies and programs that correlate the Town's transportation system with the types, intensities and locations of land uses within the planning area.

The Town of Apple Valley General Plan Circulation Element contains the following goals, policies, and programs applicable to transportation and the Project:

Goal**.** The Town shall continue to maintain and expand a safe and efficient circulation and transportation system.

Policy 1.A. The street system recommended in the Town's Circulation Map shall be strictly implemented.

Program 1.A.1 Street rights of way shall be provided as follows:

- 142 feet for a Major Divided Parkway
- 128 feet for Major Divided Arterials
- 104 feet for Major Roadways
- 88 feet for Secondary Roadways
- 60-66 feet for Collector Streets
- 66 feet for Industrial and Commercial Local Streets
- 60 feet for Local Streets
- 50 feet for Rural Streets and Cul-de-Sacs

Policy 1.C. Sidewalks shall be provided on Local Streets of 60 feet in width and on all roadways 88 feet wide or wider. In Rural Residential land use areas designated pathways may be provided as an alternate to sidewalks.

Policy 1.E. Bus pullouts shall be designed into all new projects on arterial roadways, to allow buses to leave the flow of traffic and reduce congestion.

Policy 1.F. Local streets shall be scaled to encourage neighborhood interaction, pedestrian safety and reduced speeds.

Policy 1.H. New development proposals shall pay their fair share for the improvement of street within and surrounding their projects on which they have an impact, including roadways, bridges, and traffic signals.

Policy 1.I. Pedestrian access shall be preserved and enhanced.

Policy 1.J. The Town shall implement a coordinated and connected bicycle lane network consistent with the Bicycle Lane Map in this Element.

Policy 1.K. The Town shall provide for a comprehensive, interconnected recreational trails system suitable for bicycles, equestrians and/or pedestrians.

Policy 1.M. Encourage the expansion of an integrated public transit system

The General Plan Circulation Element also identifies a range of recommended improvements to the local street network to accommodate buildout of the General Plan. Table 4.12-2 presents the roadway improvements that are proposed within the vicinity of the project site. These improvements would provide additional roadway capacity. The Stoddard Wells Road widening projects is currently listed in the Town's Five-Year Capital Improvement Plan (CIP) (Town of Apple Valley 2020).

Table 4.12-2. Apple Valley General Plan Recommended Improvements

Roadway	Recommended Improvement
I-15	▪ A future interchange at I-15 and Quarry Road
Outer I-15	▪ Extend Outer I-15 along the east side of I-15 between Stoddard Wells Road and Dale Evans Parkway. Extension would be classified as a Secondary Road (88" ROW)
Stoddard Wells Road	▪ Between I-15 Freeway and Alembic Street – upgrade from Major Road (104' ROW) to Major Divided Arterial (128' ROW) ▪ Between Alembic Street and Johnson Street - upgrade from Major Road to Major Divided Arterial
Quarry Road	▪ Between I-15 Freeway and Stoddard Wells Road – upgrade from Secondary Road (88' ROW) to Major Divided Arterial (128' ROW) ▪ Between Stoddard Wells Road and Dale Evans Road - upgrade from Secondary Road (88' ROW) to Major Divided Arterial (128' ROW)

4.12.3 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 4.12.2, Relevant Plans, Policies, and Ordinances, were analyzed for their applicability to the proposed project under Threshold A.

Vehicle Miles Traveled

In accordance with SB 743, the Town of Apple Valley adopted Resolution No 2021-08 (May 12, 2021), requiring that VMT replace LOS, and other similar measures for determining significant impacts under CEQA. A project-level VMT analysis has been completed for the project following the Town's Resolution under Threshold B. The San Bernardino County Guidelines have also been referenced for further guidance.

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 Town uses VMT per service population for its impact threshold. A project would result in a significant impact if either of the following conditions are satisfied:
   - The baseline project-generated VMT per service population exceeds the Town of Apple Valley General Plan Buildout VMT per service population, or
   - The cumulative project-generated VMT per service population exceeds Town of Apple Valley General Plan Buildout VMT per service population

   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 Town-wide VMT per service population increases under the plus project condition compared to the no project condition, or
   - The cumulative link-level boundary Town-wide 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 Town's General Plan consistency requirement and Caltrans Interim Local Development Intergovernmental Review Safety Review Practitioners Guide (December 2020), an operational analysis of Stoddard Wells Road 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 which extends onto the freeway mainline causes a potential safety concern if a significant speed differential exists between the off-ramp queue vehicles and the freeway mainline vehicles.

Emergency Access

The emergency access analysis was evaluated under Threshold C and evaluates whether the project would comply with the Town's emergency access and/or evacuation requirements including those imposed by the Fire Department.

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 Handbook, 11th Edition* (2021). Additionally, Passenger car equivalent (PCE) factors were applied to the trip generation estimates to account for truck traffic. 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 15% High-Cube Cold Storage Warehousing and 85% High-Cube Fulfillment Center Warehousing split of the total building square footage, was applied to provide a conservative analysis for daily trip generation. Incorporation of the cold-storage rate split, in the event that a small portion of the building is used for cold storage, increases the total trip generation estimate compared to a warehousing-only estimate, the expected sole land use of the facility. Therefore, the High-Cube Cold Storage (ITE Code 157) trip rates were used to obtain trip generation estimates for 15% of the Project, totaling approximately 377,775 SF of the total estimated building area and the High-Cube Fulfillment Center Warehouse trip rates were used to obtain trip generation estimates for 85% of the Project, totaling approximately 2,140,725 SF of the total estimated building area[1]. 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. Based on the analysis, the proposed Project would generate 4,855 daily trips, 340 AM peak hour trips, and 365 PM peak hour trips. Accounting for truck traffic from warehousing and industrial land uses, the proposed Project would generate 7,065 daily PCE trips, 492 AM peak hour PCE trips and 528 PM peak hour PCE trips. The ITE-based daily trip estimates used in the Project's TIA are shown in Appendix I of this report.

4.12.4 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 under Section 4.9, Land Use and Planning.

San Bernardino County CMP

The Project would be consistent with the applicable goals and elements of the San Bernardino County CMP. The Project would not impede the ability to maintain or enhance the performance of the multimodal transportation system. The Project would include on and off-site roadway improvements to minimize impacts to travel delay and would participate in the Town's Development Impact Fee program, which is coordinated with regional planning

[1] It should be noted that the Project's square footage analyzed in the technical reports was 2,518,500 square feet. The Project's size has increased to 2,520,000 square feet since the technical reports were originally prepared (an increase of 1,500 square feet in Building 2). However, this 0.0596% increase in square footage is nominal when taking into consideration the ultimate size of the Project and would not result in significant changes to the analysis performed or new significant impacts not disclosed in this EIR.

efforts in Victor Valley. The Project would also not result in an increase in vehicle miles traveled as further discussed under Threshold B. Additionally, the CMP System LOS Element and Performance Measures Element also contain LOS standards for CMP designated highways and roadways. There are no designated CMP roadways in the Project study area.

Town of Apple Valley General Plan Circulation Element

The Project would be consistent with the applicable goals and policies of the General Plan Circulation Element including policies related to maintaining and expanding a safe and efficient circulation and transportation system. The Project location takes advantage of the location along the I-15 corridor to minimize truck travel through the Town, thereby discouraging traffic to utilize local residential streets for access or parking needs. The Project would also not hinder the Town's ability to provide for a comprehensive, interconnected recreational trails system suitable for bicycles, equestrians and/or pedestrians, nor hinder the Town's ability to expand the public transit system. 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 Town's Development Impact Fee program.

The Project would provide an approximately 20-foot right-of-way (ROW) dedication, along with frontage improvements along the northern side of Stoddard Wells Road, adjacent to the Project's southern boundary. The current site plan identifies a 64-foot half-width ROW along the extent of Stoddard Wells Road bordering the Project site. This half-width is consistent with the Major Divided Arterial classification of this section of Stoddard Wells Road in the Circulation Element (128-foot ROW, with a 64-foot half-width) and therefore would be consistent with the General Plan Circulation Element.

The Project would also extend Outer I-15 to the north of Stoddard Wells Road, and would shift its proposed alignment in the General Plan Circulation Element from west of the Project site to the eastern boundary of the Project site. This new alignment of Outer I-15 would be built to a Secondary Road classification, including an 88-foot ROW and 44-foot half width. This alignment has been approved in preliminary discussions with the Town, and this shift in the alignment would slightly differ from what was described in the Circulation Element, but this change would be consistent with what was envisioned within the Circulation Element. Therefore, the Project would be consistent with the Circulation Element.

In addition, Table 4.12-3 provides a consistency analysis between the Project and the Town's Circulation Element.

Table 4.12-3. Project Consistency with General Plan Circulation Element

Goal/Policy	Consistency
Policy 1.A. The street system recommended in the Town's Circulation Map shall be strictly implemented.	Consistent. Roadway improvements (e.g., Stoddard Wells Road) would be consistent with the Town's Circulation Element.
Program 1.A.1. Street rights of way shall be provided as follows: 142 feet for a Major Divided Parkway 128 feet for Major Divided Arterials 104 feet for Major Roadways 88 feet for Secondary Roadways 60-66 feet for Collector Streets 66 feet for Industrial and Commercial Local Streets	Consistent. Stoddard Wells Road would be developed to 128 feet, consistent with the Major Divided Arterial Roadway classification.

Table 4.12-3. Project Consistency with General Plan Circulation Element

Goal/Policy	Consistency
60 feet for Local Streets 50 feet for Rural Streets and Cul-de-Sacs	
Policy 1.C. Sidewalks shall be provided on Local Streets of 60 feet in width and on all roadways 88 feet wide or wider. In Rural Residential land use areas designated pathways may be provided as an alternate to sidewalks.	Consistent. The Project would include a variety of pedestrian improvements throughout the Project site.
Policy 1.E. Bus pullouts shall be designed into all new projects on arterial roadways, to allow buses to leave the flow of traffic and reduce congestion.	Not applicable. The Town's circulation element does not identify any bus pullouts in the immediate proximity of the Project site.
Policy 1.F. Local streets shall be scaled to encourage neighborhood interaction, pedestrian safety and reduced speeds.	Consistent. Street sections for the proposed roadway is of a scale consistent with industrial areas.
Policy 1.H. New development proposals shall pay their fair share for the improvement of street within and surrounding their projects on which they have an impact, including roadways, bridges, and traffic signals.	Consistent. The Project would be responsible for its applicable fair share improvement vees.
Policy 1.I. Pedestrian access shall be preserved and enhanced.	Consistent. The Project includes a variety of pedestrian improvements, including sidewalks and roadways.
Policy 1.J. The Town shall implement a coordinated and connected bicycle lane network consistent with the Bicycle Lane Map in this Element.	Not applicable. Not bicycle paths are identified in the Town's Circulation element in the immediate vicinity of the Project site.
Policy 1.K. The Town shall provide for a comprehensive, interconnected recreational trails system suitable for bicycles, equestrians and/or pedestrians.	Not applicable. This is a Town-level policy is implemented at the planning level and not the project level.
Policy 1.M. Encourage the expansion of an integrated public transit system	Not applicable. This is a Town-level policy is implemented at the planning level and not the project level.

As demonstrated in Table 4.12-3, the Project would be consistent with the Town's Circulation Element. Impacts 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) and therefore, impacts would be less than significant.

VMT Screening

The San Bernardino County Transportation Impact Study Guidelines (July 2019) identifies projects that can be screened from conducting a project-specific VMT analysis. A land use project need only to meet one of the below screening thresholds to result in a less-than- significant impact.

- **Local Serving Development:** Projects which serve the local community and have the potential to reduce VMT should not be required to complete a VMT assessment. These projects include:
  - K-12 schools
  - Local-serving retail less than 50,000 sq. ft.
  - Local parks
  - Day care centers
  - Local serving gas stations
  - Local serving banks
  - Student housing projects
  - Local serving community colleges that are consistent with the assumptions noted in the RTP/SC

  The proposed project does not include any of the land uses above and therefore does not meet this screening criterion.
- **Projects generating less than 110 daily trips:** If a development project generates 110 or less net daily vehicle trips, further analysis is not required, and a less than significant determination can be made. As previously noted, the project would generate 4,855 daily trips and therefore does not meet this screening criterion based on its proposed size and land use.
- **Projects located within a Transit Priority Area (TPA):** Projects located within a TPA as determined by the most recent SCAG RTP/SCS. The Project site is not located within ½ mile of an existing major transit stop, or along a high-quality transit corridor and therefore does not meet this screening criterion.
- **Projects located within a low VMT generating area:** A project that is located in efficient areas of the County will reduce VMT per person/employee and is beneficial to the region. The County's Screening Tool was used to identify whether the project is located in a low VMT area. 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. As shown in Table 4.12-4 below, the VMT per service population for the Project TAZ is 124.7, and the County of San Bernardino VMT per service population is 33.3. Therefore, the TAZ would be 274.44 percent above the County's threshold, which would not meet the required baseline screening criteria established in the Town's guidelines. The Project would not qualify as residing in a low VMT area.

Table 4.12-4. Summary of Project TAZ VMT

Base Year (2022)	VMT
VMT Per Service Population	
Project TAZ	124.7
Jurisdiction	33.3
% Difference (Project TAZ – Jurisdiction)	**+274.44%**
Threshold	33.3

Source: SBCTA VMT Screening Tool (Appendix D)

VMT Analysis

Project VMT has been calculated using the most current version of the SBTAM and includes an analysis of the baseline year 2016 (consistent with the SBTAM methodology), with and without the project. The first model run included the existing land uses for the area with no changes and the second model run was conducted with socio-economic data from the proposed Project. The model scenario outputs produced Project Area VMT per Service Population and Town-wide VMT per Service Population, as shown in Table 4.12-5. Roadway (or link-level boundary) VMT was also calculated for all vehicles to estimate the Project's effect on VMT as shown in Table 4.12-5. Detailed calculations and model outputs are included in Appendix I. The following sections summarize the VMT analysis findings.

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 Town's thresholds, if a project generated VMT per service population exceeds the Town of Apple Valley General Plan Buildout VMT per service population, the project has a significant impact under CEQA. Table 4.12-5 summarizes the findings of this evaluation.

Table 4.12-5. Summary VMT Per Service Population With and Without Project

Geographic Area	Total VMT per Service Population		Percent Change	Significant Impact?
	Baseline (Year 2016) without Project	Baseline (Year 2016) with Project		
Project Area	30.57	29.47	-4.0%	No
Town-wide	16.14	15.11	-6.0%	No

Note: VMT = vehicle miles traveled;
Source: SBTAM Model Results; Appendix I

As shown, the development of the Proposed Project decreases the total VMT per Service Population in the project area by 4 percent and by 6 percent Town-wide. This is due to the creation of employment opportunities within the Town of Apple Valley that were not there before implementation of the project. The Proposed Project captures employment that used to go outside of the Town to nearby cities such as Victorville or Barstow. Therefore, based on the Town's thresholds, the Project generated VMT would have a less than significant impact. Furthermore, according to Section 15064.3 "Determining the Significance of Transportation Impacts" of the 2021 CEQA Statute & Guidelines, projects that decrease VMT in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.

Project-Effect on VMT

The Project effect on VMT evaluates the change in roadway (or link-level boundary) VMT within the Town of Apple Valley due to the proposed Project. Based on the Town's thresholds, if the link–level boundary VMT per service population increases Town-wide under the plus Project condition compared to the no Project condition, the Project would have a significant impact. Table 4.12-6 shows the roadway (or link level) VMT per service population for the Town with and without Project conditions for the baseline conditions.

Table 4.12-6. Roadway (or Link-Level Boundary) VMT

Type of VMT and Service Population	Baseline (Year 2016) without Project	Baseline (Year 2016) with Project	Percent Change	Significant Impact?
Town-wide Link-Level VMT	787,570,047	798,036,838	1.3%	—
Service Population	91,154	93,765	2.9%	—
Town-wide Link-Level VMT per Service Population	8,640	8,511	-1.5%	No

Note: VMT = vehicle miles traveled;
Source: SBTAM Model Results; Appendix I

As shown in Table 4.12-5, the development of the Proposed Project decreases the Town-wide link-level VMT per Service Population by 1.5 percent, which is consistent with the results of the total VMT per Service Population analysis. Because the Project would not increase the roadway (or link-level boundary) VMT per service population, the Project's effect on VMT would be less than significant.

Cumulative Impacts

Finally, it is important to note that based on the guidance provided in Public Resources Code, § 21083, subd. (b)(2) and CEQA Guidelines, § 15064, subd. (h)(1), "A project's cumulative impacts are based on an assessment of whether the "incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." In the context of VMT, when the VMT threshold is an efficiency-based threshold, the OPR Technical Advisory states, "[a] project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. Accordingly, a finding of a less than-significant project impact would imply a less than significant cumulative impact, and vice versa." (OPR Technical Advisory 2018 at p. 6). This approach is also consistent with our understanding of the SBTAM model, if a project results in a VMT reduction when modeled under baseline conditions, then the project would likely have the same VMT efficiency or better under future conditions. Likewise, if a project results in a VMT increase when modeled under base year conditions, then the project would likely exhibit the same characteristics under future conditions. Therefore, the analyses conducted herein are deemed appropriate and consistent with both the Town of Apple Valley's VMT Guidelines, CEQA Guidelines, and the OPR Technical Advisory. Moreover, given that the SBTAM model accounts for build out consistent with the General Plan, and that VMT impacts were determined to be less than significant, the project's cumulative VMT impacts are less than significant.

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. Roadway design has the potential to increase hazards via sharp curves that are difficult to negotiate or if intersections provide poor lines of sight. In addition, queueing associated with turn pockets can lead to speed differentials associated with speed differentials. 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

Access to the Project site would be provided via a new driveway off of Stoddard Wells Road (Intersection #4), a proposed signalized intersection at Outer I-15 Alignment and Stoddard Wells Road (Intersection #5), nine new driveways (Intersections #7 through #15) along the new alignment of Outer I-15 on the eastern boundary of the project site, and via three internal access driveways (Intersections #6, #16, and #17). A summary of the driveway access locations is provided below and illustrated on Figure 4-12-6: Vehicular Circulation and Access Plan.

- #4: Driveway A via Stoddard Wells Road – right-turn in/out only access; trucks/passenger vehicles
- #5: Outer I-15 Alignment (New)/Stoddard Wells Road – full access; trucks/passenger vehicles
- #6: Driveway B via Driveway A – full access; trucks
- #7: Driveway C via Outer I-15 Alignment (New) – full access; passenger vehicles
- #8: Driveway D via Outer I-15 Alignment (New) – full access; trucks
- #9: Driveway E via Outer I-15 Alignment (New) – full access; trucks
- #10: Driveway F via Outer I-15 Alignment (New) – full access; passenger vehicles
- #11: Driveway G via Outer I-15 Alignment (New) – full access; passenger vehicles
- #12: Driveway H via Outer I-15 Alignment (New) – full access; trucks
- #13: Driveway I via Outer I-15 Alignment (New) – full access; trucks/passenger vehicles
- #14: Driveway J via Outer I-15 Alignment (New) – full access; passenger vehicles
- #15: Driveway K via Outer I-15 Alignment (New) – full access; trucks/passenger vehicles
- #16: Driveway L via Driveway K – full access; passenger vehicles
- #17: Driveway M via Driveway I – full access; passenger vehicles

A queuing analysis was prepared for all Project driveways to assess the adequacy of any off-site storage lanes into the Project site, as well as the adequacy of driveway throat lengths and space on-site for vehicles to queue without effecting the internal circulation on the Project site. All queuing analysis data and SimTraffic queuing worksheets are provided in Appendix I. The proposed Project would not result in unacceptable queueing conditions into or out of the Project site; however, the following recommendations are made for the two site accesses to Stoddard Wells Road:

- *Driveway A/Stoddard Wells Road (unsignalized):* Restrict to right-in/right-out to limit the potential for collisions due to a high percentage of truck traffic making left-turns into or out of this driveway, or operational deficiencies associated with left-turning traffic traveling across multiple travel lanes (e.g., future conditions) or across movements with high opposing through volumes.
- *Outer I-15 Alignment (New)/Stoddard Wells Road (signalized):* Add an eastbound left turn lane with protected phasing and *at least* 125-feet of storage length to accommodate forecasted queues. Additionally, this intersection was analyzed with a shared southbound left-right turn lane (LOS operations and queuing are forecast to be acceptable under these geometrics); however, inclusion of a separate right-turn lane should be considered in final geometric design of the intersection due to the high volume of southbound right-turning traffic exiting the site to I-15.

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 improvements are proposed, and also noted in Figure 4-12-6, Vehicular Circulation and Access Plan:

- The Project would provide an approximately 20-foot ROW dedication, along with frontage improvements along the northern side of Stoddard Wells Road, adjacent to the Project's southern boundary. Stoddard Wells Road would be built to a 64-foot half width with development of the Project. This is consistent with the Major Divided Arterial classification of this section of Stoddard Wells Road in the Circulation Element (128-foot ROW, with a 64-foot half-width).
- The Project would extend Outer I-15 to the north of Stoddard Wells Road, and would shift its proposed alignment in the General Plan Circulation Element from west of the Project site to the eastern boundary of the Project site. This new alignment of Outer I-15 would be built to a Secondary Road classification, including an 88-foot ROW and 44-foot half width. This alignment has been approved in preliminary discussions with the Town.
- With the extension of the Outer I-15 alignment, the Project would provide signalization at its intersection with Stoddard Wells Road.

As the Project continues through design review, detailed roadway improvements will continue to be developed in coordination with the Town. 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 the southbound I-15 ramps at Quarry Road, as well as the northbound I-15 ramps at Stoddard Wells Road to assess vehicle queues for the off ramps 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 Existing (2022), Opening Year (2025) plus Project, and Horizon Year (2040) plus Project conditions, using Synchro/SimTraffic software, as summarized below. All SimTraffic queueing reports are provided in Appendix I.

Existing (2022) Conditions

As shown in Table 4.12-7, Peak-Hour Queuing Summary for Existing Conditions, 95th percentile queuing would be satisfactory and would not extend into mainline lanes.

Opening Year (2025) Plus Project Conditions

As shown in Table 4.12-8, Peak-Hour Queuing Summary for Opening Year (2025) Plus Project Conditions, the following intersection approaches are anticipated to experience periodic queuing issues during the peak hours based on the 95th percentile peak hour traffic flows for the Opening Year (2025) plus Project traffic conditions:

- #3: I-15 NB Ramps - Outer I-15/ Stoddard Wells Road: Southbound approaches (AM and PM peak hours)

Horizon Year (2040) Plus Project Conditions

As shown in Table 4.12-9, Peak-Hour Queuing Summary for Horizon Year (2040) Plus Project Conditions, the following intersection approaches 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:

- #3: I-15 NB Ramps - Outer I-15/ Stoddard Wells Road: Southbound approaches (AM and PM peak hours)

Improvement measures required to mitigate the Project's LOS and queuing impacts would include fair-share contributions to this intersection. Since the Town 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.

Table 4.12-7. Peak-Hour Queuing Summary for Existing Conditions

No.	Intersection	Movement	Available Stacking Distance (Feet)	Existing			
				95th Percentile Queue (Feet)		Acceptable?[1]	
				AM Peak	PM Peak	AM Peak	PM Peak
1	Quarry Road/I-15 SB Ramps	WBL	1,000	24	26	Yes	Yes
2	Quarry Road/Stoddard Wells Road	SBL[2]	1,400	38	40	Yes	Yes
		SBR[3]	25	41	16	**No**	Yes
3	I-15 NB Ramps – Outer I-15/Stoddard Wells Road	SBLT	1,000	68	106	Yes	Yes
		SBR[3]	25	47	49	**No**	**No**
5	Outer I-15 Alignment (New)/Stoddard Wells Road	EBL	200	*Does Not Exist*			
		SBLR	1,000	*Does Not Exist*			

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; **Bold:** Exceeds available stacking distance; **Bold:** Exceeds available stacking distance and would extend to freeway mainline/past total approach stacking distance

1 Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided.

2 Available stacking distance measured to the Quarry Road/I-15 SB Off-Ramp intersection.

3 Analyzed as a defacto right-turn pocket; queues may exceed defacto pocket of one vehicle (e.g. 25-feet), but may not exceed total approach stacking distance.

Table 4.12-8. Peak-Hour Queuing Summary for Opening Year (2025) Plus Project Conditions

No.	Intersection	Movement	Available Stacking Distance (Feet)	Opening Year (2025)				Opening Year (2025) plus Project			
				95th Percentile Queue (Feet)		Acceptable?[1]		95th Percentile Queue (Feet)		Acceptable?[1]	
				AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
1	Quarry Road/I-15 SB Ramps	WBL	1,000	37	43	Yes	Yes	45	50	Yes	Yes
2	Quarry Road/Stoddard Wells Road	SBL[2]	1,400	50	56	Yes	Yes	59	63	Yes	Yes
		SBR[3]	25	43	21	**No**	Yes	44	15	**No**	Yes
3	I-15 NB Ramps – Outer I-15/Stoddard Wells Road	SBLT	1,000	185	1,512	Yes	**No**	2,509[4]	2,270[4]	**No**	**No**
		SBR[3]	25	46	61	**No**	**No**	55	47	**No**	**No**
5	Outer I-15 Alignment (New)/Stoddard Wells Road	EBL	200	*Does Not Exist*				114	92	Yes	Yes
		SBLR	1,000	*Does Not Exist*				45	76	Yes	Yes

Source: Appendix C

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; **Bold:** Exceeds available stacking distance; **Bold:** Exceeds available stacking distance and would extend to freeway mainline/past total approach stacking distance

1 Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided.

2 Available stacking distance measured to the Quarry Road/I-15 SB Off-Ramp intersection.

3 Analyzed as a defacto right-turn pocket; queues may exceed defacto pocket of one vehicle (e.g. 25-feet), but may not exceed total approach stacking distance.

4 95th percentile volume exceeds capacity; queue may be longer.

Table 4.12-9. 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	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
1	Quarry Road/I-15 SB Ramps	WBL	1,000	56	40	Yes	Yes	96	80	Yes	Yes
2	Quarry Road/Stoddard Wells Road	SBL[2]	1,400	68	55	Yes	Yes	83	67	Yes	Yes
		SBR[3]	25	55	44	**No**	**No**	59	48	**No**	**No**
3	I-15 NB Ramps – Outer I-15/Stoddard Wells Road	SBLT	1,000	2,521[4]	2,467[4]	**No**	**No**	2,072[4]	2,101[4]	**No**	**No**
		SBR[3]	25	67	63	**No**	**No**	53	51	**No**	**No**
5	Outer I-15 Alignment (New)/Stoddard Wells Road	EBL	200	*Does Not Exist*				103	85	Yes	Yes
		SBLR	1,000	*Does Not Exist*				54	82	Yes	Yes

Source: Appendix C

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; **Bold:** Exceeds available stacking distance; **Bold:** Exceeds available stacking distance and would extend to freeway mainline/past total approach stacking distance

1 Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided.

2 Available stacking distance measured to the Quarry Road/I-15 SB Off-Ramp intersection.

3 Analyzed as a defacto right-turn pocket; queues may exceed defacto pocket of one vehicle (e.g. 25-feet), but may not exceed total approach stacking distance.

4 95th percentile volume exceeds capacity; queue may be longer.

Threshold D: Would the Project result in inadequate emergency access?

Less-than-Significant Impact. As described above, the Project has 14 access locations, and in the event of an emergency all the site access 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 the Towns' firefighting apparatus, and to provide alternative emergency ingress and egress. The site plan would be subject to plan review by the Town'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 intersection #3 under the Opening Year (2025) plus Project traffic conditions and Horizon Year (2040) plus Project conditions. Since the Town does not have jurisdiction over this intersection, 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.

4.12.5 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. The Project would extend Outer I-15 to the north of Stoddard Wells Road, and would shift its proposed alignment in the General Plan Circulation Element from west of the Project site to the eastern boundary of the Project site. This alignment has been approved in preliminary discussions with the Town. The Project would be consistent with the Circulation Element.

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 intersection #3. Since the Town does not have jurisdiction over this intersection, 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 impacts at intersection #3 under the Opening Year (2025) plus Project traffic conditions and Horizon Year (2040) plus Project conditions. Since the Town does not have jurisdiction over this intersection, 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.

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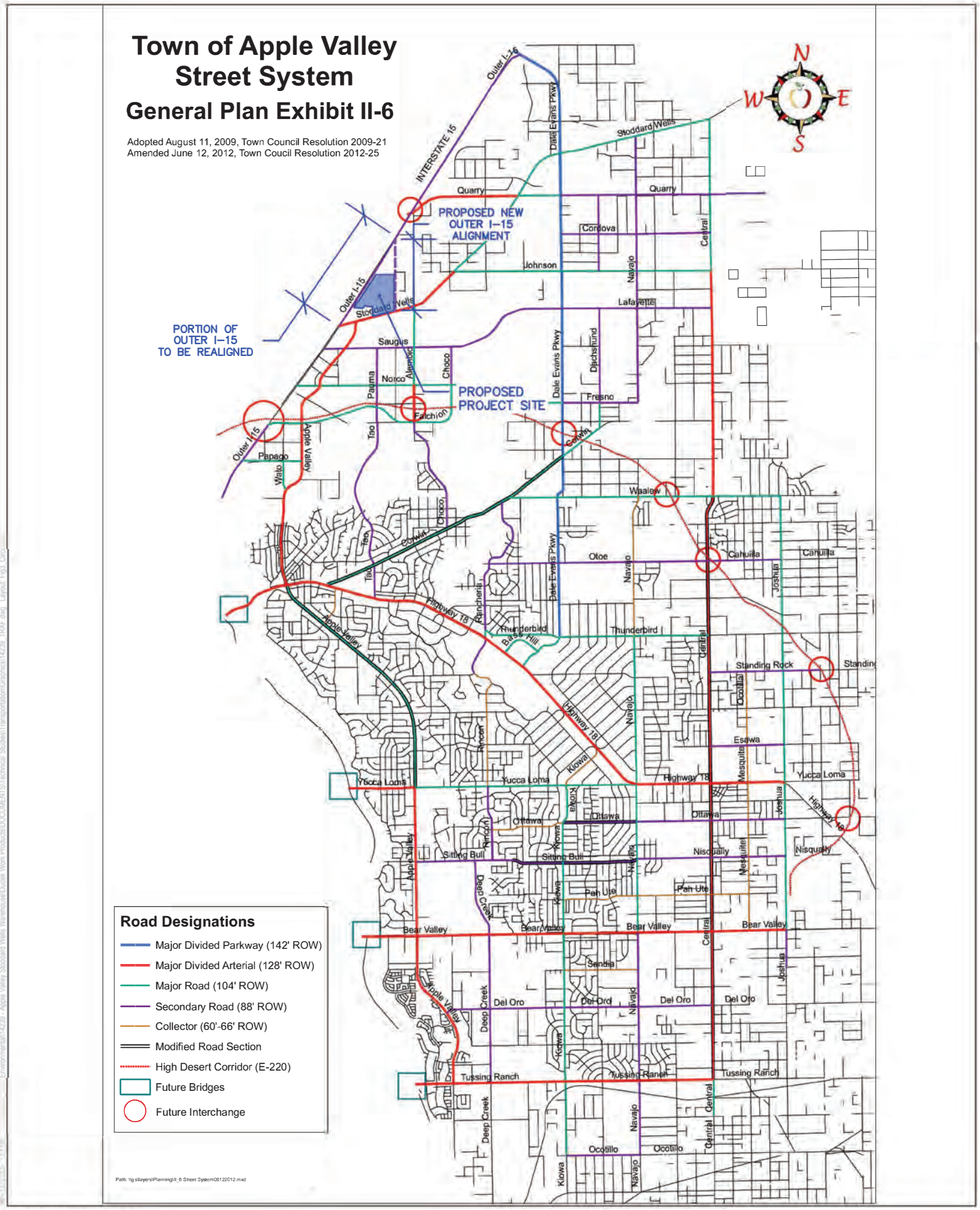
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SOURCE: Terra Nova 2009

FIGURE 4.12-1

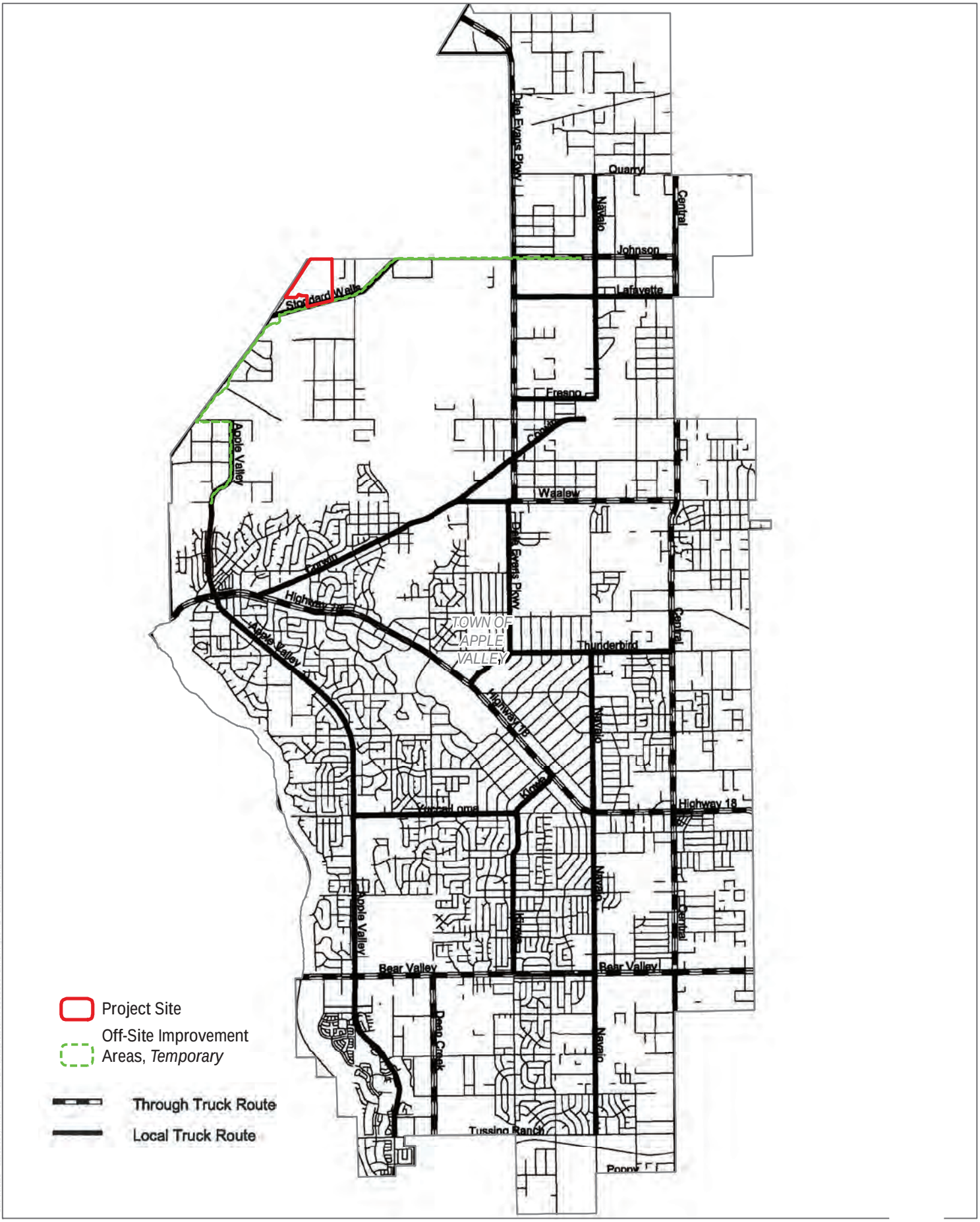
Circulation Element Map

Apple Valley 143 Project

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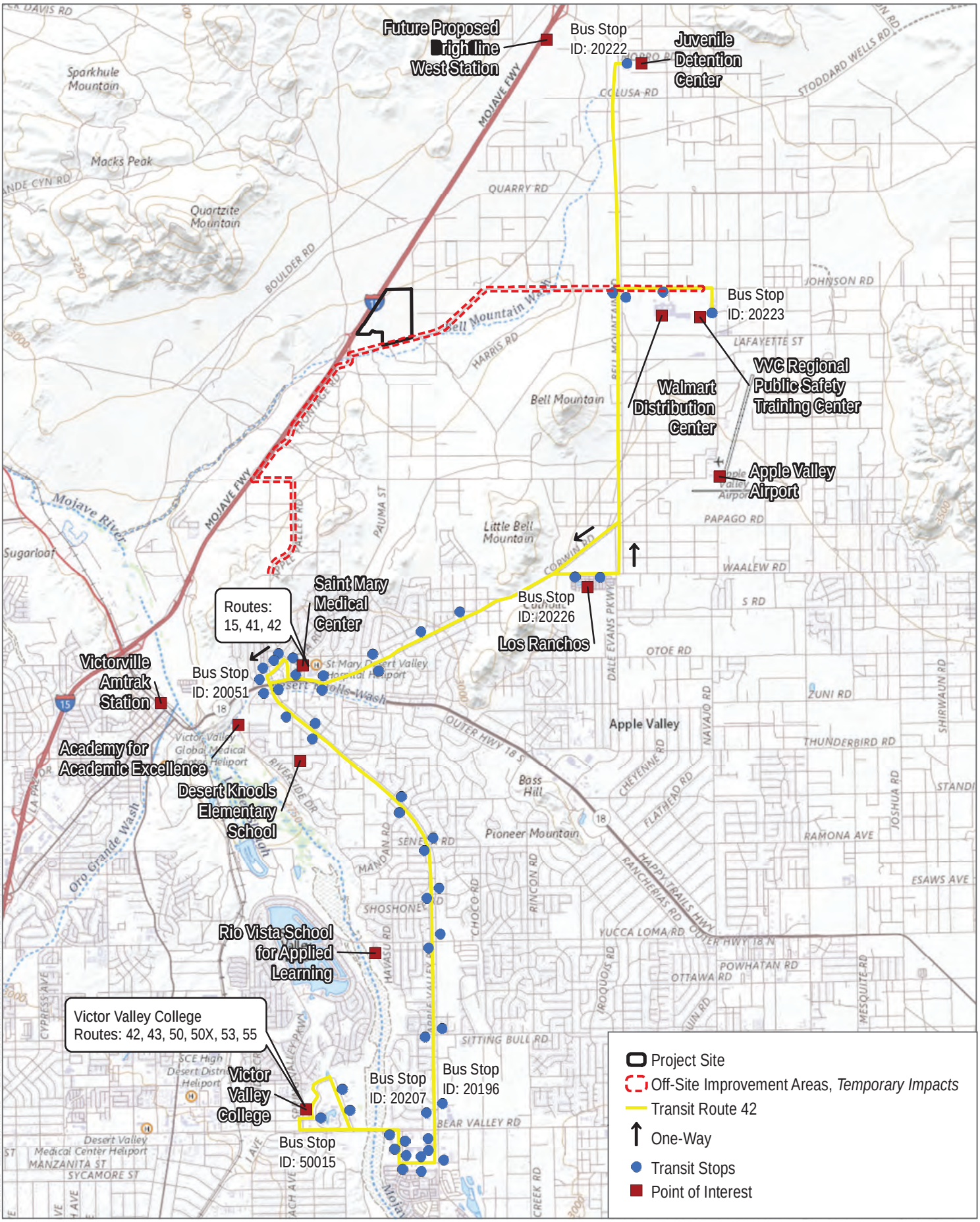
SOURCE: USGS Basemap; San Bernadino County 2021; Town of Apple Valley 2009

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0 0.75 1.5 Miles

FIGURE 4.12-2
Local Truck Routes
Apple Valley 143 Project

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SOURCE: USGS Basemap; San Bernadino County 2021; Victor Valley Transit 2022

FIGURE **4.12-3**

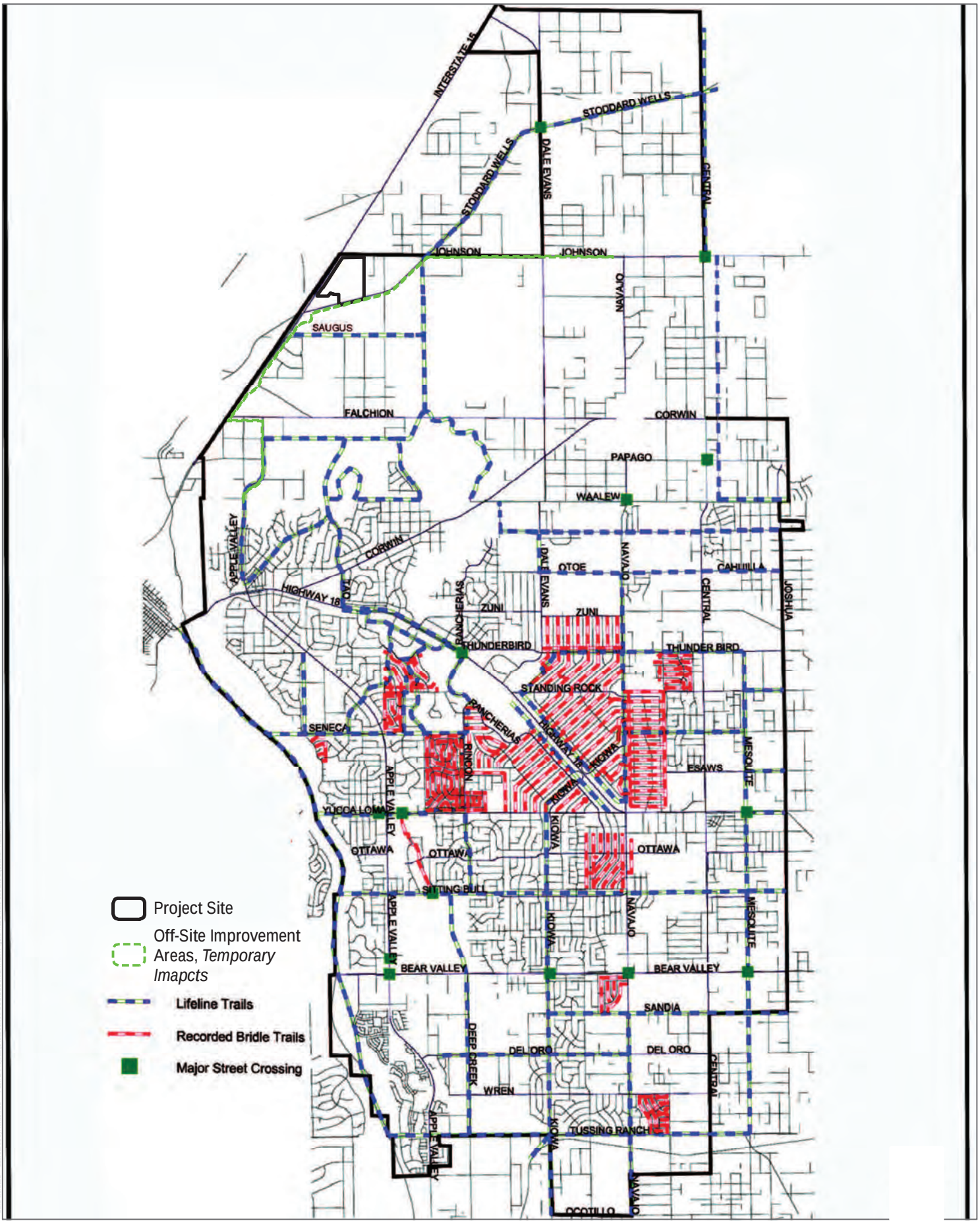
Existing Transit Facilities

Apple Valley 143 Project

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SOURCE: USGS Basemap; San Bernadino County 2021; Terra Nova 2022

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FIGURE **4.12-4**

Multi-Use and Equestrian Trails

Apple Valley 143 Project

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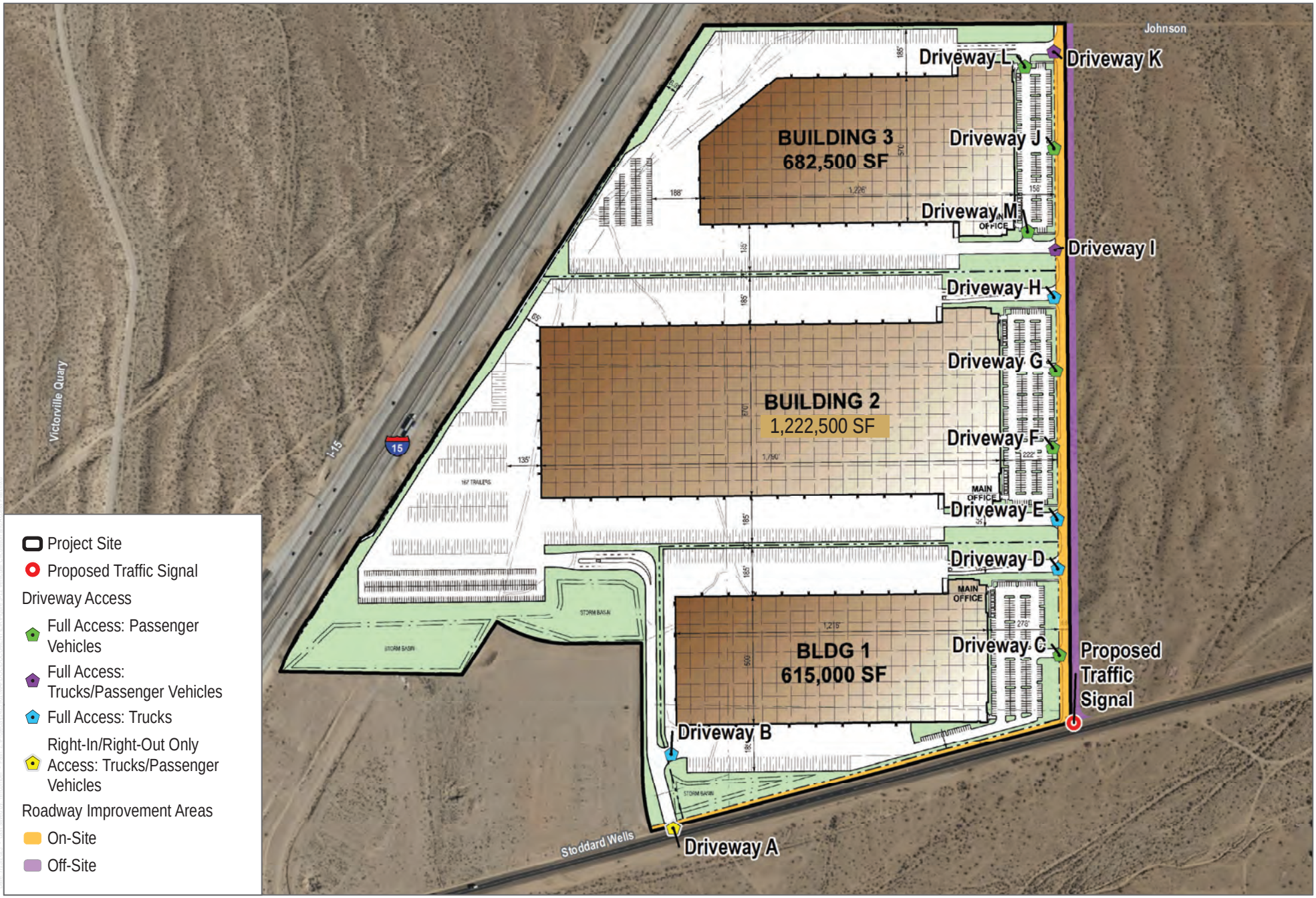
SOURCE: Terra Nova 2009

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FIGURE 4.12-5
Bike Paths
Apple Valley 143 Project

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

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FIGURE **4.12-6**

Vehicular Circulation and Access Plan

Apple Valley 143 Project

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4.13 Utilities and Service Systems

This section describes the existing utility conditions of the Apple Valley 143 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 Apple Valley 143 Acres Project, prepared by Q3 Consulting in September 2022 (Appendix G-1).
- Apple Valley 143 Acres Preliminary Water Quality Management Plan, prepared by Q3 Consulting in September 2022 (Appendix G-2).
- Water Supply Assessment for the Apple Valley 143 San Bernardino County, California prepared by Dudek in July 2022 (Appendix J).

4.13.1 Existing Conditions

Water

Water Supply

Liberty Utilities provides water service to the Town of Apple Valley and unincorporated areas of San Bernardino County. Liberty Utilities' service area encompasses an area of approximately 50 square miles (Liberty Utilities 2021). In 2020, Liberty Utilities obtained 100% of its source water from 18 deep wells located throughout the service area. These wells draw water from the deep Alto sub-unit of the Mojave ground water basin, which is recharges from snowmelt from the San Bernardino Mountains to the south and the Mojave River to the west.

The Mojave Water Agency serves as the entity responsible for managing the use, replenishment, and protection of the groundwater basin. The Upper Mojave River Valley Groundwater Basin is an adjudicated basin and thus has a managed groundwater extraction rate, reducing the potential for over-extraction to occur. The Upper Mojave River Valley Groundwater Basin is classified by the California Department of Water Resources as having a very low priority in regard to prioritizing the completion of a Groundwater Sustainability Plan (GSP) (CDWR 2020) (see Section 4.13.2, Relevant Plans, Policies, and Ordinances, for additional detail).

In addition to relying on groundwater, Liberty Utilities purchases imported State Water Project water. However, Liberty Utilities does not directly resell State Water Project water to retail customers. Rather, Liberty Utilities 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. Liberty Utilities 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 basin.

Pursuant to the Urban Water Management Planning Act, Liberty Utilities prepares an Urban Water Management Plan (UWMP) on a five-year basis to evaluate current and projected water supplies and demands amongst other water planning issues. Liberty Utilities' most recent UWMP, prepared in 2020, 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. Liberty Utilities comprehensively updates its UWMP on a 5-year basis to refine population projections and include all new land use patterns and development.

According to the Liberty Utilities UWMP, Liberty Utilities 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 4.13-1, 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 five-year increments. Demands are shown with the effects of assumed urban demand reduction (conservation) measures that would be implemented during drought conditions.

Table 4.13-1. Supply and Demand Comparison (Acre-Feet per Year)

Supply and Demand		2025	2030	2035	2040	2045
Normal Year						
Supply totals		15,846	16,466	17,120	17,810	18,538
Demand totals		15,846	16,466	17,120	17,810	18,538
Difference		0	0	0	0	0
Single-Dry Year						
Supply totals		14,922	15,506	16,122	16,772	17,458
Demand totals		14,922	15,506	16,122	16,772	17,458
Difference		0	0	0	0	0
Multiple Dry Years Supply and Demand Comparison						
First Year	Supply totals	19,285	20,039	20,835	21,675	22,561
	Demand totals	19,285	20,039	20,835	21,675	22,561
	Difference	0	0	0	0	0
Second Year	Supply totals	17,760	18,454	19,188	19,961	20,777
	Demand totals	17,760	18,454	19,188	19,961	20,777
	Difference	0	0	0	0	0
Third Year	Supply totals	18,114	18,823	19,571	20,360	21,192
	Demand totals	18,114	18,823	19,571	20,360	21,192
	Difference	0	0	0	0	0
Fourth Year	Supply totals	17,440	18,122	18,842	19,602	20,403
	Demand totals	17,440	18,122	18,842	19,602	20,403
	Difference	0	0	0	0	0
Fifth Year	Supply totals	14,296	14,856	15,446	16,069	16,726
	Demand totals	14,296	14,856	15,446	16,069	16,726
	Difference	0	0	0	0	0

Source: Liberty Utilities 2021.

Existing Water Use

The Project consists of vacant, undeveloped land. As such, there is no existing water demand on site.

Water Infrastructure

Liberty Utilities' existing water distribution system includes approximately 475 miles of underground pipelines.

The Project is proposed to receive water via an existing 12-inch main tie in from a nearby Walmart Distribution Center.

Wastewater

Sewer Infrastructure

The Town's Department of Public Works Wastewater Division owns, operates, and maintains a wastewater collection system, including approximately 140 miles of collector sewer, trunk lines and inceptors, as well as nine sewer lift pump stations. The Town is a member of the joint power agency, Victor Valley Wastewater Reclamation Authority (VVWRA). VVWRA operates a regional interceptor sewer system and wastewater reclamation plants. The Town's sewer system conveys wastewater to the Regional Wastewater Treatment Plant (RWWTP) operated by VVWRA in Victorville. The plant currently treats approximately 10.7 million gallons per day (mgd) and has a design capacity of 18 mgd (VVWRA 2022). The Apple Valley Subregional Water Recycling facility located at Brewster Park was completed in 2018. It can produce one million gallons per day of recycled water, which is used to irrigate Brewster Park and the Civic Center Park. The facility only treats wastewater and returns solid waste to the sewer line where it continues to the RWWTP in Victorville for treatment.

Within the immediate vicinity of the Project site, an existing 21-inch diameter sanitary sewer line is located within Stoddard Wells Road.

Existing Wastewater Generation

The Project site is undeveloped and vacant. As such, no wastewater is currently generated.

Stormwater Drainage

The Project site consists of 143-acres of irregularly shaped vacant undeveloped land with a natural topography that results in drainage to the southwest corner of the 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, the Town's Public Works Department manages facilities through its Master Drainage Plan.

While there are no stormwater drainage facilities located on site because the site is undeveloped, stormwater flows as sheet flow to the southwest where it naturally evaporates and/or infiltrates into the soil.

Solid Waste

The collection, transport, and disposal of solid waste and recyclables from business use and residential use in the Town are provided by Burrtec's AVCO Disposal (Burrtec). After waste is collected, it is delivered to the Victor Valley

Material Recovery Facility, located at 17000 Abbey Lane in Victorville, approximately 3 miles to the southwest of the Project site. Waste is collected and hauled to the Victorville Sanitary Landfill. Details on this landfill are provided below (CalRecycle 2022a):

> The Victorville Sanitary Landfill is located at 18600 Stoddard Wells Road in Victorville, approximately 0.5 miles to the west 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 2022, this landfill was expected to remain open until 2047.

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 2019). The Chino Valley Rock Landfill is located at 13434 Ontario Avenue in Ontario, approximately 45 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 Town is already disposed of at the Victorville Sanitary Landfill, it is unlikely that Chino Valley Rock Landfill would be used. In addition, the Town has a franchise agreement with Burrtec, which designates them as the Town'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 Town 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 (CEC), approximately 104,125 gigawatt-hours of electricity were used in SCE's service area in 2019 (CEC 2021). Demand forecasts anticipate that approximately 115 gigawatt watt-hours of electricity will be used in SCE's service area in 2025 under a high demand forecast (CEC 2021). SCE receives electric power from a variety of sources. According to CPUC'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).

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 (ISO). The California ISO 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 ISO routes electrical power along these assets, maximizing the use of the transmission system and its power generation resources. The ISO matches buyers and sellers of electricity to ensure that enough power is available to meet demand. To these ends, every five minutes the ISO 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 ISO'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 ISO reviews and either approves or denies the proposed additions. In addition, and perhaps most importantly, the ISO 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.

Existing Electricity Use

The Project site is undeveloped and vacant. As such, no electricity is currently used.

Natural Gas

Natural gas service for the Town is provided by the Southwest Gas Holdings, Inc. (Southwest Gas). Southwest Gas provides natural gas service to more than 2 million customers in Arizona, Nevada, and portions of California. Southwest Gas' southern division is a wholesale customer of SoCalGas. According to the Town's Climate Action Plan 2019 Update, Townwide natural gas demand in Apple Valley in 2019 was 15,526,732 therms.

As the Project site is currently undeveloped, there are no underground gas pipelines on site.

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 Town including Verizon, Charter, and Charter Spectrum. 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.

4.13.2 Relevant Plans, Policies, and Ordinances

Federal

National Pollutant Discharge Elimination System Permit Program

The National Pollution Discharge Elimination System (NPDES) permit program was established in the Clean Water Act (CWA) to regulate municipal and industrial discharges to surface waters of the United States. Discharge from any point source is unlawful unless the discharge is in compliance with an NPDES permit. Federal NPDES permit

regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (Code of Federal Regulations, Title 40, Section 268, Subpart D), contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs that include federal landfill criteria. The federal regulations address the location, operation, design, and closure of landfills, as well as groundwater monitoring requirements.

State

California Code of Regulations, Titles 14 and 27

Title 14 (Natural Resources, Division 7) and Title 27 (Environmental Protection, Division 2 [Solid Waste]) of the California Code of Regulations govern the handling and disposal of solid waste and operation of landfills, transfer stations, and recycling facilities.

Assembly Bills 939 and 341: Solid Waste Reduction

The California Integrated Waste Management (CIWM) Act of 1989 (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 CIWM Board (CIWMB) regulatory oversight. Since the adoption of AB 939, landfill capacity is no longer considered a statewide crisis. AB 939 has achieved substantial progress in waste diversion, program implementation, solid waste planning, and protection of public health, safety, and the environment from landfills operations and solid waste facilities.

In 2011, AB 341 was passed, 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 SGMA. This act requires governments and water agencies of high- and medium-priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over-drafted basins, sustainability should be achieved by 2040. For the remaining high- and medium-priority basins, 2042 is the deadline. Through SGMA, the CDWR provides ongoing support to local agencies through guidance, financial assistance, and technical assistance. SGMA empowers local agencies to form Groundwater

Sustainability Agencies (GSAs) to manage basins sustainably, and requires those GSAs to adopt GSP 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 are required to assess the reliability of its water sources over a 20-year period under normal-year, dry-year, and multiple-dry-year scenarios in a UWMP. UWMPs must be updated and submitted to the CDWR every five years for review and approval. The Project site is within the area addressed by the Liberty Utilities Apple Valley 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 Town'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 CDWR modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

Sanitary Sewer General Waste Discharge Requirements

On May 2, 2006, the State Water Resources Control Board (SWRCB) adopted a General Waste Discharge Requirement (Order No. 2006-0003) for all publicly owned sanitary sewer collection systems in California with more than 1.0 mile of sewer pipe. The order provides a consistent statewide approach to reducing sanitary sewer overflows by requiring public sewer system operators to take all feasible steps to control the volume of waste discharged into the system in order to prevent sanitary sewer waste from entering the storm sewer system, and to develop a Sewer System Management Plan. The General Waste Discharge Requirement also requires that storm sewer overflows be reported to the SWRCB using an online reporting system.

California Code of Regulations Title 24, Part 11

In 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code, Part 11 of Title 24, commonly referred to as CALGreen, 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 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 SWRCB, 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,

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.

Local

Town of Apple Valley General Plan

The Energy and Mineral Resources Element of the Town of Apple Valley contains the following goals and policies pertaining to energy for the proposed Project.

Energy and Mineral Resources Element

Goal. Assure the long-term availability and affordability of energy and mineral resources through conservative consumption, efficient use and environmentally sensitive management practices

Policy 1A. The community and all economic sectors shall be urged to conserve energy, with particular focus on the inclusion of energy saving measures in transport systems, and in the planning and construction of urban uses

Policy 1B. Promote building design and construction that integrates alternative energy systems, including but not limited to solar, thermal, photovoltaics and other clean energy systems

Policy 1C. Proactively support state and federal legislation and regulations and long-term strategies that assure affordable and reliable production and delivery of electrical power to the community. The Town will encourage and facilitate the exploitation of local renewable resources by supporting public and private initiatives to develop and operate alternative systems of electricity generation, using wind, solar and other renewable energies.

Policy 1D. The Town will encourage and facilitate the exploitation of local renewable resources by supporting public and private initiatives to develop and operate alternative systems of electricity generation, using wind, solar and other renewable energies.

Water, Wastewater and Utilities Element

Goal. The provision of a range of water, wastewater and other utility services and facilities that is comprehensive and adequate to meets the Town's near and long-term needs in a cost-effective manner.

Policy 1.A. The Town shall coordinate with the various domestic water service providers to ensure that local and regional domestic water resources and facilities are protected from over-exploitation and contamination.

Policy 1.B. The Town shall continue to require sewer connection where feasible at the time that a lot is developed, or when service becomes available.

Policy 1.D. The Town shall confer and coordinate with service and utility providers to ensure the timely expansion of facilities so as to minimize or avoid environmental impacts and disturbance of existing improvements. Planning efforts shall include design and siting of support and distribution facilities.

Policy 1.E. The Town shall encourage and support the integration of energy conservation technologies throughout the community.

Policy 1.F. The Town and its solid waste disposal service provider shall continue to consult and coordinate to maintain and surpass, where possible, the provisions of AB 939 by means of expanded recycling programs to divert resources from the waste stream that can be returned to productive us.

Policy 1.G. To the greatest extent feasible, the Town shall encourage commercial and industrial establishments to minimize the amount of packaging and potential waste associated with product manufacturing and sales.

Policy 1.H. Power and other transmission towers, cellular communication towers and other major utility facilities shall be designed and sited so that they result in minimal impacts to viewsheds and minimally pose environmental hazards.

Policy 1.I. Planning, development and installation of state-of-the-art telecommunications and other broadband communications systems shall continue to be encouraged as essential infrastructure in the Town's Sphere of Influence.

4.13.3 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.

4.13.4 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. The Project is proposed to receive water via an existing 12-inch main tie in from a nearby Walmart Distribution Center. The existing water line would extend westward under Johnson Road and Stoddard Wells Road to the Project site (Appendix J). The Project proposes to construct a 16-inch diameter water line within Stoddard Wells Road and a 16-inch diameter water line within Outer I-15 Road.

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, 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 Liberty Utilities' 2020 UWMP. A WSA was prepared for the Project to evaluate Liberty Utilities' projected supplies and demands and is included as Appendix J. As concluded by the WSA (Appendix J), the Project would likely not adversely affect the water supply for Liberty Utilities-Apple Valley for the duration of the project life and currently potable groundwater quality in their service area meets all regulatory requirements without treatment. 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, an existing 21-inch diameter sanitary sewer line is located within Stoddard Wells Road. The 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

During construction, a limited amount of wastewater would be generated by construction workers. The contractor would be responsible for providing restroom facilities and contracting with a permitted wastewater handler to transport wastewater to the VVWRA for disposal. Significant amounts of wastewater generation is not anticipated. Moreover, construction activities would not result in the generation of wastewater (such as wastewater associated with manufacturing processes).

Upon build-out of the Project, the Project's wastewater would be conveyed to the VVWRA RWWTP, which has a treatment capacity of 18.0 mgd and currently produces an average flow of 10.7 mgd, or approximately 60% 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 0.02944 mgd of wastewater. Projected wastewater from the Project would represent approximately 0.4% of the remaining capacity of the treatment facility. Given the remaining capacity of the VVWRA RWWTP, the VVWRA RWWTP should be able to adequately accommodate the Project's contribution of wastewater. As such, no improvements to any of the Town'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 and detention basins would be utilized as low impact development (LID) features 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 10-year and 100-year storm events, 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 10-year or 100-year storm while also accommodating the required retention/detention volumes for water quality purposes. The basins would be designed to capture the entire volume generated from a 10-year and at least 95% of the 100-year storm, with only very low flows being discharged off-site (Appendix G-1).

The Project-specific Preliminary Water Quality Management Plan (Appendix G-2) indicates that stormwater runoff from the Project site would be conveyed to an underground infiltration chamber southwest of Building 1 and an extended detention basin southwest of Building 2, 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 drainage improvements described above has the potential to cause environmental effects associated with buildout of the Project as a whole. The storm drainage improvements, however, 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 2021). 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 three industrial/warehouse buildings and associated improvements areas on an approximately 143-acre site.

Water demand for operation and maintenance of the Project during the anticipated 35-year Project operational life would require approximately 33 AFY of water. Due to the unknown plans of future tenants, water demand from three different businesses was used to estimate potential annual water volumes. This estimate was based on average water use per square foot of similar project types within the Liberty Utilities service area. Construction water demand is estimated to be insignificant and plans for decommissioning and potential revegetation of the site at the end of the 35-year project life are not yet complete. Table 4.13-2 shows the water use for the example warehouse developments provided by Liberty Utilities. Table 4.13-3 shows the three different water use rates applied to the Project footprint. Each scenario has been converted to AFY and collectively averaged for the estimation of 33 AFY.

Table 4.13-2. Water Usage for Example Warehouses

Business	Size (sq ft)	Gallons per day	Gal/day per sq. foot
Big Lots	1360875	673	0.0005
Fresenius Medical Blue	150000	378	0.003
WalMart DC	1080000	29,920	0.03

Source: Appendix J.

Table 4.13-3. Estimated Water Usage for Project

Business	Size (sq ft)	Gal/day per sq. foot	Gal/day	AFY	Average (AFY)
Apple Valley 143	2628000	0.0005	1314	1.47	33
Apple Valley 143	2628000	0.003	7884	8.83	—
Apple Valley 143	2628000	0.03	78840	88.31	—

Source: Appendix J.

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 33 AFY.

The Liberty Utilities' UWMP has planned for growth within its service area over the next 20 years. Liberty Utilities 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 Liberty Utilities 2020 UWMP, Liberty Utilities projects a water demand increase of 2,692 AFY from 2025 (15,846 AFY) to 2045 (18,538 AFY) during normal years. The net water demand of the Apple Valley 143 Project development would be accounted for within this growth, as the Project is consistent with the underlying Town zoning designations for the Project site via the warehouse overlay.

The UWMP and Project specific WSA (Appendix J) identities a sufficient and reliable water supply for Liberty Utilities-Apple Valley's service area, including sufficient water supply for the Project. 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 Regional Wastewater Reclamation Facility operated by Victor Valley Wastewater Reclamation Authority (VVWRA), which has a treatment capacity of 18.0 mgd and currently produces an average flow of 10.7 mgd, or approximately 60% 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 0.02944 mgd of wastewater. Projected wastewater from the Project would represent approximately 0.4% of the remaining capacity of the treatment facility. Given the remaining capacity of the VVWRA RWWTP, the VVWRA RWWTP should be able to adequately accommodate the Project's contribution of wastewater.

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' Sewerage System for increasing the strength or quantity of wastewater discharged from connected facilities. This connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the 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 CALGreen, at least 65% of construction and demolition waste must be diverted from landfills. The Town 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 Town is already transported to the Victorville Sanitary Landfill, it is assumed that waste would continue to be transported there. As of 2022, this landfill had an expected remaining capacity of 93,400,000 cubic yards and was expected to remain open until 2047.

The Town has a franchise agreement with Burrtec's AVCO Disposal, which designates them as the Town's exclusive waste hauler. Therefore, it is not an option to self-haul or use other companies to transport construction debris. 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 4.13-4. The solid waste generation rates assume compliance with the California Code of Regulations Title 24, Part 11.

Table 4.13-4. Anticipated Solid Waste Generation

Project Components	Size Metric	Units of Size Metric	Rate	Solid Waste Generation (tons per year)
Refrigerated Warehouse – No Rail	1,000 square feet	377.78	0.94 tons per 1,000 square feet per year	355
Unrefrigerated Warehouse – No Rail	1,000 square feet	2,140.73	0.94 tons per 1,000 square feet per year	2,012
			Total	**2,367**

Source: Appendix B-1

As previously discussed, the Town has a franchise agreement with Burrtec, which designates them as the Town's exclusive waste hauler. Burrtec owns and operates the Victor Valley Material Recovery Facility, which recycles municipal 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 0.0009% 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 2022c). 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 the Town is brought to the Victor Valley Material Recovery Facility, 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 Town 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 Town 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 Liberty Utilities-Apple Valley. As such, the development of the Project would increase the amount of water used in Liberty Utilities' service area. Liberty Utilities-Apple Valley 2021 UWMP estimates the annual water demand for 2025 (normal year) is projected to be 15,846 acre-feet. This equates to approximately 4.44 billion gallons a year of water or 12.2 mgd. Liberty Utilities-Apple Valley UWMP states that Liberty Utilities 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 Project-specific WSA (Appendix J) concluded that water demand and supply for water demand and supply projections for Liberty Utilities-Apple Valley, 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.

Lastly, compliance with the CALGreen Building Code would be required for new development. In addition, CALGreen Building Code standards require a mandatory reduction in outdoor water use, in accordance with the CDWR Model Water Efficient Landscape Ordinance. This would ensure that 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, Town addresses its long-term planning efforts through the development of a long-term capital improvements program, 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. The Town's Capital Improvements Program relies on its Sewer System Master Plan (Town of Apple Valley 2013) to identify 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, the Town 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 the Town's long-term planning efforts, the Town 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. 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 4.13.1, the ISO 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 ISO reviews and either approves or denies the proposed additions. In addition, and perhaps most importantly, the ISO 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 CPUC 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.

4.13.5 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.

4.13.6 References Cited

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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 Apple Valley 143 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 Farmland

According to the California Department of Conservation's California Important Farmland Finder, the Project site contains grazing land (CDOC 2016). Grazing land is described as land on which the existing vegetation is suited to the grazing of livestock. Grazing land does not include land designated or previously designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (collectively "Important Farmland"). Therefore, no impacts would occur.

Agricultural Zoning and Williamson Act Contracts

According to the Town's General Plan EIR, the Project site is not located on or adjacent to any lands under a Williamson Act contract (Town of Apple Valley 2009a). In addition, the Project site and surrounding area are not zoned for agricultural uses, but instead for Regional Commercial uses (Town of Apple Valley 2021). As such, implementation of the Project would not conflict with existing zoning for agricultural use or land under a Williamson Act contract. Therefore, no impacts would occur.

Conversion of Forest Lands

According to the Town's Zoning Map, the Project site is not located on or adjacent to forestland, timberland, or timberland zoned timberland production (Town of Apple Valley 2021). Therefore, no impacts would occur.

Loss of Forest Lands

The Project site is not located on or adjacent to forestland. No private timberlands or public lands with forests are located in the Town. Therefore, no impact would occur.

Other Changes in the Existing Environment Resulting in Conversion of Farmland or Forest Land

The Project site is not located on or adjacent to any parcels identified as Important Farmland or forestland (CDOC 2016). In addition, the Project would not involve changes to the existing environment that would result in the indirect conversion of Important Farmland or forestland located away from the Project site. Therefore, no impacts 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 2015). Thus, the potential for surface rupture is low on the Project site. Therefore, no impacts would occur.

Seismic Ground Shaking

Similar to other areas located in seismically active Southern California, the Town 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 8, Buildings and Construction, of the Apple Valley Municipal Code, the Project's geotechnical report will be subject to review and approval by Town staff prior to issuance of a grading permit. Compliance with the recommendations of the geotechnical report is mandated by Section 8.12.010 of the Apple Valley Municipal Code, and compliance is subject to inspection by the Town Building Official. With implementation of the 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. According to Exhibit III-11 of the Town's General Plan EIR (Town of Apple Valley 2009a), the Project site is not within an area of the Town that has the potential for liquefaction. Therefore, impacts associated with potential seismic-related ground failure, including liquefaction, would be less than significant.

Landslide

According to Exhibit III-11 of the Town's General Plan EIR (Town of Apple Valley 2009a), 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 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 it does not remain visible in the atmosphere beyond the property line of the emissions source (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) designed to prevent erosion and protect the quality of stormwater runoff. Sediment-control best management practices may include stabilized construction entrances, straw wattles on earthen embankments, sediment filters on existing inlets, or the equivalent. Therefore, impacts 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. Pursuant to Title 8, Buildings and Construction, of the Apple Valley Municipal Code, the Project's geotechnical report will be subject to review and approval by Town staff prior to issuance of a grading permit. Compliance with the recommendations of the geotechnical report is mandated by Section 8.12.010 of the Apple Valley Municipal Code, and compliance is subject to inspection by the Town 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 minerals are known to expand with changes in moisture content. The higher the percentage of expansive minerals present in near-surface soils, the higher the potential for substantial expansion.

Alluvial fan sediments, composed primarily of granular soils, underlie the low-lying areas of the Town and the expansion potential ranges from very low to moderately low. Additionally, 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 (USDA 2022). Therefore, impacts would be less than significant.

Septic Tanks

The Project would connect to the Town's municipal sewer lines. The Project would not require septic tanks or alternative wastewater disposal systems. Therefore, no impacts would occur.

5.3 Hazards and Hazardous Materials

Hazardous Materials Use Near Schools

There are no schools within a three-mile radius of the Project site. As such, the closest school is located well outside of a 0.25-mile radius around the Project site. Therefore, no impacts 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 2022). 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 2022; SWRCB 2022). Therefore, no impacts would occur.

Airport-Related Safety Hazards or Excessive Noise

The nearest operational public-use airport to the Project site is the Southern California Logistics Airport, which is located approximately 6.2 miles to the west. 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 2008). Therefore, impacts would not occur.

Emergency Response and Evacuation Plans

Construction activities that may temporarily restrict vehicular traffic would be required to implement appropriate measures to facilitate the passage of persons and vehicles through/around any required road closures. Typical Town requirements include prior notification of any land or road closures with sufficient signage before and during any closures, flag crews with radio communication when necessary to coordinate traffic flow, etc. The Project developer would be required to comply with these requirements, which would maintain emergency access and allow for evacuation if needed during construction activities.

The Town's General Plan designates Central Road, State Highway 18, and Bear Valley Road as evacuation routes. The Project does not propose any changes to the geometry of these roadways, and moreover, the Project's truck trips would not be directed towards these roads (as they would be directed towards I-15). 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 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, since 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 D, which is classified as an area of undetermined flood hazard (FEMA 2008). 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 would occur.

5.6 Mineral Resources

Mineral Resources and Recovery Sites

According to the Energy and Mineral Resources Element in the Town's General Plan, mineral resources such as sand, gravel, and stone have been identified within the Town (Town of Apple Valley 2009b). According to Figure III-8 in the Town's General Plan, the Project site is not within an area that has been identified to contain mineral resources (Town of Apple Valley 2009b). Additionally, 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, no impacts would occur.

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 buildings 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.

Because the future tenants are not known yet, the number of jobs that the Project would generate cannot be precisely determined. Thus, for purposes of analyses, employment estimates were calculated using average

employment density factors reported by Southern California Association of Governments (SCAG). SCAG reports that for every 1,195 square feet of warehouse space in San Bernardino County, the average numbers of jobs supported is one employee (SCAG 2001). The Project would include 2,520,000 square feet of industrial/warehouses space, excluding associated improvements. As such, the estimated number of employees required for operation would be approximately 2,108.

According to the 2010 U.S. Census, the population of the Town was approximately 69,136 residents. According to the Town's General Plan, upon build-out, the Town could support a population of 185,858 residents (Town of Apple Valley 2009b). As such, the Project-related increase of approximately 2,108 employees would represent a nominal percentage of the Town's projected future population upon General Plan build-out.[1]

In addition, data provided by the California Employment Development Department in February 2022 found that the unemployment rate for San Bernardino County is at 5%, which is similar to the state average (5.4%) (EDD 2022). As such, the Project's temporary and permanent employment requirements could likely be met by the Town'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 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 would occur.

5.8 Public Services

School Facilities

As previously discussed, the Project would not directly or indirectly induce unplanned population growth in the Town. 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 Town 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 Town, 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 Town. Therefore, no impacts would occur.

[1] Note that this represents a conservative approach, as this finding assumes that all future employees will have relocated to the Town as a result of the Project from outside of the Town, and that no future employees are already residents of the Town.

Parks

The Project would construct three industrial/warehouse buildings in the Town. The Project does not propose any residential uses and would not directly or indirectly induce unplanned population growth in the Town. As such, the Project would not increase the use of existing neighborhood parks or regional parks in the Town and surrounding area. Therefore, no impacts 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 would occur.

5.9 Recreation

Existing, Expanded, and New Recreation Facilities

The Project would construct three industrial/warehouse building and associated improvements. The Project does not propose 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 Town and surrounding area. In addition, as an industrial use, the Project does not propose recreational facilities or require the construction or expansion of recreational facilities. Therefore, no impacts would occur.

5.10 Wildfire

Impair Adopted Emergency Response Plan or Emergency Evacuation Plan

Construction activities that may temporarily restrict vehicular traffic would be required to implement appropriate measures to facilitate the passage of persons and vehicles through/around any required road closures. Typical Town requirements include prior notification of ay land or road closures with sufficient signage before and during any closures, flag crews with radio communication when necessary to coordinate traffic flow, etc. The Project developer would be required to comply with these requirements, which would maintain emergency access and allow for evacuation if needed during construction activities.

The Town's General Plan designates Central Road, State Highway 18, and Bear Valley Road as evacuation routes. The Project does not propose any changes to the geometry of these roadways, and moreover, the Project's truck trips would not be directed towards these roads (as they would be directed towards I-15). 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 would be less than significant.

Exacerbate Wildfire Risk due to Slope, Prevailing Winds, and Other Factors

The California Department of Forestry and Fire Protection's (CAL FIRE) Fire Hazard Severity maps have determined that the Project site is not in or near land classified as a Very High Fire Hazard Severity Zone, and impacts associated with wildfire in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones are not anticipated. The Project site is located in an area that is generally flat, lacking any steep slopes, and

characterized as vacant land; these factors are not typically associated with the uncontrolled spread of wildfire. Therefore, impacts associated with the spread of wildfire would be less than significant.

Exacerbate Wildfire Risk from Installation or Maintenance of Infrastructure

As previously addressed, the Project site is not located within or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones. While the Project does not include the construction of fuel breaks or power lines, the Project would involve the installation of infrastructure, including water, wastewater treatment, and storm drainage facilities. The installation of this infrastructure would be typical of development within the greater Project area and would not require the use of specialized techniques or machinery that would result in temporary or ongoing impacts beyond those impacts discussed within this Initial Study. Any impacts associated with the installation of this infrastructure would be done in compliance with existing regulatory requirements, such as SWPPP requirements, that would reduce potential impacts associated with construction of these facilities to below a level of significance. Therefore, impacts associated with infrastructure exacerbating fire risk would be less than significant.

Expose People or Structures to Significant Wildfire Risks

As discussed above, the Project site is not located within or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones. As discussed above under Geology and Soils and Hydrology and Water Quality, the Project would not result in significant risks associated with flooding or landslides, and the Project does not propose the use of fire (such as for a controlled vegetation burn) that would result in post-fire slope instability. Therefore, impacts associated with runoff, post-fire slope instability, or drainage changes would be less than significant.

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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 Apple Valley 143 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 three industrial/warehouse buildings 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. Thus, for purposes of analyses, employment estimates were based on Institute of Transportation Engineers and TUMF warehouse study employee generation rates. The Project would include 2,520,000square feet of industrial/warehouse space, excluding associated improvements. As such, the estimated number of employees required for operation would be approximately 2,108.

According to the 2010 U.S. Census, the population of the Town was approximately 69,136 residents. According to the Town's General Plan, upon build-out, the Town could support a population of 185,858 residents (Town of Apple Valley 2009). As such, the Project-related increase of approximately 2,108 employees would represent a nominal percentage of the Town's projected future population upon General Plan buildout. As such, the Project's temporary and permanent employment requirements could likely be met by the Town'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 water and 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. Although new roadway construction is planned as part of the Project (i.e., construction of Outer I-15 Road), the construction of these roadways is 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 Apple Valley Fire Protection District and Apple Valley Police 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 Town, it is not anticipated that many people would relocate to the Town as a result 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 Town 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 Town of Apple Valley General Plan and the Apple Valley Municipal Code, the land use and zoning designations for the Project site are Regional Commercial (C-R) with a Warehouse Distribution Regional Commercial Overlay (Town of Apple Valley 2009; Town of Apple Valley 2019). As discussed in Section 4.9, Land Use and Planning, of this EIR, the Project is consistent with the Project site's land use and zoning designations applied by the Town of Apple Valley General Plan and the Apple Valley Municipal Code. As such, although construction of the Project would develop a total of 2,520,000square feet of industrial/warehouse space on the Project site, the Town already committed the site to industrial/warehouse (and similar) uses when the Town designated and zoned the site as Regional Commercial (C-R) with a Warehouse Distribution Regional Commercial Overlay.

Land uses surrounding the Project site primarily consist of vacant land. However, existing and approved large-scale industrial facilities are located in the broader Project area within 2 to 3 miles of the Project site. Since the Project site is located near existing urbanized uses, including other industrial uses, the Project would not result in land use changes that would commit future generations to uses that already occur in the Project area. Thus, implementation would not commit future generations to similar uses, given that this proposed use is already found throughout the City.

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 air quality, 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 Apple Valley 143 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 air quality, 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 Town's General Plan, the land use and zoning designation for the overall Project site is Regional Commercial (C-R). Additionally, the Project site is located within the Warehouse Distribution Regional Commercial (C-R) Overlay. The Alternative land uses for the Project site, including residential, standalone retail, mining, and residential mixed-use, were considered and rejected because these land uses are not consistent with the C-R zoning designation.

Permitted uses in the C-R designation include auto malls, regional malls, business parks, factory stores and outlets, entertainment commercial, hotels and motels, restaurants, institutional and public uses. The minimum size for a Regional Commercial project site is 10 acres. Land uses that deviate these activities, including residential, standalone retail, mining, and residential mixed-use, are not identified in the Town's General Plan as being suitable within the C-R zone (Town of Apple Valley 2009).

As such, without approval of a General Plan Amendment and Zone Change, which are discretionary approvals, and are not required for the Project, residential and residential mixed-use land uses could not be developed upon the Project site.

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 approximately 143-acre property exists within the Town 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 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 be 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 buildings, 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, and 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 would not be constructed on the Project site as proposed under the Project. Under existing conditions, no storm drainage or stormwater treatment facilities are currently found or planned to be constructed on-site, and thus, stormwater is not presently collected or treated on the Project site prior to being discharged off-site. Due to historic illegal dumping activities on the project site, stormwater runoff potentially contributes to water quality impacts by discharging trash, debris, sediments, and other pollutants that would otherwise be remediated and mitigated under the project. Additionally, culverts presently used to control stormwater flows are undersized to convey 10-year and 100-year peak discharges and thus floodwater leaving the site is currently expected to breech Stoddard Wells Road at numerous locations. 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 observed on-site tires and debris, shallow soil contamination may be encountered during Project construction. Under the Project scenario, implementation of mitigation measure MM-HAZ-1 requires the removal and disposal of on-site tires and debris 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 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, 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.

Under Alternative 1, the Project site would remain undeveloped, and no construction or operational activities would occur. The Project site would remain in its current condition. As such, this Alternative 1 would involve the routine transport, use, or disposal of hazardous materials. Therefore, Alternative 1 would result in less impacts related to hazards and hazardous materials as compared to the Project.

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 warehouse permitted 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, 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 property's C-R zoning irrespective of the warehouse overlay.

The Regional Commercial land use category allows retail uses that serve not only the residents and businesses of Apple Valley, but also of the surrounding region. Permitted uses in this designation include auto malls, regional malls, business parks, factory stores and outlets, entertainment commercial, hotels and motels, restaurants, institutional and public uses. The minimum size for a Regional Commercial project site is 10 acres.

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/site coverage as the Project. Land uses that are expressly not allowed in the C-R 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 and other local truck routes), it is assumed that the Project constructed under Alternative 2 would consist of auto malls, regional malls, business parks, factory stores and outlets, entertainment commercial, or other similar type commercial land use of similar size as the Project. Such an alternative could take the form of many smaller buildings instead of three larger buildings.

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 similar floor-area-ratio as 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 Traffic 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 rates (either daily or peak hour) than some of the other land uses that are permitted by right or conditional permitted in the C-R zone, including but not limited to regional malls, factory stores and outlets, entertainment commercial, hotels and motels, and restaurants (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. Given that Project impacts related to traffic congestion, tailpipe air emissions, and traffic noise have been determined to be significant and unavoidable, an increase in impacts would continue to be significant.

Alternative 2 Impact Conclusion

All of 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, and 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 and 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 C-R zone have a higher peak hour and/or daily trip generation rate.

As a 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 warehouse permitted 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, railroad service corridors, and other similar infrastructure (Objective 4). Depending on the use, Alternative 2 would 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 a reminder, this EIR has identified the following Project impacts that would be significant and unavoidable.

As discussed in Section 4.2, Air Quality, of this EIR, the Project would exceed the numerical thresholds of significance established by the MDAQMD for emissions of NO_x and PM_{10}. Although mitigation measures have been recommended to minimize operational-related air quality impacts (MM-AQ-1, MM-AQ-2, and MM-AQ-3), no feasible mitigation measures or Project design features beyond those already identified exist that would reduce these emissions to levels that are less than significant. Therefore, even with the incorporation of mitigation, long-term impacts associated with a cumulatively considerable net increase of criteria pollutants for which the Project region is non-attainment would be significant and unavoidable.

Operation of the Project could result in exceedances of the MDAQMD significance thresholds for NO_x and PM_{10}, and the Project would potentially result in health effects associated with those pollutants. Because construction of the Project would not exceed any MDAQMD thresholds (after implementation of MM-AQ-1 and MM-AQ-2), and operation of the Project would not exceed the MDAQMD thresholds for carbon monoxide (CO), VOC, SO_x or $PM_{2.5}$, and because the MDAQMD thresholds are based on levels that the Mojave Desert Air Basin can accommodate without affecting the attainment date for the ambient air quality standards and the ambient air quality standards are established to protect public health and welfare, the Project is not anticipated to result in health effects associated with CO, VOC, SO_x or $PM_{2.5}$. However, because operation of the Project could result in exceedances of MDAQMD significance

thresholds for NO_x and PM_{10}, even after implementation of mitigation measures, the potential health effects associated with criteria air pollutants are conservatively considered significant and unavoidable. For these reasons, impacts associated with the conflicting with the MDAQMD 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 mitigation measures MM-AQ-2 and MM-AQ-3 would reduce potential air quality impacts (in Section 4.2 in this EIR) and mitigation measures 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.

Further, as outlined in Section 4.12, Transportation, an intersection in the vicinity of the Project site currently experiences 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 Horizon Year (2040) Plus Project Conditions (queueing issues would continue to occur without Project-generated traffic for this intersection 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, this intersection is not within the Town's jurisdiction, but rather within the jurisdiction of other agencies, such as the California Department of Transportation. Since the Town 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 air quality, GHG emission, 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 Town 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 2,142,000 square feet, compared to the Project's 2,520,000 square feet. Since the building footprint would be reduced by 378,000 square feet (approximately 8.7 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 substantially 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 378,000 square feet (approximately 8.7 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, 2,142,000 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 require mitigation measures to reduce short-term construction emissions of VOC. With required mitigation, 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.

However, Alternative 3 would still require implementation of mitigation measures similar to those imposed for the Project. Even with incorporation of mitigation measures, long-term operation of Alternative 3 would still likely result in significant and unavoidable impacts due to emissions of NOx and PM_{10}, which would violate the MDAQMD regional air quality standard and would contribute to an existing air quality violation. 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 not eliminated or reduced to less-than-significant levels. As such, Alternative 3 would reduce, but not avoid, the Project's significant and unavoidable impact due to operational air contaminant emissions.

As with the Project, impacts to nearby sensitive receptors would be significant and unavoidable under Alternative 3. Similar to the Project, emissions under Alternative 3 would be above 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, but not reduced to less-than-significant levels, under Alternative 3.

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. However, in accordance with the Town's development standards, these areas would not be allowed to be completely unimproved, but instead would still need 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 need 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. 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 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 above, the Project would result in significant and unavoidable impacts with regard to generating GHG emissions. Implementation of the 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, GHG emissions impacts would be reduced under Alternative 3, but 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 development intensity would be reduced. Incorporation of MM-HAZ-1 would still be required under Alternative 3, which mandates, among other requirements, the removal and disposal of on-site debris and used tires 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 activates 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 3, 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, and thus, stormwater is not presently collected or treated on the Project site prior to being discharging off-site. However, under Alternative 3, 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

Similar to the proposed Project, Alternative 3 would be consistent with the Project Site's existing General Plan and Zoning Code. 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 with vehicles traveling to and from the site, and on-site vehicle idling, maneuvering, and parking. Alternative 3 would generate fewer daily trips than the Project, and, as such, would contribute less traffic-related noise to local roadways than the Project. However, the increase in traffic noise associated with Alternative 3 would still be noticeable to residents along the roadway segments impacted by the Project. Therefore, noise impacts would be similar under Alternative 3.

Transportation and Traffic

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 essentially remain 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, the intersection that is anticipated to experience queueing issues under the Horizon Year (2040) conditions would experience these issues regardless of the Project. As such, even with the reduction in building-square footage and corresponding reduction in trip generation, this intersection would continue to experience these issues. Improvement measures would still be required for Alternative 3; however, because the affected intersection is outside of 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 would result in incremental reductions in the severity of impacts related to aesthetics, air quality, energy, GHG emissions, and noise. However the reductions in Project-related trips under Alternative 3 would not be substantial enough to reduce impacts to less than significant, and therefore would not avoid the significant and unavoidable impacts related to air quality and GHG as compared to the project. Impacts associated with aesthetics, energy and noise are less than significant under both the Project and Alternative 3 scenarios.

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, transportation, and utilities and service systems would generally be the same under Alternative 3 compared to the Project.

All of the same 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; this EIR analysis also evaluates 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, Environmental Impact Analysis, 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	Avoided	Similar	Similar but reduced
Air Quality	Significant and Unavoidable	Avoided	Greater	Lessened, but significant and unavoidable impacts still not avoided
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	Greater	Lessened, but significant and unavoidable impacts still not avoided
Hazards, Hazardous Materials, and Wildfire	Less-than-Significant with Mitigation	Less	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	Greater	Similar
Public Services	Less-than-Significant	Avoided	—	—
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 and 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 Town of Apple Valley.	Yes	No	Yes	Yes, albeit to a less 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 less degree than the Project
Objective 3: Develop a fiscally sound and employment generating land use that maximizes utilization of warehouse permitted areas.	Yes	No	Yes	Yes, albeit to a less degree than the Project
Objective 4: Create a project that takes advantage of and enhances existing infrastructure, including the proximity to major regional roadways such as I-15, 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 less degree than the Project
Objective 5: Fulfill the existing and growing demand for logistics and warehouse uses in the region.	Yes	No	No	Yes

7.5 References Cited

SCAG (Southern California Association of Governments). 2013. Southern California Association of Governments Comprehensive Regional Goods Movement Plan and Implementation Strategy. http://www.freightworks.org/Pages/default.aspx.

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